

## **Oracle® Fusion Middleware**

Man Page Reference for Oracle Directory Server Enterprise  
Edition

11g Release 1 (11.1.1.7.0)

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Describes the commands, configuration attributes, and schema elements available with Directory Server Enterprise Edition. The available options, arguments, and operands for each command are provided in accordance with standard rules of command syntax, along with availability attributes, diagnostic information, and cross-references to other manual pages and reference material with relevant information. This section is for all UNIX® system users.

Oracle Fusion Middleware Man Page Reference for Oracle Directory Server Enterprise Edition, 11g Release 1 (11.1.1.7.0)

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# Contents

<b>Preface</b> .....	xxix
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## **1 User Commands**

Intro_1User .....	1-2
authrate .....	1-4
dsmlmodify .....	1-10
dsmlsearch .....	1-14
entrycmp .....	1-19
fildif .....	1-22
insync .....	1-24
ldapcmp .....	1-28
ldapcompare .....	1-36
ldapdelete .....	1-43
ldapmodify .....	1-50
ldappasswd .....	1-59
ldapsearch .....	1-65
ldapsubtdel .....	1-81
ldif .....	1-84
ldifxform .....	1-86
logconv .....	1-91
makeldif .....	1-95
mmldif .....	1-106
modrate .....	1-107
pwdhash .....	1-113
repldisc .....	1-115
searchrate .....	1-119

## **2 Administration Commands**

Intro_2Admin .....	2-2
dpadm .....	2-3
dpconf .....	2-10
dsadm .....	2-29
dscagent .....	2-40
dscmon .....	2-43
dscereg .....	2-46

dscctest	2-50
dsconf	2-53
dsmig	2-70
dsrepair	2-75
dsutil	2-77
idsktune	2-81
replcheck	2-84

### 3 Directory Server Configuration

Intro_3DSconf	3-2
algorithm	3-14
all-ids-threshold	3-18
all-ids-threshold-eq	3-21
all-ids-threshold-pres	3-28
all-ids-threshold-sub	3-35
approx-enabled	3-42
argument	3-49
attr	3-55
auth-bind-dn	3-59
auth-protocol	3-65
auth-pwd	3-71
auth-pwd-file	3-77
base-dn_5dsconf	3-83
bind-dn_5dsconf	3-87
buffering-enabled	3-91
check-schema-enabled	3-99
check-syntax-enabled	3-100
compat-flag_5dsconf	3-101
compressed-entries	3-103
compression-mode	3-104
config-magic-number	3-105
controls	3-106
db-batched-transaction-count	3-108
db-cache-size	3-109
db-checkpoint-interval	3-110
db-env-path	3-111
db-lock-count	3-112
db-log-buf-size	3-113
db-log-path	3-114
db-name_5dsconf	3-115
db-path	3-124
def-repl-manager-pwd	3-127
def-repl-manager-pwd-file	3-128
depends-on-named	3-129
depends-on-type	3-135
desc	3-141
dn-cache-count	3-144

dn-cache-size .....	3-145
ds5AgreementEnable .....	3-146
ds5BeginReplicaAcceptUpdates .....	3-147
ds5LastInitTimeStamp .....	3-148
ds5ReferralDelayAfterInit .....	3-149
ds5ReplicaAutomaticInit .....	3-150
ds5ReplicaConsumerTimeout .....	3-151
ds5ReplicaTransportCompressionLevel .....	3-152
ds5ReplicaTransportConcurrencyLevel .....	3-153
ds5ReplicaTransportGroupSize .....	3-154
ds5ReplicaTransportGrpPktSize .....	3-155
ds5ReplicaTransportWindowSize .....	3-156
ds6ruv .....	3-157
dsChangelogMaxAge .....	3-158
dsChangelogMaxentries .....	3-159
dsFilterSPConfigchecksum .....	3-160
ds-hdsml-clientauthmethod .....	3-161
ds-hdsml-dsmlschemalocation .....	3-162
ds-hdsml-iobuffersize .....	3-163
ds-hdsml-poolmaxsize .....	3-164
ds-hdsml-poolsize .....	3-165
ds-hdsml-port .....	3-166
ds-hdsml-requestmaxsize .....	3-167
ds-hdsml-responsemsgsize .....	3-168
ds-hdsml-rooturl .....	3-169
ds-hdsml-secureport .....	3-170
ds-hdsml-soapschemalocation .....	3-171
ds-maxheaphigh .....	3-172
ds-maxheaplow .....	3-174
dsml-answer-size .....	3-176
dsml-buffer-size .....	3-177
dsml-client-auth-mode .....	3-178
dsml-enabled .....	3-179
dsml-max-parser-count .....	3-180
dsml-min-parser-count .....	3-181
dsml-port .....	3-182
dsml-relative-root-url .....	3-183
dsml-request-max-size .....	3-184
dsml-secure-port .....	3-185
dsReplFractionalExclude .....	3-186
dsReplFractionalInclude .....	3-187
enabled .....	3-188
encryption .....	3-191
entry-cache-count .....	3-195
entry-cache-mode .....	3-205
entry-cache-preload-enabled .....	3-215
entry-cache-size .....	3-225

entry-count.....	3-234
entry-crc-enabled .....	3-243
eq-enabled .....	3-252
extended-operations.....	3-259
feature .....	3-261
file-descriptor-count .....	3-267
heap-high-threshold-size .....	3-268
heap-low-threshold-size .....	3-270
heapmaxhighhits .....	3-271
heapmaxlowhits.....	3-272
host-access-dir-path.....	3-273
idle-timeout .....	3-274
import-cache-size.....	3-275
index.....	3-276
index-filter-analyzer-enabled .....	3-283
index-filter-analyzer-max-entries .....	3-292
init-func .....	3-301
instance-path .....	3-307
ldap-port_5dsconf.....	3-308
ldap-secure-port.....	3-309
level .....	3-310
lib-path .....	3-318
listen-address_5dsconf .....	3-324
log .....	3-325
look-through-limit .....	3-333
matching-rule .....	3-334
max-age_5dsconf.....	3-341
max-disk-space-size .....	3-349
max-file-count .....	3-357
max-psearch-count .....	3-365
max-size_5dsconf.....	3-366
max-thread-count.....	3-374
max-thread-per-connection-count .....	3-375
min-free-disk-space-size_5dsconf.....	3-376
moddn-enabled.....	3-384
mod-tracking-enabled .....	3-387
nsAbandonedSearchCheckInterval.....	3-388
nsActiveChainingComponents .....	3-389
nsBindConnectionsLimit.....	3-390
nsBindRetryLimit.....	3-391
nsBindTimeout .....	3-392
nsCheckLocalACI.....	3-393
nsConcurrentBindLimit .....	3-394
nsConcurrentOperationsLimit.....	3-395
nsConnectionLife .....	3-396
nsds50ruv .....	3-397
nsds5BeginReplicaRefresh.....	3-398

nsDS5Flags .....	3-399
nsDS5Replica .....	3-400
nsDS5ReplicaAutoReferral .....	3-407
nsDS5ReplicaBindDN .....	3-408
nsDS5ReplicaBindMethod .....	3-409
nsDS5ReplicaChangeCount .....	3-410
nsds5replicaChangesSentSinceStartup .....	3-411
nsDS5ReplicaCredentials .....	3-412
nsDS5ReplicaHost .....	3-413
nsDS5ReplicaId .....	3-414
nsds5replicaLastInitEnd .....	3-415
nsds5replicaLastInitStart .....	3-416
nsds5replicaLastInitStatus .....	3-417
nsds5replicaLastUpdateEnd .....	3-418
nsds5replicaLastUpdateStart .....	3-419
nsds5replicaLastUpdateStatus .....	3-420
nsDS5ReplicaName .....	3-425
nsDS5ReplicaPort .....	3-426
nsDS5ReplicaPurgeDelay .....	3-427
nsDS5ReplicaReferral .....	3-428
nsDS5ReplicaRoot .....	3-429
nsDS5ReplicatedAttributeList .....	3-430
nsds5ReplicaTimeout .....	3-431
nsDS5ReplicationAgreement .....	3-432
nsDS5ReplicaTombstonePurgeInterval .....	3-439
nsDS5ReplicaTransportInfo .....	3-440
nsDS5ReplicaType .....	3-441
nsds5replicaUpdateInProgress .....	3-442
nsDS5ReplicaUpdateSchedule .....	3-443
nsDS5Task .....	3-444
nsFarmServerURL .....	3-445
nshoplimit .....	3-446
nsIndexType .....	3-447
nsLookthroughLimit_5dsconf .....	3-449
nsMatchingRule .....	3-450
nsMaxResponseDelay .....	3-451
nsMaxTestResponseDelay .....	3-452
nsMultiplexorBindDN .....	3-453
nsMultiplexorCredentials .....	3-454
nsOperationConnectionsLimit .....	3-455
nsProxiedAuthorization .....	3-456
nsReferralOnScopedSearch .....	3-457
nsslapd-accesscontrol .....	3-458
nsslapd-accesslog .....	3-459
nsslapd-accesslog-level .....	3-460
nsslapd-accesslog-list .....	3-461
nsslapd-accesslog-logbuffering .....	3-462

nsslapd-accesslog-logexpirationtime .....	3-463
nsslapd-accesslog-logexpirationtimeunit .....	3-464
nsslapd-accesslog-logging-enabled .....	3-465
nsslapd-accesslog-logmaxdiskspace .....	3-466
nsslapd-accesslog-logminfreediskspace .....	3-467
nsslapd-accesslog-logrotationtime .....	3-468
nsslapd-accesslog-logrotationtimeunit .....	3-471
nsslapd-accesslog-maxlogsize .....	3-472
nsslapd-accesslog-maxlogspdir .....	3-473
nsslapd-accesslog-permissions .....	3-474
nsslapd-allidsthreshold .....	3-475
nsslapd-attribute-name-exceptions .....	3-477
nsslapd-auditlog .....	3-478
nsslapd-auditlog-level .....	3-479
nsslapd-auditlog-list .....	3-480
nsslapd-auditlog-logbuffering .....	3-481
nsslapd-auditlog-logexpirationtime .....	3-482
nsslapd-auditlog-logexpirationtimeunit .....	3-483
nsslapd-auditlog-logging-enabled .....	3-484
nsslapd-auditlog-logmaxdiskspace .....	3-485
nsslapd-auditlog-logminfreediskspace .....	3-486
nsslapd-auditlog-logrotationtime .....	3-487
nsslapd-auditlog-logrotationtimeunit .....	3-490
nsslapd-auditlog-maxlogsize .....	3-491
nsslapd-auditlog-maxlogspdir .....	3-492
nsslapd-auditlog-permissions .....	3-493
nsslapd-backend .....	3-494
nsslapd-berbufsize .....	3-495
nsslapd-cachememsize .....	3-496
nsslapd-cachesize .....	3-497
nsslapd-certmap-basedn .....	3-498
nsslapd-changelogdir .....	3-499
nsslapd-changelogmaxage .....	3-500
nsslapd-changelogmaxentries .....	3-501
nsslapd-config .....	3-502
nsslapd-dbcachesize .....	3-503
nsslapd-db-checkpoint-interval .....	3-504
nsslapd-db-circular-logging .....	3-505
nsslapd-db-durable-transactions .....	3-506
nsslapd-db-home-directory .....	3-507
nsslapd-db-idl-divisor .....	3-509
nsslapd-db-locks .....	3-510
nsslapd-db-logbuf-size .....	3-511
nsslapd-db-logdirectory .....	3-512
nsslapd-db-logfile-size .....	3-513
nsslapd-dbnocache .....	3-514
nsslapd-db-page-size .....	3-515

nsslapd-db-transaction-batch-val .....	3-517
nsslapd-db-tx-max .....	3-519
nsslapd-directory .....	3-520
nsslapd-disk-full-threshold .....	3-521
nsslapd-disk-low-threshold .....	3-522
nsslapd-distribution-funct .....	3-523
nsslapd-distribution-plugin .....	3-524
nsslapd-dn-cachememsize .....	3-525
nsslapd-dn-cachesize .....	3-526
nsslapd-ds4-compatible-schema .....	3-527
nsslapd-enquote-sup-oc .....	3-528
nsslapd-errorlog .....	3-530
nsslapd-errorlog-level .....	3-531
nsslapd-errorlog-list .....	3-532
nsslapd-errorlog-logbuffering .....	3-533
nsslapd-errorlog-logexpirationtime .....	3-534
nsslapd-errorlog-logexpirationtimeunit .....	3-535
nsslapd-errorlog-logging-enabled .....	3-536
nsslapd-errorlog-logmaxdiskspace .....	3-537
nsslapd-errorlog-logminfreediskspace .....	3-538
nsslapd-errorlog-logrotationtime .....	3-539
nsslapd-errorlog-logrotationtimeunit .....	3-542
nsslapd-errorlog-maxlogsize .....	3-543
nsslapd-errorlog-maxlogsperdir .....	3-544
nsslapd-errorlog-permissions .....	3-545
nsslapd-exclude-from-export .....	3-546
nsslapd-groupevalnestlevel .....	3-547
nsslapd-groupevalsizelimit .....	3-548
nsslapd-idletimeout .....	3-549
nsslapd-import-cachesize .....	3-550
nsslapd-infolog-area .....	3-551
nsslapd-infolog-level .....	3-553
nsslapd-instancedir .....	3-554
nsslapd-ioblocktimeout .....	3-555
nsslapd-lastmod .....	3-556
nsslapd-listenBacklog .....	3-557
nsslapd-listenhost .....	3-558
nsslapd-localhost .....	3-559
nsslapd-localuser .....	3-560
nsslapd-maxbersize .....	3-561
nsslapd-maxconnections .....	3-562
nsslapd-maxdescriptors .....	3-563
nsslapd-maxpsearch .....	3-565
nsslapd-maxthreadsperconn .....	3-566
nsslapd-mode .....	3-567
nsslapd-nagle .....	3-568
nsslapd-plugin .....	3-569

nsslapd-plugin-depends-on-named .....	3-593
nsslapd-plugin-depends-on-type .....	3-617
nsslapd-pluginDescription .....	3-641
nsslapd-pluginEnabled .....	3-665
nsslapd-pluginId .....	3-689
nsslapd-pluginInitfunc .....	3-713
nsslapd-pluginPath .....	3-737
nsslapd-pluginType .....	3-761
nsslapd-pluginVendor .....	3-785
nsslapd-pluginVersion .....	3-809
nsslapd-port .....	3-833
nsslapd-privatenamespaces .....	3-834
nsslapd-pwdgeneratorpwrlen .....	3-835
nsslapd-readonly .....	3-836
nsslapd-referral .....	3-837
nsslapd-referralmode .....	3-839
nsslapd-require-index .....	3-840
nsslapd-reservedescriptors .....	3-841
nsslapd-rootdn .....	3-843
nsslapd-rootpw .....	3-844
nsslapd-rootpwstoragescheme .....	3-845
nsslapd-schemacheck .....	3-846
nsslapd-schema-repl-useronly .....	3-848
nsslapd-search-tune .....	3-849
nsslapd-securelistenhost .....	3-851
nsslapd-securePort .....	3-852
nsslapd-security .....	3-853
nsslapd-sizelimit .....	3-854
nsslapd-state .....	3-855
nsslapd-suffix .....	3-857
nsslapd-threadnumber .....	3-858
nsslapd-timelimit .....	3-859
nsslapd-versionstring .....	3-860
nsSSL2 .....	3-861
nsSSL3 .....	3-862
nsSSL3ciphers .....	3-863
nsSSLClientAuth .....	3-864
nsSSLServerAuth .....	3-865
nsSSLSessionTimeout .....	3-866
nsState .....	3-867
nsSystemIndex .....	3-868
nsTransmittedControls .....	3-869
op-type .....	3-870
parent-suffix-dn .....	3-874
path .....	3-883
perm .....	3-891
plugin .....	3-899

polling-thread-count .....	3-905
pres-enabled .....	3-906
pwd-accept-hashed-pwd-enabled .....	3-913
pwd-check-enabled .....	3-914
pwd-compat-mode .....	3-915
pwd-expire-no-warning-enabled .....	3-916
pwd-expire-warning-delay .....	3-917
pwd-failure-count-interval .....	3-918
pwd-grace-login-limit .....	3-919
pwd-keep-last-auth-time-enabled .....	3-920
pwd-lockout-duration .....	3-921
pwd-lockout-enabled .....	3-922
pwd-lockout-repl-priority-enabled .....	3-923
pwd-max-age .....	3-924
pwd-max-failure-count .....	3-925
pwd-max-history-count .....	3-926
pwd-min-age .....	3-927
pwd-min-length .....	3-928
pwd-mod-gen-length .....	3-929
pwd-must-change-enabled .....	3-930
pwd-root-dn-bypass-enabled .....	3-931
pwd-safe-modify-enabled .....	3-932
pwd-storage-scheme .....	3-933
pwd-strong-check-dictionary-path .....	3-934
pwd-strong-check-enabled .....	3-935
pwd-strong-check-require-charset .....	3-936
pwd-supported-storage-scheme .....	3-938
pwd-user-change-enabled .....	3-939
read-write-mode .....	3-940
referral-mode .....	3-941
referral-url .....	3-950
ref-integrity-attr .....	3-953
ref-integrity-check-delay .....	3-954
ref-integrity-enabled .....	3-955
repl-accept-client-update-enabled .....	3-956
repl-agmt .....	3-965
repl-cl-max-age .....	3-971
repl-cl-max-entry-count .....	3-980
repl-fractional-exclude-attr .....	3-989
repl-fractional-include-attr .....	3-995
replication .....	3-1001
repl-id .....	3-1008
repl-manager-bind-dn .....	3-1017
repl-priority .....	3-1026
replPriorityAttribute .....	3-1030
replPriorityBaseDN .....	3-1031
replPriorityBindDN .....	3-1032

ReplPriorityRule.....	3-1033
replPriorityType.....	3-1040
repl-purge-delay .....	3-1041
repl-rewrite-referrals-enabled .....	3-1050
repl-role .....	3-1059
repl-schedule .....	3-1068
repl-user-schema-enabled.....	3-1074
require-bind-pwd-enabled .....	3-1075
require-index-enabled .....	3-1076
retro-cl-deleted-entry-attr .....	3-1085
retro-cl-enabled.....	3-1086
retro-cl-ignored-attr.....	3-1087
retro-cl-max-age .....	3-1088
retro-cl-max-entry-count .....	3-1089
retro-cl-path .....	3-1090
retro-cl-suffix-dn.....	3-1091
root-dn .....	3-1092
root-pwd .....	3-1093
root-pwd-file .....	3-1094
root-pwd-storage-scheme.....	3-1095
rotation-interval.....	3-1096
rotation-min-file-size.....	3-1104
rotation-time .....	3-1112
search-size-limit_5dsconf .....	3-1120
search-time-limit_5dsconf .....	3-1121
secure-listen-address .....	3-1122
server.....	3-1123
ssl-cipher-family .....	3-1127
ssl-client-auth-mode .....	3-1128
ssl-enabled .....	3-1129
ssl-rsa-cert-name .....	3-1130
ssl-rsa-security-device .....	3-1131
ssl-supported-ciphers .....	3-1132
sub-enabled .....	3-1133
suffix .....	3-1140
system .....	3-1150
thread-count.....	3-1157
transport-compression.....	3-1158
transport-group-size.....	3-1164
transport-window-size .....	3-1170
type.....	3-1176
useAuthzIdForAuditAttrs.....	3-1182
vendor.....	3-1183
verbose-enabled.....	3-1189
version .....	3-1197

## 4 Directory Proxy Server Configuration

Intro_4DPconf .....	4-2
aci-data-view .....	4-18
aci-manager-bind-dn.....	4-19
aci-manager-bind-pwd .....	4-20
aci-manager-bind-pwd-file.....	4-21
aci-source.....	4-22
action.....	4-23
add-weight .....	4-25
allow-add-operations .....	4-26
allow-bind-operations .....	4-27
allow-cert-based-auth .....	4-28
allow-compare-operations .....	4-29
allow-delete-operations.....	4-30
allowed-auth-methods.....	4-31
allowed-comparable-attrs .....	4-32
allowed-ldap-controls.....	4-33
allowed-ldap-ports .....	4-35
allowed-search-scopes .....	4-36
allowed-subtrees.....	4-37
allow-extended-operations .....	4-38
allow-heuristic-search .....	4-39
allow-inequality-search-operations .....	4-40
allow-ldapv2-clients.....	4-41
allow-modify-operations .....	4-42
allow-partial-search .....	4-43
allow-persistent-searches.....	4-44
allow-rename-operations .....	4-45
allow-sasl-external-authentication.....	4-46
allow-search-operations .....	4-47
allow-unauthenticated-operations .....	4-48
allow-unauthenticated-operations-mode .....	4-49
alternate-search-base-dn .....	4-50
attr-name .....	4-52
attr-name-mappings.....	4-53
attrs.....	4-55
base-dn_5dpconf.....	4-56
bind-dn_5dpconf .....	4-58
bind-dn-filters.....	4-59
bind-pwd.....	4-60
bind-pwd-attr .....	4-61
bind-pwd-file .....	4-62
bind-weight .....	4-63
cert-data-view-routing-custom-list .....	4-64
cert-data-view-routing-policy .....	4-65
cert-search-attr-mappings .....	4-66
cert-search-base-dn.....	4-67

cert-search-bind-dn .....	4-68
cert-search-bind-pwd .....	4-69
cert-search-bind-pwd-file .....	4-70
cert-search-user-attr .....	4-71
client-affinity-bind-dn-filters .....	4-72
client-affinity-criteria .....	4-73
client-affinity-ip-address-filters .....	4-75
client-affinity-policy .....	4-76
client-affinity-timeout .....	4-77
client-cred-mode .....	4-78
close-client-connection .....	4-80
compare-weight .....	4-81
compat-flag_5dpconf .....	4-82
configuration-manager-bind-dn .....	4-83
configuration-manager-bind-pwd .....	4-84
configuration-manager-bind-pwd-file .....	4-85
connection-idle-timeout .....	4-86
connection-pool-wait-interval .....	4-87
connection-pool-wait-timeout .....	4-88
connection-read-data-timeout .....	4-89
connection-write-data-timeout .....	4-90
connect-timeout .....	4-91
connect-to-parent .....	4-92
contains-shared-entries .....	4-94
coordinated-data-view .....	4-96
custom-distribution-algorithm .....	4-97
data-source-read-timeout .....	4-99
data-view-automatic-routing-mode .....	4-100
data-view-routing-custom-list .....	4-101
data-view-routing-policy .....	4-102
data-view-use-internal-client-identity .....	4-103
db-name_5dpconf .....	4-104
db-pwd .....	4-105
db-pwd-encryption .....	4-106
db-pwd-file .....	4-107
db-url .....	4-108
db-user .....	4-109
db-vendor .....	4-110
default-log-level .....	4-112
delete-weight .....	4-114
denied-presence-filter-attr .....	4-115
denied-presence-filter-enabled .....	4-116
description_5dpconf .....	4-117
distribution-algorithm .....	4-119
dn-join-rule .....	4-121
dn-mapping-attrs .....	4-123
dn-mapping-source-base-dn .....	4-125

dn-pattern.....	4-127
domain-name-filters .....	4-128
down-monitoring-interval.....	4-129
driver-class.....	4-130
driver-url .....	4-131
email-alerts-enabled .....	4-132
email-alerts-message-from-address .....	4-133
email-alerts-message-subject .....	4-134
email-alerts-message-subject-includes-alert-code .....	4-135
email-alerts-message-to-address .....	4-136
email-alerts-smtp-host.....	4-137
email-alerts-smtp-port.....	4-138
enable-client-affinity .....	4-139
enabled-admin-alerts.....	4-140
enable-data-view-affinity .....	4-142
enabled-ssl-cipher-suites .....	4-143
enabled-ssl-protocols.....	4-144
enable-log-rotation.....	4-145
enable-remote-user-mapping.....	4-146
enable-user-mapping.....	4-147
encrypt-configuration.....	4-148
excluded-subtrees.....	4-149
extension-jar-file-url .....	4-151
filter-join-rule.....	4-152
group-dn-filters.....	4-154
group-search-bind-dn.....	4-155
group-search-bind-pwd.....	4-156
group-search-bind-pwd-file .....	4-157
internal-value .....	4-158
ip-address-filters.....	4-159
is-enabled.....	4-161
is-read-only .....	4-163
is-restart-required.....	4-165
is-routable .....	4-166
is-single-row-table .....	4-168
is-ssl-mandatory .....	4-169
jdbc-attr-date-format.....	4-170
jdbc-attr-time-format .....	4-171
jdbc-attr-timestamp-format .....	4-172
jdbc-data-source-pool .....	4-173
join-rule-control-enabled.....	4-174
ldap-address .....	4-175
ldap-data-source-pool.....	4-176
ldap-port_5dpconf.....	4-177
ldaps-port.....	4-178
ldap-syntax.....	4-179
ldif-data-source .....	4-180

lexicographic-attrs .....	4-181
lexicographic-lower-bound .....	4-183
lexicographic-upper-bound .....	4-185
listen-address_5dpconf .....	4-187
listen-port .....	4-188
load-balancing-algorithm .....	4-189
log-buffer-size .....	4-191
log-etimes-in-seconds .....	4-192
log-file-compression .....	4-193
log-file-name .....	4-195
log-file-perm .....	4-196
log-level-bind .....	4-197
log-level-client-connections .....	4-198
log-level-client-disconnections .....	4-200
log-level-client-operations .....	4-202
log-level-configuration .....	4-203
log-level-connection-handlers .....	4-204
log-level-data-source .....	4-205
log-level-data-sources .....	4-206
log-level-data-sources-detailed .....	4-207
log-level-internal .....	4-208
log-level-operation-decode .....	4-209
log-level-operation-processing .....	4-210
log-level-plugin .....	4-211
log-level-shutdown .....	4-212
log-level-startup .....	4-213
log-min-size .....	4-214
log-rotation-frequency .....	4-215
log-rotation-policy .....	4-217
log-rotation-size .....	4-219
log-rotation-start-day .....	4-220
log-rotation-start-time .....	4-222
log-search-filters .....	4-224
mapped-bind-dn .....	4-225
mapped-bind-pwd .....	4-226
mapped-bind-pwd-file .....	4-227
max-age_5dpconf .....	4-228
max-client-connections .....	4-229
max-connection-queue-size .....	4-230
max-connections .....	4-231
max-ldap-message-size .....	4-232
max-log-files .....	4-233
max-op-count-per-interval .....	4-234
max-simultaneous-operations-per-connection .....	4-235
max-size_5dpconf .....	4-236
max-total-operations-per-connection .....	4-237
min-free-disk-space-size_5dpconf .....	4-238

minimum-search-filter-substring-length.....	4-239
minimum-total-weight.....	4-240
model.....	4-241
modify-dn-weight.....	4-243
modify-weight.....	4-244
monitoring-bind-dn.....	4-245
monitoring-bind-pwd.....	4-246
monitoring-bind-pwd-file.....	4-247
monitoring-bind-timeout.....	4-248
monitoring-entry-dn.....	4-249
monitoring-entry-timeout.....	4-250
monitoring-inactivity-timeout.....	4-251
monitoring-interval.....	4-252
monitoring-mode.....	4-253
monitoring-retry-count.....	4-254
monitoring-search-filter.....	4-255
monitoring-search-scope.....	4-256
non-viewable-attr.....	4-257
non-writable-attr.....	4-259
number-of-psearch-threads.....	4-261
number-of-search-threads.....	4-262
number-of-threads.....	4-263
number-of-worker-threads.....	4-264
num-bind-incr.....	4-265
num-bind-init.....	4-266
num-bind-limit.....	4-267
num-connection-incr.....	4-268
num-connection-init.....	4-269
num-connection-limit.....	4-270
numeric-attrs.....	4-271
numeric-default-data-view.....	4-273
numeric-lower-bound.....	4-275
numeric-upper-bound.....	4-277
num-read-incr.....	4-279
num-read-init.....	4-280
num-read-limit.....	4-281
num-write-incr.....	4-282
num-write-init.....	4-283
num-write-limit.....	4-284
one-level-search-base-dn.....	4-285
op-count-per-interval-timeout.....	4-286
pattern-matching-base-dn-regular-expression.....	4-287
pattern-matching-base-object-search-filter.....	4-289
pattern-matching-dn-regular-expression.....	4-291
pattern-matching-one-level-search-filter.....	4-293
pattern-matching-subtree-search-filter.....	4-295
perform-distinct-select.....	4-297

primary-table.....	4-298
primary-view.....	4-299
priority.....	4-300
process-bind.....	4-301
processing-power.....	4-303
prohibited-comparable-attrs.....	4-304
prohibited-subtrees.....	4-305
proportion.....	4-306
proxied-auth-check-timeout.....	4-307
proxied-auth-use-v1.....	4-308
referral-bind-policy.....	4-309
referral-hop-limit.....	4-310
referral-policy.....	4-311
remote-user-mapping-bind-dn-attr.....	4-312
replication-role.....	4-313
request-filtering-policy.....	4-315
request-grouping-size.....	4-316
require-data-view-availability.....	4-317
resource-limits-policy.....	4-318
revert-add-on-failure.....	4-319
routing-policy.....	4-320
rule-action.....	4-322
sample-size.....	4-323
schema-check-enabled.....	4-324
scriptable-alerts-command.....	4-325
scriptable-alerts-enabled.....	4-326
search-mode.....	4-327
search-retry-count.....	4-328
search-size-limit_5dpconf.....	4-329
search-time-limit_5dpconf.....	4-330
search-wait-timeout.....	4-331
search-weight.....	4-332
secondary-table.....	4-333
secondary-view.....	4-334
sql-column.....	4-335
sql-syntax.....	4-336
sql-table.....	4-337
ssl-client-cert-alias.....	4-338
ssl-policy.....	4-339
ssl-server-cert-alias.....	4-340
subtree-search-base-dn.....	4-341
super-class.....	4-342
supported-ssl-cipher-suites.....	4-343
supported-ssl-protocols.....	4-344
syslog-alerts-enabled.....	4-345
syslog-alerts-facility.....	4-346
syslog-alerts-host.....	4-347

target-attr-value-assertions .....	4-348
target-dn-regular-expressions .....	4-349
target-dns .....	4-350
time-resolution.....	4-351
time-resolution-mode .....	4-352
use-cert-subject-as-bind-dn.....	4-353
use-external-schema.....	4-354
user-bind-dn.....	4-355
user-bind-pwd.....	4-356
user-bind-pwd-file .....	4-357
use-read-connections-for-writes .....	4-358
user-filter.....	4-359
user-mapping-anonymous-bind-dn.....	4-360
user-mapping-anonymous-bind-pwd .....	4-361
user-mapping-anonymous-bind-pwd-file.....	4-362
user-mapping-default-bind-dn.....	4-363
user-mapping-default-bind-pwd .....	4-364
user-mapping-default-bind-pwd-file.....	4-365
use-tcp-keep-alive .....	4-366
use-tcp-no-delay .....	4-367
verify-certs .....	4-368
viewable-attr.....	4-369
view-value.....	4-371
vlv-control-enabled.....	4-372
vlv-control-page-size .....	4-373
vlv-control-sorting-attr .....	4-374
warning-op-count-per-interval .....	4-375
writable-attr .....	4-376

## 5 Formats

Intro_5Formats .....	5-2
certmap.conf .....	5-3
dse.ldif.....	5-6
hosts_access .....	5-21

## 6 LDAP Schema Collections

Intro_6Schema.....	6-2
adminserv.....	6-8
attributes .....	6-9
changelog_5dssd.....	6-11
dirserv .....	6-12
idpilot .....	6-14
numsub.....	6-15
objects .....	6-16
operational .....	6-18
pwpolicy.....	6-19

rfc2079 .....	6-20
rfc2247 .....	6-21
rfc2307 .....	6-22
rfc2713 .....	6-23
rfc2798 .....	6-24
rfc3045 .....	6-25
rfc3296 .....	6-26
rfc4512 .....	6-27
rfc4517 .....	6-28
rfc4519 .....	6-29
rfc4523 .....	6-31
rfc4524 .....	6-32
sasl .....	6-33
subentry .....	6-34
wppilot .....	6-35

## 7 LDAP Schema Attribute Types

Intro_7Attributes .....	7-2
abstract .....	7-17
accountUnlockTime .....	7-18
aci .....	7-19
aliasedObjectName .....	7-20
associatedDomain .....	7-21
associatedName .....	7-22
attributeTypes .....	7-23
audio .....	7-24
authorCn .....	7-25
authorityRevocationList .....	7-26
authorSn .....	7-27
bootFile .....	7-28
bootParameter .....	7-29
buildingName .....	7-30
businessCategory .....	7-31
c .....	7-32
cACertificate .....	7-33
carLicense .....	7-34
certificateRevocationList .....	7-35
changeHasReplFixupOp .....	7-36
changeIsReplFixupOp .....	7-37
changeLog_5dsat .....	7-38
changeNumber .....	7-39
changes .....	7-40
changeTime .....	7-41
changeType .....	7-42
cn .....	7-43
co .....	7-44
commonName .....	7-45

<b>copiedFrom</b> .....	7-46
<b>copyingFrom</b> .....	7-47
<b>cosAttribute</b> .....	7-48
<b>cosIndirectSpecifier</b> .....	7-49
<b>cosPriority</b> .....	7-50
<b>cosspecifier</b> .....	7-51
<b>costargettree</b> .....	7-52
<b>costemplatedn</b> .....	7-53
<b>countryName</b> .....	7-54
<b>crossCertificatePair</b> .....	7-55
<b>dc</b> .....	7-56
<b>deletedEntryAttrs</b> .....	7-57
<b>deleteOldRdn</b> .....	7-58
<b>deltaRevocationList</b> .....	7-59
<b>departmentNumber</b> .....	7-60
<b>description_5dsat</b> .....	7-61
<b>destinationIndicator</b> .....	7-62
<b>displayName</b> .....	7-63
<b>distinguishedName</b> .....	7-64
<b>dITContentRules</b> .....	7-65
<b>ditRedirect</b> .....	7-66
<b>dITStructureRules</b> .....	7-67
<b>dmdName</b> .....	7-68
<b>dn</b> .....	7-69
<b>dNSRecord</b> .....	7-70
<b>documentAuthor</b> .....	7-71
<b>documentauthorcommonname</b> .....	7-72
<b>documentauthorsurname</b> .....	7-73
<b>documentIdentifier</b> .....	7-74
<b>documentLocation</b> .....	7-75
<b>documentPublisher</b> .....	7-76
<b>documentStore</b> .....	7-77
<b>documentTitle</b> .....	7-78
<b>documentVersion</b> .....	7-79
<b>domaincomponent</b> .....	7-80
<b>drink</b> .....	7-81
<b>dSAQuality</b> .....	7-82
<b>ds-pluginDigest</b> .....	7-83
<b>ds-pluginSignature</b> .....	7-84
<b>dsSaslMaxBufSize</b> .....	7-85
<b>dsSaslMaxSSF</b> .....	7-86
<b>dsSaslMinSSF</b> .....	7-88
<b>dsSaslPluginsEnable</b> .....	7-90
<b>dsSaslPluginsPath</b> .....	7-91
<b>employeeNumber</b> .....	7-92
<b>employeeType</b> .....	7-93
<b>enhancedSearchGuide</b> .....	7-94

<b>facsimileTelephoneNumber</b> .....	7-95
<b>favouriteDrink</b> .....	7-96
<b>fax</b> .....	7-97
<b>friendlycountryname</b> .....	7-98
<b>gecos</b> .....	7-99
<b>generationQualifier</b> .....	7-100
<b>gidNumber</b> .....	7-101
<b>givenName</b> .....	7-102
<b>homeDirectory</b> .....	7-103
<b>homePhone</b> .....	7-104
<b>homePostalAddress</b> .....	7-105
<b>host</b> .....	7-106
<b>houseIdentifier</b> .....	7-107
<b>info</b> .....	7-108
<b>initials</b> .....	7-109
<b>internationaliSDNNumber</b> .....	7-110
<b>ipHostNumber</b> .....	7-111
<b>ipNetmaskNumber</b> .....	7-112
<b>ipNetworkNumber</b> .....	7-113
<b>ipProtocolNumber</b> .....	7-114
<b>ipServicePort</b> .....	7-115
<b>ipServiceProtocol</b> .....	7-116
<b>isMemberOf</b> .....	7-117
<b>janetMailbox</b> .....	7-118
<b>javaClassName</b> .....	7-119
<b>javaClassNames</b> .....	7-120
<b>javaCodebase</b> .....	7-121
<b>javaDoc</b> .....	7-122
<b>javaFactory</b> .....	7-123
<b>javaReferenceAddress</b> .....	7-124
<b>javaSerializedData</b> .....	7-125
<b>jpegPhoto</b> .....	7-126
<b>keyWords</b> .....	7-127
<b>knowledgeInformation</b> .....	7-128
<b>l</b> .....	7-129
<b>labeledUri</b> .....	7-130
<b>labeledurl</b> .....	7-131
<b>lastModifiedBy</b> .....	7-132
<b>lastModifiedTime</b> .....	7-133
<b>ldapSyntaxes</b> .....	7-134
<b>locality_5dsat</b> .....	7-135
<b>localityname</b> .....	7-136
<b>loginShell</b> .....	7-137
<b>macAddress</b> .....	7-138
<b>mail</b> .....	7-139
<b>mailPreferenceOption</b> .....	7-140
<b>manager</b> .....	7-141

<b>matchingRules</b> .....	7-142
<b>matchingRuleUse</b> .....	7-143
<b>member</b> .....	7-144
<b>memberCertificateDescription</b> .....	7-145
<b>memberNisNetgroup</b> .....	7-147
<b>memberUid</b> .....	7-148
<b>memberURL</b> .....	7-149
<b>mobile</b> .....	7-150
<b>mobileTelephoneNumber</b> .....	7-151
<b>multiLineDescription</b> .....	7-152
<b>name</b> .....	7-153
<b>nameForms</b> .....	7-154
<b>namingContexts</b> .....	7-155
<b>newRdn</b> .....	7-156
<b>newSuperior</b> .....	7-157
<b>nisMapEntry</b> .....	7-158
<b>nisMapName</b> .....	7-159
<b>nisNetgroupTriple</b> .....	7-160
<b>nsds5ReplConflict</b> .....	7-161
<b>nsIdleTimeout</b> .....	7-162
<b>nsLicensedFor</b> .....	7-163
<b>nsLicenseEndTime</b> .....	7-164
<b>nsLicenseStartTime</b> .....	7-165
<b>nsLookThroughLimit_5dsat</b> .....	7-166
<b>nsRole</b> .....	7-167
<b>nsRoleDN</b> .....	7-168
<b>nsRoleFilter</b> .....	7-170
<b>nsRoleScopeDn</b> .....	7-171
<b>nsSizeLimit</b> .....	7-172
<b>nsTimeLimit</b> .....	7-173
<b>numSubordinates</b> .....	7-174
<b>o</b> .....	7-175
<b>objectClass</b> .....	7-176
<b>objectClasses</b> .....	7-177
<b>obsoletedByDocument</b> .....	7-178
<b>obsoletesDocument</b> .....	7-179
<b>oncRpcNumber</b> .....	7-180
<b>organizationalStatus</b> .....	7-181
<b>organizationalUnitName</b> .....	7-182
<b>organizationname</b> .....	7-183
<b>otherMailbox</b> .....	7-184
<b>ou</b> .....	7-185
<b>owner</b> .....	7-186
<b>pager</b> .....	7-187
<b>pagerTelephoneNumber</b> .....	7-188
<b>passwordAllowChangeTime</b> .....	7-189
<b>passwordChange</b> .....	7-190

passwordCheckSyntax .....	7-191
passwordExp .....	7-192
passwordExpirationTime .....	7-193
passwordExpireWithoutWarning .....	7-194
passwordExpWarned .....	7-195
passwordHistory .....	7-196
passwordInHistory .....	7-197
passwordLockout .....	7-198
passwordLockoutDuration .....	7-199
passwordMaxAge .....	7-200
passwordMaxFailure .....	7-201
passwordMinAge .....	7-202
passwordMinLength .....	7-203
passwordMustChange .....	7-204
passwordNonRootMayResetUserpwd .....	7-205
passwordPolicySubentry .....	7-206
passwordResetDuration .....	7-207
passwordResetFailureCount .....	7-208
passwordRetryCount .....	7-209
passwordRootdnMayBypassModsChecks .....	7-210
passwordStorageScheme .....	7-211
passwordUnlock .....	7-213
passwordWarning .....	7-214
personalSignature .....	7-215
personalTitle .....	7-216
photo .....	7-217
physicalDeliveryOfficeName .....	7-218
postalAddress .....	7-219
postalCode .....	7-220
postOfficeBox .....	7-221
preferredDeliveryMethod .....	7-222
preferredLanguage .....	7-223
presentationAddress .....	7-224
protocolInformation .....	7-225
pwdAccountLockedTime .....	7-226
pwdAllowUserChange .....	7-227
pwdAttribute .....	7-228
pwdChangedTime .....	7-229
pwdCheckQuality .....	7-230
pwdExpireWarning .....	7-232
pwdFailureCountInterval .....	7-233
pwdFailureTime .....	7-234
pwdGraceAuthNLimit .....	7-235
pwdGraceUseTime .....	7-236
pwdHistory .....	7-237
pwdInHistory .....	7-238
pwdIsLockoutPrioritized .....	7-239

<b>pwdKeepLastAuthTime</b> .....	7-240
<b>pwdLastAuthTime</b> .....	7-241
<b>pwdLockout</b> .....	7-242
<b>pwdLockoutDuration</b> .....	7-243
<b>pwdMaxAge</b> .....	7-244
<b>pwdMaxFailure</b> .....	7-245
<b>pwdMinAge</b> .....	7-246
<b>pwdMinLength</b> .....	7-247
<b>pwdMustChange</b> .....	7-248
<b>pwdPolicySubentry</b> .....	7-249
<b>pwdReset</b> .....	7-250
<b>pwdSafeModify</b> .....	7-251
<b>ref</b> .....	7-252
<b>registeredAddress</b> .....	7-253
<b>replicaIdentifier</b> .....	7-254
<b>replicationCSN</b> .....	7-255
<b>retryCountResetTime</b> .....	7-257
<b>rfc822mailbox</b> .....	7-258
<b>roleOccupant</b> .....	7-259
<b>roomNumber</b> .....	7-260
<b>searchGuide</b> .....	7-261
<b>secretary</b> .....	7-262
<b>seeAlso</b> .....	7-263
<b>serialNumber</b> .....	7-264
<b>shadowExpire</b> .....	7-265
<b>shadowFlag</b> .....	7-266
<b>shadowInactive</b> .....	7-267
<b>shadowLastChange</b> .....	7-268
<b>shadowMax</b> .....	7-269
<b>shadowMin</b> .....	7-270
<b>shadowWarning</b> .....	7-271
<b>singleLevelQuality</b> .....	7-272
<b>sn</b> .....	7-273
<b>st</b> .....	7-274
<b>stateOrProvinceName</b> .....	7-275
<b>street</b> .....	7-276
<b>streetaddress</b> .....	7-277
<b>subject</b> .....	7-278
<b>subschemaSubentry</b> .....	7-279
<b>subtreeMaximumQuality</b> .....	7-280
<b>subtreeMinimumQuality</b> .....	7-281
<b>supportedAlgorithms</b> .....	7-282
<b>supportedApplicationContext</b> .....	7-283
<b>supportedControl</b> .....	7-284
<b>supportedExtension</b> .....	7-285
<b>supportedLDAPVersion</b> .....	7-286
<b>supportedSASLMechanisms</b> .....	7-287

supportedSSLCiphers .....	7-288
surName .....	7-290
targetDn.....	7-291
targetUniqueId.....	7-292
telephoneNumber .....	7-293
teletexTerminalIdentifier .....	7-294
telexNumber .....	7-295
textEncodedORAddress .....	7-296
title.....	7-297
uid.....	7-298
uidNumber .....	7-299
uniqueIdentifier .....	7-300
uniqueMember .....	7-301
updatedByDocument.....	7-302
updatesDocument .....	7-303
userCertificate .....	7-304
userClass .....	7-305
userid .....	7-306
userPassword.....	7-307
userPKCS12 .....	7-308
userSMIMECertificate.....	7-309
vendorName .....	7-310
vendorVersion .....	7-311
vlvBase.....	7-312
vlvEnabled .....	7-313
vlvFilter .....	7-314
vlvScope .....	7-315
vlvSort.....	7-316
vlvUses .....	7-317
x121Address.....	7-318
x500UniqueIdentifier.....	7-319

## 8 LDAP Schema Object Classes

Intro_8Classes .....	8-2
account.....	8-7
alias .....	8-9
applicationEntity .....	8-10
bootableDevice .....	8-12
changeLogEntry .....	8-13
cosClassicDefinition .....	8-15
cosDefinition.....	8-17
cosIndirectDefinition .....	8-19
cosPointerDefinition .....	8-20
cosSuperDefinition.....	8-22
costemplate .....	8-24
country .....	8-25
dcObject .....	8-27

<b>device</b> .....	8-29
<b>document</b> .....	8-31
<b>documentSeries</b> .....	8-33
<b>domain</b> .....	8-35
<b>domainRelatedObject</b> .....	8-37
<b>dSA</b> .....	8-38
<b>dsSaslConfig</b> .....	8-39
<b>extensibleObject</b> .....	8-41
<b>friendlyCountry</b> .....	8-43
<b>groupOfCertificates</b> .....	8-44
<b>groupOfNames</b> .....	8-46
<b>groupOfUniqueNames</b> .....	8-48
<b>groupOfURLs</b> .....	8-50
<b>ieee802Device</b> .....	8-52
<b>inetOrgPerson</b> .....	8-53
<b>ipHost</b> .....	8-55
<b>ipNetwork</b> .....	8-57
<b>ipProtocol</b> .....	8-59
<b>ipService</b> .....	8-61
<b>javaContainer</b> .....	8-63
<b>javaMarshaledObject</b> .....	8-64
<b>javaNamingReference</b> .....	8-65
<b>javaObject</b> .....	8-66
<b>javaSerializedObject</b> .....	8-68
<b>labeledURIObject</b> .....	8-69
<b>ldapSubEntry</b> .....	8-70
<b>locality_5dsoc</b> .....	8-71
<b>newPilotPerson</b> .....	8-73
<b>nisMap</b> .....	8-75
<b>nisNetgroup</b> .....	8-76
<b>nisObject</b> .....	8-78
<b>nsComplexRoleDefinition</b> .....	8-80
<b>nsFilteredRoleDefinition</b> .....	8-81
<b>nsLicenseUser</b> .....	8-82
<b>nsManagedRoleDefinition</b> .....	8-84
<b>nsNestedRoleDefinition</b> .....	8-85
<b>nsRoleDefinition</b> .....	8-87
<b>nsSimpleRoleDefinition</b> .....	8-88
<b>oncRpc</b> .....	8-90
<b>organization</b> .....	8-92
<b>organizationalPerson</b> .....	8-94
<b>organizationalRole</b> .....	8-96
<b>organizationalUnit</b> .....	8-98
<b>passwordPolicy</b> .....	8-100
<b>person</b> .....	8-102
<b>pilotObject</b> .....	8-104
<b>pilotOrganization</b> .....	8-106

<b>posixAccount</b> .....	8-108
<b>posixGroup</b> .....	8-110
<b>pwdPolicy</b> .....	8-112
<b>referral</b> .....	8-114
<b>residentialPerson</b> .....	8-116
<b>RFC822localPart</b> .....	8-118
<b>room</b> .....	8-119
<b>shadowAccount</b> .....	8-121
<b>simpleSecurityObject</b> .....	8-123
<b>strongAuthenticationUser</b> .....	8-124
<b>subschema</b> .....	8-125
<b>sunPwdPolicy</b> .....	8-127
<b>top</b> .....	8-129
<b>vlvIndex</b> .....	8-130
<b>vlvSearch</b> .....	8-132

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# Preface

The *Man Page Reference for Oracle Directory Server Enterprise Edition* describes the command-line tools, schema objects, and other public interfaces that are available through Directory Server Enterprise Edition.

## Oracle Directory Server Enterprise Edition Documentation Set

This documentation set explains how to use Oracle Directory Server Enterprise Edition to evaluate, design, deploy, and administer directory services. In addition, it shows how to develop client applications for Directory Server Enterprise Edition. The Oracle Fusion Middleware Directory Server Enterprise Edition Documentation Library is available at [http://docs.oracle.com/cd/E29127\\_01/index.htm](http://docs.oracle.com/cd/E29127_01/index.htm).

The following table lists the documents that make up the Directory Server Enterprise Edition documentation set.

Document Title	Contents
<i>Release Notes for Oracle Directory Server Enterprise Edition</i>	Contains the latest information about Directory Server Enterprise Edition, including known problems.
<i>Evaluation Guide for Oracle Directory Server Enterprise Edition</i>	Introduces the key features of this release. Demonstrates how these features work and what they offer in the context of a deployment that you can implement on a single system.
<i>Deployment Planning Guide for Oracle Directory Server Enterprise Edition</i>	Explains how to plan and design highly available, highly scalable directory services based on Directory Server Enterprise Edition. Presents the basic concepts and principles of deployment planning and design. Discusses the solution life cycle, and provides high-level examples and strategies to use when planning solutions based on Directory Server Enterprise Edition.
<i>Installation Guide for Oracle Directory Server Enterprise Edition</i>	Explains how to install the Directory Server Enterprise Edition software. Shows how to configure the installed software and verify the configured software.
<i>Upgrade and Migration Guide for Oracle Directory Server Enterprise Edition</i>	Provides instructions for upgrading versions 11.1.1.3, 7.x, and 6 installations, and instructions for migrating version 5.2 installations.

Document Title	Contents
<i>Administrator's Guide for Oracle Directory Server Enterprise Edition</i>	Provides command-line instructions for administering Directory Server Enterprise Edition.  For hints and instructions about using the Directory Service Control Center, DSCC, to administer Directory Server Enterprise Edition, see the online help provided in DSCC.
<i>Reference for Oracle Directory Server Enterprise Edition</i>	Introduces technical and conceptual foundations of Directory Server Enterprise Edition. Describes its components, architecture, processes, and features.
<i>Man Page Reference for Oracle Directory Server Enterprise Edition</i>	Describes the command-line tools, schema objects, and other public interfaces that are available through Directory Server Enterprise Edition. Individual sections of this document can be installed as online manual pages.
<i>Developer's Guide for Oracle Directory Server Enterprise Edition</i>	Shows how to develop directory client applications with the tools and APIs that are provided as part of Directory Server Enterprise Edition.
<i>Troubleshooting for Oracle Directory Server Enterprise Edition Guide</i>	Provides information for defining the scope of the problem, gathering data, and troubleshooting the problem areas by using various tools.
<i>Release Notes for Identity Synchronization for Windows 6.0</i>	Provides the latest information for installing, migrating, and upgrading Identity Synchronization for Windows 6.0 SP1.
<i>Deployment Planning Guide for Identity Synchronization for Windows 6.0</i>	Provides general guidelines and best practices for planning and deploying Identity Synchronization for Windows.
<i>Installation and Configuration Guide for Identity Synchronization for Windows 6.0</i>	Describes how to install and configure Identity Synchronization for Windows.

## Related Reading

The SLAMD Distributed Load Generation Engine is a Java application that is designed to stress test and analyze the performance of network-based applications. This application was originally developed by Sun Microsystems, Inc. to benchmark and analyze the performance of LDAP directory servers. SLAMD is available as an open source application under the Sun Public License, an OSI-approved open source license. To obtain information about SLAMD, go to <http://www.slamd.com/>. SLAMD is also available as a java.net project. See <https://slamd.dev.java.net/>.

Java Naming and Directory Interface (JNDI) supports accessing the Directory Server using LDAP and DSML v2 from Java applications. For information about JNDI, see <http://www.oracle.com/technetwork/java/jndi/index.html>. The *JNDI Tutorial* contains detailed descriptions and examples of how to use JNDI. This tutorial is at <http://download.oracle.com/javase/jndi/tutorial/>.

Identity Synchronization for Windows uses Message Queue with a restricted license. Message Queue documentation is available at <http://www.oracle.com/technetwork/indexes/documentation/index.html>.

Identity Synchronization for Windows works with Microsoft Windows password policies.

- Information about password policies for Windows 2003, is available in the Microsoft documentation (<http://technet.microsoft.com/en-us/windowsserver/default.aspx>) online.
- Information about the Microsoft Certificate Services Enterprise Root certificate authority, is available in the Microsoft support documentation (<http://support.microsoft.com/default.aspx?scid=kb;en-us;247078>) online.
- Information about configuring LDAP over SSL on Microsoft systems, is available in the Microsoft support documentation (<http://support.microsoft.com/default.aspx?scid=kb;en-us;321051>) online.

## Redistributable Files

Directory Server Enterprise Edition does not provide any files that you can redistribute.

## Default Paths and Command Locations

This section explains the default paths used in documentation, and provides locations of commands on different operating systems and deployment types.

### Default Paths

The table in this section describes the default paths that are used in this document. For complete descriptions of the files installed, see Chapter 1, *Directory Server Enterprise Edition File Reference*, in *Reference for Oracle Directory Server Enterprise Edition*.

Placeholder	Description	Default Value
<i>install-path</i>	Represents the base installation directory for Directory Server Enterprise Edition software.	When you install from a zip distribution using unzip, the <i>install-path</i> is the <i>current-directory/dsee7</i> .
<i>instance-path</i>	Represents the full path to an instance of Directory Server or Directory Proxy Server.  Documentation uses <i>/local/dsInst/</i> for Directory Server and <i>/local/dps/</i> for Directory Proxy Server.	No default path exists. Instance paths must nevertheless always be found on a <i>local</i> file system.  On Solaris systems, the <i>/var</i> directory is recommended:
<i>serverroot</i>	Represents the parent directory of the Identity Synchronization for Windows installation location	Depends on your installation. Note that the concept of a <i>serverroot</i> no longer exists for Directory Server and Directory Proxy Server.
<i>isw-hostname</i>	Represents the Identity Synchronization for Windows instance directory	Depends on your installation
<i>/path/to/cert8.db</i>	Represents the default path and file name of the client's certificate database for Identity Synchronization for Windows	<i>current-working-dir/cert8.db</i>

Placeholder	Description	Default Value
<code>serverroot/isw-hostname/linebreaklogs/</code>	Represents the default path to the Identity Synchronization for Windows local log files for the System Manager, each connector, and the Central Logger	Depends on your installation
<code>serverroot/isw-hostname/linebreaklogs/central/</code>	Represents the default path to the Identity Synchronization for Windows central log files	Depends on your installation

## Command Locations

The table in this section provides locations for commands that are used in Directory Server Enterprise Edition documentation. To learn more about each of the commands, see the relevant man pages. See also "Software Layout for Directory Server Enterprise Edition" in the *Reference for Oracle Directory Server Enterprise Edition*.

Command	Zip Distribution
<code>certutil</code>	<code>install-path/bin/certutil</code>
<code>dpadm</code>	<code>install-path/bin/dpadm</code>
<code>dpconf</code>	<code>install-path/bin/dpconf</code>
<code>dsadm</code>	<code>install-path/bin/dsadm</code>
<code>dscagent</code>	<code>install-path/bin/agent</code>
<code>dscmcom</code>	<code>install-path/bin/dscmcom</code>
<code>dscereg</code>	<code>install-path/bin/dscereg</code>
<code>dscsetup</code>	<code>install-path/bin/dscsetup</code>
<code>dsconf</code>	<code>install-path/bin/dsconf</code>
<code>dsmig</code>	<code>install-path/bin/dsmig</code>
<code>dsutil</code>	<code>install-path/bin/dsutil</code>
<code>entrycmp</code>	<code>install-path/bin/entrycmp</code>
<code>fildif</code>	<code>install-path/bin/fildif</code>
<code>idsktune</code>	At the root of the unzipped zip distribution
<code>insync</code>	<code>install-path/bin/insync</code>
<code>ldapmodify</code>	<code>install-path/dsrk/bin/ldapmodify</code>
<code>ldapsearch</code>	<code>install-path/dsrk/bin/ldapsearch</code>
<code>repldisc</code>	<code>install-path/bin/repldisc</code>

## Typographic Conventions

The following table describes the typographic conventions that are used in this book.

Typeface	Meaning	Example
AaBbCc123	The names of commands, files, and directories, and onscreen computer output	Edit your <code>.login</code> file. Use <code>ls a</code> to list all files. <code>machine_name% you have mail.</code>

Typeface	Meaning	Example
<b>AaBbCc123</b>	What you type, contrasted with onscreen computer output	machine_name% <b>su</b> Password:
<i>aabbcc123</i>	Placeholder: replace with a real name or value	The command to remove a file is <i>rm filename</i> .
<i>AaBbCc123</i>	Book titles, new terms, and terms to be emphasized	Read Chapter 6 in the <i>User's Guide</i> .  A <i>cache</i> is a copy that is stored locally.  Do <i>not</i> save the file.  <b>Note:</b> Some emphasized items appear bold online.

## Shell Prompts in Command Examples

The following table shows the default UNIX system prompt and superuser prompt for shells that are included in the Oracle Solaris OS. Note that the default system prompt that is displayed in command examples varies, depending on the Oracle Solaris release.

Shell	Prompt
Bash shell, Korn shell, and Bourne shell	\$
Bash shell, Korn shell, and Bourne shell for superuser	#
C shell	machine_name%
C shell for superuser	machine_name#

## Symbol Conventions

The following table explains symbols that might be used in this book.

Symbol	Description	Example	Meaning
[ ]	Contains optional arguments and command options.	ls [-1]	The -1 option is not required.
{   }	Contains a set of choices for a required command option.	-d {y n}	The -d option requires that you use either the y argument or the n argument.
\${ }	Indicates a variable reference.	\${com.sun.javaRoot}	References the value of the com.sun.javaRoot variable.
-	Joins simultaneous multiple keystrokes.	Control-A	Press the Control key while you press the A key.
+	Joins consecutive multiple keystrokes.	Ctrl+A+N	Press the Control key, release it, and then press the subsequent keys.
>	Indicates menu item selection in a graphical user interface.	File > New > Templates	From the File menu, choose New. From the New submenu, choose Templates.

## Documentation, Support, and Training

See the following web sites for additional resources:

- Documentation (<http://www.oracle.com/technetwork/indexes/documentation/index.html>)
- Support (<http://www.oracle.com/us/support/systems/index.html>)
- Training (<http://education.oracle.com>)

## Oracle Software Resources

Oracle Technology Network

(<http://www.oracle.com/technetwork/index.html>) offers a range of resources related to Oracle software:

- Discuss technical problems and solutions on the ODSEE Discussion Forum (<http://forums.oracle.com/forums/forum.jspa?forumID=877>) and the Directory Services blog (<http://blogs.oracle.com/directoryservices/>).
- See the latest announcements on the Directory Services blog (<http://blogs.oracle.com/directoryservices/>).
- Download ODSEE 11g Example Files (<http://www.oracle.com/technetwork/middleware/id-mgmt/learnmore/odsee11113-examples-350399.zip>).

## Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

### Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

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## User Commands

This section describes commands available in a full installation of Directory Server Enterprise Edition.

## Intro\_1User

introduction to Directory Server Enterprise Edition user commands

### Description

This section describes commands available in a full installation of Directory Server Enterprise Edition.

### OTHER SECTIONS

See also the following introductory pages.

#### [Intro\\_2Admin\(1M\)](#)

This section describes commands used for Directory Server Enterprise Edition maintenance and administration purposes.

#### [Intro\\_5Formats\(4\)](#)

This section describes the formats of files delivered with Directory Server Enterprise Edition.

#### [Intro\\_3DScnf\(5DSCNF\)](#)

This section describes Directory Server configuration properties. You modify these properties using the `dsconf` command.

This section also describes legacy Directory Server configuration attributes. You modify these attributes using the `ldapmodify` command on the entries under `cn=config`.

#### [Intro\\_4DPconf\(5DPCONF\)](#)

This section describes Directory Proxy Server configuration properties. You use these properties using the `dpconf` command.

#### [Intro\\_6Schema\(5DSSD\)](#)

This section describes collections of LDAP schema objects that Directory Server provides.

#### [Intro\\_7Attributes\(5DSAT\)](#)

This section describes attribute types defined in the LDAP schema that Directory Server provides.

#### [Intro\\_8Classes\(5DSOC\)](#)

This section describes object classes defined in the LDAP schema that Directory Server provides.

### LIST OF COMMANDS

This reference manual section includes the following pages.

#### [authrate\(1\)](#)

measure rate of authentication to an LDAP directory

#### [dsmlmodify\(1\)](#)

add, modify, rename, move, or delete directory entries

#### [dsmlsearch\(1\)](#)

find directory entries

**entrycmp(1)**

compare the same entry on two or more different servers

**fildif(1)**

creates a filtered version of an LDIF input file

**insync(1)**

indicate the synchronization state between a supplier replica and one or more consumer replicas

**ldapcmp(1)**

compare LDAP entries from two directories

**ldapcompare(1)**

compare a value with an LDAP entry attribute value

**ldapdelete(1)**

delete LDAP entries

**ldapmodify(1)**

add, modify, rename, move, or delete LDAP entries

**ldappasswd(1)**

change the password of an LDAP entry

**ldapsearch(1)**

find LDAP entries

**ldapsubtdel(1)**

recursively delete a subtree of LDAP entries

**ldif(1)**

format input by adding base64 encoding to make it suitable for inclusion in an LDIF file

**ldifxform(1)**

reformat LDIF text

**logconv(1)**

analyze access logs

**makeldif(1)**

generate LDIF for import into a directory

**mmldif(1)**

combine multiple ldif files into a single, authoritative set of entries

**modrate(1)**

measure modification performance for an LDAP directory

**pwdhash(1)**

print the encrypted form of a password by using one of the encryption algorithms

**repldisc(1)**

discover a replication topology

**searchrate(1)**

measure search performance for an LDAP directory

## authrate

measure rate of authentication to an LDAP directory

### Synopsis

```
install-path/dsrk/bin/authrate  
[options]
```

### Description

The `authrate` command measures the rate at which a given bind DN can authenticate to an LDAP directory. As with all measures of performance, results depend on many factors, including what options you pass to the `authrate` command, and also how the directory service itself is tuned.

The command uses LDAP v3, and cannot be used to authenticate to an LDAP v2 directory not supporting LDAP v3.

### Options

The `authrate` command supports the following options:

–C **messages**

Display the specified number of results messages before exiting. Results messages appear by default as output on standard out, similar to the following:

```
Avg r=2584.00/thr (516.80/sec), total= 7752
```

This shows output for three threads authenticating for five seconds. The average bind rate per thread is 516.80 per thread per second for the interval measured. The total shown for all threads is 7752.

Default is to continue iterating until the command is interrupted.

–D **bindDN**

Use the specified bind DN to authenticate to the directory.

If the bind DN is not specified, the `authrate` command attempts anonymous authentication.

You can use `%d` and `%s` placeholders in the `–D` option in the `authrate` command. Refer to [Extended Description](#) for more details.

–h **hostname**

Connect to the directory on the specified host.

Enclose IPv6 addresses in brackets (`[ ]`) as described in RFC 2732.

Default is to connect to the local host on the loopback address, `127.0.0.1`.

–i **filename**

Use the file specified to read bind DN's and passwords at random.

Refer to [Random Bind DN Syntax](#) and [Random Bind DN Substitution](#) for details.

–j **seconds**

Display results each specified number of seconds.

Default is to display results every 5 seconds.

**-k**

Keep connections open, measuring only the time required to perform the bind operation.

Default is to measure both the bind and unbind time as part of the authentication sequence.

**-m *maxAuth***

Perform no more than the specified number of binds per thread.

Default is for each thread to continue iterating until the command is interrupted.

**-p *port***

Connect to the directory on the specified port.

Default is to connect to the default simple authentication port for LDAP, 389.

**-q**

Run in quiet mode, not displaying results.

Default is to display results every 5 seconds, which you can adjust using the **-j** option.

**-r *maxRand***

Use the specified maximum to determine the range for random numbers replacing %d formatting specifications when authenticating with random bind DN's and passwords.

When you use this option twice, the first occurrence generates random numbers in the range [0,*maxRand1*-1] for the first %d, the second [1,*maxRand2*] for the second %d.

**-s *randSeed***

Use the specified seed, an unsigned int, for random number generation.

Default seed is 0.

**-t *threads***

Use the specified number of the threads to connect to the server.

Default is to use one thread.

**-u**

Do not unbind as part of the authentication sequence.

Default is to unbind as part of the authentication sequence.

**-v**

Display verbose output.

**-W *filename***

Read the bind password from the specified file.

**-w *password***

Use the specified bind password to authenticate to the directory.

**-w -**

Prompt for the bind password so it does not appear on the command line or in a file.

## Extended Description

The `authrate` command repeatedly initializes a connection and binds to a directory server, without performing any other operation. Threads may be configured to keep open connections and perform LDAP binds repeatedly. The command-line options let you specify the bind credentials.

The command uses LDAP v3, and cannot be used to authenticate to an LDAP v2 directory not supporting LDAP v3. Furthermore, the `authrate` command uses simple authentication, not secure binding.

By default, the `authrate` command attempts to bind indefinitely, displaying results periodically, and displaying any errors encountered as well without interrupting operation.

To simulate real use conditions and reduce any artifacts due to the repetitive nature of the tests, the `authrate` command provides a mechanism for generating a random bind DN for authentication.

### Random Bind DN Syntax

Include randomly generated numbers by specifying `%d` and `%s` placeholders in the bind DN and the bind password. These placeholders are then replaced according to the following rules:

`%d`

Replace this placeholder with random integer values depending on the *maxRand* parameter to the `-r` option.

The `-r` option may be used at most two times to generate random bind DNs. When used in the bind DN, replacement values for the `%d` placeholder range over  $[0, \text{maxRand1}-1]$  for the first use of the `-r` option, and over  $[1, \text{maxRand2}]$  for the second.

The `%d` may be used up to eight times to generate a random password. When used in the bind password, replacement values for the `%d` placeholder range over  $[0, \text{maxRand1}-1]$  for each use of the `-r` option.

When the the number of `%d` placeholders exceeds the number of `-r` options, only one value for each use of the `-r` option is generated. Each `%d` placeholder is replaced with a generated value.

`%s`

Replace this placeholder with random strings from the file specified using the `-i` option.

Replacement values for this placeholder are randomly selected lines of the file specified.

### Random Bind DN Substitution

The `authrate` command requires that you apply the following rules for substitutions, displaying an error message when the used incorrectly:

- Use only one type of placeholder, either `%d` or `%s`, per invocation of the `authrate` command.
- Use `%%d` and `%%s` to specify literal strings `%d` and `%s`, respectively.

In order to use this random authentication mechanism, you must populate your directory accordingly. For example, you can measure the authentication rate using the following command:

```
$ authrate -D "uid=test%d,ou=test,dc=example,dc=com" -w "auth%d%d" -r 100
```

In order for the `authrate` command to bind effectively, your directory must contain entries corresponding to the following LDIF excerpt:

```
dn: uid=test0,ou=test,dc=example,dc=com
userPassword: auth00

dn: uid=test1,ou=test,dc=example,dc=com
userPassword: auth11

dn: uid=test2,ou=test,dc=example,dc=com
userPassword: auth22
...

dn: uid=test10,ou=test,dc=example,dc=com
userPassword: auth1010
...

dn: uid=test99,ou=test,dc=example,dc=com
userPassword: auth9999
```

## Examples

Examples in this section use the following conventions:

- The `authrate` command is found in a directory present in the `PATH` used for the examples.
- The directory server is located on a system named `host`.
- The directory has been configured to support anonymous access for search and read. Therefore, you do not have to specify bind information.
- The directory server listens on port 389, the default for non-SSL connections.

### Example 1 `authrate`: Sample Output

The following command performs anonymous binds until it has displayed five results messages. Notice that each line concerns only the elapsed interval.

```
$ authrate -C 5
Avg r=1952.00/thr (390.40/sec), total= 1952
Avg r=1937.00/thr (387.40/sec), total= 1937
Avg r=1938.00/thr (387.60/sec), total= 1938
Avg r=1921.00/thr (384.20/sec), total= 1921
Avg r=1921.00/thr (384.20/sec), total= 1921
All threads exited
```

Notice also that a result message provides the following items of information:

- The average rate of authentication per thread of execution
- The average rate of authentication per second
- The total number of authentication operations performed during the interval the results message concerns

### Example 2 `authrate`: Two Threads

The following command performs anonymous binds until it has displayed five results messages, using three threads to bind. Notice that each line concerns only the elapsed interval.

```
$ authrate -C 5 -t 3
Avg r= 300.00/thr (180.00/sec), total= 900
Avg r= 300.00/thr (180.00/sec), total= 900
Avg r= 299.67/thr (179.80/sec), total= 899
Avg r= 298.00/thr (178.80/sec), total= 894
Avg r= 299.33/thr (179.60/sec), total= 898
All threads exited
```

Here the average per thread, approximate 300 binds, is shown for each interval of three seconds. The averages given in parentheses, approximately 180 per second, represent the average bind rate over the interval. The totals shown represent the total number of binds over the interval.

### Example 3 authrate: Full Authentication Rate

The following command applies the mechanism described in [Random Bind DN Substitution](#), performing full authentication (open, bind, unbind, close) with randomly generated bind DN's and passwords.

```
$ authrate -D "uid=test%d,ou=test,dc=example,dc=com" -w "auth%d%d" -r 100 -C 5
Avg r=1301.00/thr (260.20/sec), total= 1301
Avg r=1307.00/thr (261.40/sec), total= 1307
Avg r=1281.00/thr (256.20/sec), total= 1281
Avg r=1316.00/thr (263.20/sec), total= 1316
Avg r=1313.00/thr (262.60/sec), total= 1313
All threads exited
```

### Example 4 authrate: Bind Rate Alone

The following command applies the mechanism described in [Random Bind DN Substitution](#), keeping the connection open and binding repeatedly with randomly generated bind DN's and passwords.

```
$ authrate -D "uid=test%d,ou=test,dc=example,dc=com" -w "auth%d%d" -r 100 -k -C 5
Avg r=2584.00/thr (516.80/sec), total= 2584
Avg r=2603.00/thr (520.60/sec), total= 2603
Avg r=2592.00/thr (518.40/sec), total= 2592
Avg r=2613.00/thr (522.60/sec), total= 2613
Avg r=2560.00/thr (512.00/sec), total= 2560
All threads exited
```

## Exit Status

The `authrate` command returns the following exit status codes.

0  
Successful completion.

**non-zero**  
An error occurred.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	Zip distribution only

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Stability Level	Evolving

**See Also**

[makeldif\(1\)](#), [modrate\(1\)](#), [searchrate\(1\)](#)

## dsmlmodify

add, modify, rename, move, or delete directory entries

### Synopsis

```
install-path/dsrk/bin/dsmlmodify  
-h hostURL [options] -f filename
```

### Description

The `dsmlmodify` command requests the addition, modification, rename, move, or deletion of entries stored in a directory accessible through Directory Services Markup Language (DSML) v2.

You must specify additions and modifications in the proper order, because the directory performs the updates in the order you request them. For example, to add entries to a subtree that does not yet exist, you must first update the base entry at the root of the subtree before adding entries under the base entry.

### Options

The `dsmlmodify` command supports the following options:

**-D *user-identifier***

Use the specified user identifier to authenticate.

The user identifier is the HTTP-layer identifier. The HTTP-layer identifier is typically mapped to an account in the directory. For example, if the `uid` value is used for HTTP-layer authentication, which maps in the directory to bind DN

`dn:uid=user-identifier,ou=people,dc=example,dc=com`, then the `dsmlmodify`

`-D bjensen` command would end up using permissions for directory operations

based on the permissions for the account with entry DN

`uid=bjensen,ou=people,dc=example,dc=com`. The *user-identifier* thus depends closely on the identity mapping between the HTTP layer and the LDAP layer.

If the user identifier and its password are omitted, the `dsmlmodify` command binds anonymously. The user identifier determines what entries and attributes the user can modify, according to the permissions for the user.

**-f *filename***

Read the modifications from a file using DSML syntax.

The following content for example allows modification of Barbara Jensen's password:

```
<modifyRequest dn="uid=bjensen,ou=people,dc=example,dc=com">  
<modification name="userpassword" operation="replace">  
<value>newpassword</value>  
</modification>  
</modifyRequest>
```

**-h *hostURL***

Use the specified URL to access the directory.

The host URL takes the form `http://host:port` where *host* represents the host on which the directory runs, and *port* is the port on which the directory listens for DSML requests.

`-j filename`

Read the bind password for simple HTTP authentication from the specified file.

`-w -`

Prompt for the bind password for simple HTTP authentication.

`-w password`

Use the specified bind password for simple HTTP authentication.

## Examples

Examples in this section use the following conventions:

- The `dsmlmodify` command is found in a directory present in the `PATH` used for the examples.
- The directory server is located on a system named `host`.
- The directory server listens for DSML requests over HTTP on port 8080.

### Example 1 `dsmlmodify`: Adding an Entry

The following commands demonstrate adding an entry:

```
$ cat add.dsml
<addRequest dn="uid=ajohnson,ou=people,dc=example,dc=com">
  <attr name="objectclass"><value>top</value></attr>
  <attr name="objectclass"><value>person</value></attr>
  <attr name="objectclass"><value>organizationalPerson</value></attr>
  <attr name="objectclass"><value>inetOrgPerson</value></attr>
  <attr name="uid"><value>ajohnson</value></attr>
  <attr name="sn"><value>Johnson</value></attr>
  <attr name="cn"><value>Alice</value></attr>
  <attr name="mail"><value>alice.johnson@example.com</value></attr>
  <attr name="userPassword"><value>weakness</value></attr>
</addRequest>
$ dsmlmodify -h http://host:8080 -D hmiller -w - -f add.dsml
```

Enter bind password:

...

If you read `Example.ldif`, you see that `hmiller`'s password is `hillock`.

### Example 2 `dsmlmodify`: Modifying an Entry

The following commands demonstrate modifying an entry:

```
$ cat mod.dsml
<modifyRequest dn="uid=bjensen,ou=people,dc=example,dc=com">
  <modification name="userpassword" operation="replace">
    <value>newpassword</value>
  </modification>
</modifyRequest>
$ dsmlmodify -h http://host:8080 -D bjensen -w - -f mod.dsml
```

Enter bind password:

...

If you read `Example.ldif`, you see that the `bjensen`'s password is `hifalutin`.

**Example 3 dsmlmodify: Deleting an Entry**

The following commands demonstrate deleting an entry:

```
$ cat del.dsml
<delRequest dn="uid=ajohnson,ou=people,dc=example,dc=com" />
$ dsmlmodify -h http://host:8080 -D hmiller -w - -f del.dsml
Enter bind password:
...
```

If you read `Example.ldif`, you see that `hmiller`'s password is `hillock`.

**Example 4 dsmlmodify: Renaming an Entry**

The following commands demonstrate renaming an entry:

```
$ cat rdn.dsml
<modDNRequest
  dn="uid=ajohnson,ou=people,dc=example,dc=com"
  newrdn="uid=aweiss"
  deleteoldrdn="true"
  newSuperior="ou=people,dc=example,dc=com" />
$ dsmlmodify -h http://host:8080 -D hmiller -w - -f rdn.dsml
Enter bind password:
...
```

If you read `Example.ldif`, you see that `hmiller`'s password is `hillock`.

**Exit Status**

Exit status values are returned as part of the response, including both the code and the description as described in the DSML v2 standard. Common exit status codes follow:

**0**

Successful completion; success.

**1**

Server encountered errors while processing the request; `operationsError`.

**2**

Server encountered errors while processing the request; `protocolError`.

**10**

Base DN belongs to an entry handled by neither server, and the referral URL identifies another server that handles the entry; `referral`.

**16**

Attribute to be modified does not exist; `noSuchAttribute`.

**19**

Attribute modification requested is not a proper modification. For example, a requested change to `userpassword` would result in a user password shorter than the minimum length allowed; `constraintViolation`.

**20**

Attribute to add already exists with specified value; `attributeOrValueExists`.

**21**

In response to a request to modify directory schema, the requested modification includes no object class or attribute type specification; `invalidAttributeSyntax`.

**32**

Base DN belongs to an entry handled by neither server, and no referral URL is available for the entry; noSuchObject.

**50**

Bind DN user does not have permission to read the entry from the directory; insufficientAccessRights.

**53**

Directory is read-only; unwillingToPerform.

**65**

Requested modification would cause the entry not to comply with the schema; objectClassViolation.

**67**

Requested modification would cause the entry to be missing attributes that are components of the entry DN; notAllowedOnRDN.

**68**

An entry already exists with the same DN as the entry to add; entryAlreadyExists.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	Zip distribution only
Stability Level	Evolving

**See Also**

[dsmlsearch\(1\)](#), [ldap\\_error\(3LDAP\)](#)

## dsmlsearch

find directory entries

### Synopsis

```
install-path/dsrk/bin/dsmlsearch  
-h hostURL -b baseDN [options] [attribute]...
```

### Description

The `dsmlsearch` command searches for entries stored in a directory accessible through Directory Services Markup Language (DSML) v2, and displays the results in DSML format, including the specified attributes or all attributes returned if none are specified.

Filter files contain filters in DSML format. The `dsmlsearch` command does not support LDAP-style filters.

### Options

The `dsmlsearch` command supports the following options:

**-a *deref***

Dereference aliases as specified during a search. Possible values for the *deref* argument include:

`derefAlways`

Dereference aliases both when finding the base DN, and when searching below it.

`derefFindingBaseObj`

Dereference aliases when finding the base DN.

`neverDerefAliases`

Never dereference aliases (default).

This option has no effect when used with directories that do not support alias dereferencing.

**-b *baseDN***

Use the entry with the specified distinguished name (DN) as the base entry for the search scope.

**-D *user-identifier***

Use the specified user identifier to authenticate.

The user identifier is the HTTP-layer identifier. The HTTP-layer identifier is typically mapped to an account in the directory. For example, if the `uid` value is used for HTTP-layer authentication, which maps in the directory to bind DN `dn:uid=user-identifier,ou=people,dc=example,dc=com`, then the `dsmlsearch -D bjensen` command would end up using permissions for directory operations based on the permissions for the account with entry DN `uid=bjensen,ou=people,dc=example,dc=com`. The *user-identifier* thus depends closely on the identity mapping between the HTTP layer and the LDAP layer.

If the user identifier and its password are omitted, the `dsmlsearch` command binds anonymously. The user identifier determines what entries and attributes the user can read, according to the permissions for the user.

**-f *filename***

Read the search filter or filters from the specified file.

**-h *hostURL***

Use the specified URL to access the directory.

The host URL takes the form `http://host:port` where *host* represents the host on which the directory runs, and *port* is the port on which the directory listens for DSML requests.

**-j *filename***

Read the bind password for simple HTTP authentication from the specified file.

**-l *timelimit***

Interrupt the search if the time limit specified in seconds is exceeded.

**-s *scope***

Use the specified search scope.

The following values are supported for *scope*:

`baseObject`

Examine only the entry specified by the argument to the `-b` option.

`singleLevel`

Examine only to the entry specified by the argument to the `-b` option and its immediate children.

`wholeSubtree`

(Default) Examine the subtree whose root is the entry specified by the argument to the `-b` option.

**-w -**

Prompt for the bind password for simple HTTP authentication.

**-w *password***

Use the specified bind password for simple HTTP authentication.

**-z *maxEntries***

Return no more than the specified number of entries.

## Examples

Examples in this section use the following conventions:

- The `dsmlsearch` command is found in a directory present in the `PATH` used for the examples.
- The directory server is located on a system named `host`.
- The directory has been configured to support anonymous access for search and read. Therefore, you do not have to specify bind information.
- The directory server listens for DSML requests over HTTP on port 8080.

**Example 1 dsmlsearch: Returning All Entries**

The following command returns all entries in the suffix under the base DN. Use this only when you need to retrieve all entries and attributes:

```
$ cat filter
<filter>
<present name="objectclass"/>
</filter>
$ dsmlsearch -h http://host:8080 -b dc=example,dc=com -f filter
```

**Example 2 dsmlsearch: Narrowing a Search**

The following command employs a more specific filter to narrow the search:

```
$ cat filter
<filter>
<equalityMatch name="uid">
<value>bjensen</value>
</equalityMatch>
</filter>
$ dsmlsearch -h http://host:8080 -b dc=example,dc=com -f filter
```

**Example 3 dsmlsearch: Searching the Root DSE**

The following command searches the root DSE entry, which contains the list of suffixes supported by the directory and potentially other information. Notice you specify the scope as only the base entry:

```
$ cat filter
<filter>
<present name="objectclass"/>
</filter>
$ dsmlsearch -h http://host:8080 -b "" -s baseObject -f filter
```

**Example 4 dsmlsearch: Searching the Schema Entry**

The following command searches the schema entry, which contains the directory schema. Notice you specify the scope as only the base entry:

```
$ cat filter
<filter>
<present name="objectclass"/>
</filter>
$ dsmlsearch -h http://host:8080 -b cn=schema -s baseObject -f filter
```

**Example 5 dsmlsearch: Filter Examples**

The following list shows LDAP search filters with corresponding DSML search filters.

**LDAP filter:** (cn=Barbara Francis)

**DSML filter:**

```
<filter>
<equalityMatch name="cn">
<value>Barbara Francis</value>
</equalityMatch>
</filter>
```

**LDAP filter:** (cn=\*Barb\*)

DSML filter:

```
<filter>
<substrings name="cn">
<any>Barb</any>
</substrings>
</filter>
```

**LDAP filter:** (cn~=Barbare)

DSML filter:

```
<filter>
<approxMatch name="cn">
<value>Barbare</value>
</approxMatch>
</filter>
```

**LDAP filter:** (!(cn=\*Barbara\*))

DSML filter:

```
<filter>
<not>
  <substrings name="cn">
    <any>Barbara</any>
  </substrings>
</not>
</filter>
```

**LDAP filter:** (&(cn=\*Barbara\*)(cn=\*Francis\*))

DSML filter:

```
<filter>
<and>
  <substrings name="cn">
    <any>Barbara</any>
  </substrings>
  <substrings name="cn">
    <any>Francis</any>
  </substrings>
</and>
</filter>
```

**LDAP filter:** (|(cn=\*Barbara\*)(cn=\*Jensen\*))

DSML filter:

```
<filter>
<or>
  <substrings name="cn">
    <any>Barbara</any>
  </substrings>
  <substrings name="cn">
    <any>Jensen</any>
  </substrings>
</or>
</filter>
```

## Exit Status

Exit status values are returned as part of the response, including both the code and the description as described in the DSML v2 standard. Common exit status codes follow:

**0**

Successful completion; success.

**1**

Server encountered errors while processing the request; `operationsError`.

**2**

Server encountered errors while processing the request; `protocolError`.

**3**

Search exceeded the time limit for operations on the server; `timeLimitExceeded`.

**4**

Search returned more results than the maximum number allowed by the server; `sizeLimitExceeded`.

**10**

Base DN belongs to an entry handled by neither server, and the referral URL identifies another server that handles the entry; `referral`.

**11**

Search returned more results than the maximum number a client application is allowed by the server to retrieve; `adminLimitExceeded`.

**32**

Base DN belongs to an entry handled by neither server, and no referral URL is available for the entry; `noSuchObject`.

**50**

Bind DN user does not have permission to read the entry from the directory; `insufficientAccessRights`.

**53**

Directory is read-only; `unwillingToPerform`.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	Zip distribution only
Stability Level	Evolving

## See Also

[dsmlmodify\(1\)](#), [ldap\\_error\(3LDAP\)](#)

## entrycmp

compare the same entry on two or more different servers

### Synopsis

```
install-path/bin/entrycmp
[-D bindDN] [-w password] [-n] [-p port] [-j file] [-T timeout]
[-J file] [-W keypassword] [-K keydbpath] [-N certname]
[-P certdbpath] [-e SSL port] ServerSpec entryDN
```

### Description

The `entrycmp` command compares the same entry on two or more different servers. An entry is retrieved from the master and the `nsuniqueid` of the entry is used to retrieve the same entry from a specified consumer. All the attributes and values of the two entries are compared. If they are identical, the entries are considered to be the same.

### Options

The following options are supported:

`-D`

The distinguished name with which to bind to the server. This parameter is optional if the server is configured to support anonymous access. If a DN is specified in the *ServerSpec*, this overrides the `-D` option.

`-j`

If specifying the default password at the command-line poses a security risk, the password can be stored in a file. The `-j` option specifies this file.

`-n`

Specifies that `entrycmp` should not run in interactive mode. Running in interactive mode allows you to re-enter the `bindDN`, password, host and port, if a bind error occurs.

`-p`

The TCP port used by Directory Server. The default port is 389. If a port is specified in the *ServerSpec*, this overrides the `-p` option.

`-T`

Specifies the number of seconds after which `entrycmp` will time out if the server connection goes down.

`-w`

The password associated with the distinguished name specified by the `-D` option. If a password is specified in the *ServerSpec*, this overrides the `-w` option.

#### **entryDN**

The DN of the entry that you wish to compare.

#### **ServerSpec**

The server specification. The server specification is of one of the following forms.

```
-s|-S HostSpec [-c|-C HostSpec ...]
```

`-c|-C HostSpec [-s|-S HostSpec ...]`

Here, `-s` refers to the supplier replica. `-c` refers to the consumer replica. Lower case specifies non-SSL options. Upper case specifies SSL options.

### **Host Spec**

The host specification, which takes the form

`[bindDN: [password] ]@[host[:port]]`. The following is an example:

**`cn=admin,cn=Administrators,cn=config:mykeyword@myserver:1389`**

If you are using SSL, use `-S` and `-C` in the server specification. In this case, *HostSpec* specifies the certificate name and key password, rather than the bindDN and password. Specifying both more than one `-s`, and also more than one `-c` generates an error. If no `-c` option is specified, the `-s HostSpec` may refer to any server, either a consumer or a supplier.

## **SSL Options**

You can use the following options to specify that `entrycmp` uses LDAPS when communicating with the Directory Server. You can also use these options if you want to use certificate-based authentication. These options are valid only when LDAPS has been turned on and configured.

`-e`

Default SSL port, 636.

`-J`

This option has the same function as the `-j` option, for the key password.

`-K`

Specifies the name of the certificate key used for certificate-based client authentication. For example, `-K Server-Key`.

`-N`

Specifies the certificate name to use for certificate-based client authentication. For example, `-N Server-Cert`. If this option is specified, the `-W` option is required.

`-P`

Specifies the location of the certificate database.

`-W`

Specifies the password for the certificate database identified by the `-P` option. For example, `-W serverpassword`.

## **Examples**

### **Example 1 Specifying an entry DN**

```
$ entrycmp -D cn=admin,cn=Administrators,cn=config -w mykeyword \  
-s myserver:1389 "uid=csmith,ou=people,dc=example,dc=com"
```

## **Exit Status**

The following exit values are returned:

**0**  
Successful completion, that is a match was found.

**1**  
An error occurred, and no match was found.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Stable

## See Also

[insync\(1\)](#), [repldisc\(1\)](#)

## Notes

The node on which you are running the `entrycmp`, `insync`, and `repldisc` tools must be able to reach all the specified hosts. If these hosts are unavailable due to a firewall, VPN, or other network setup reasons, you will encounter difficulties using these tools. For the same reason ensure that all servers are up and running before using these tools.

When identifying hosts, you must use either symbolic names or IP addresses for all hosts since the replication monitoring commands do not address resolution between symbolic names and IP addresses. Using a combination of the two can cause problems. Moreover, on multi-homed hosts, referring to the same Directory Server instance using different names may cause unexpected results.

When SSL is enabled, the directory server on which you are running the tools must have a copy of all the certificates used by the other servers in the topology.

The replication monitoring tools rely on access to `cn=config` to obtain the replication status. This should be taken into account particularly when replication is configured over SSL.

## fildif

creates a filtered version of an LDIF input file

### Synopsis

```
install-path/bin/fildif
-i input-file [-o output-file] [-f ] -b repl-agmt-dn
-p instance-path
```

### Description

The `fildif` command creates a filtered version of an LDIF input file. `fildif` takes a configuration file as an input parameter. This configuration file must conform to the configuration rules of the filtering service included as part of Directory Server, and must contain the specific set and element entries that define these rules. The configuration rules can be defined by using Directory Service Control Center or at the command-line.

`fildif` does not require the Directory Server instance to be running.

A filtering service configuration is accessed through a replication agreement. The replication agreement entry DN is provided to `fildif` with the `-b` option.

---

---

**Note:** `fildif` does not support the LDIF input file bigger than 2GB.

---

---

### Options

The following options are supported:

`-b repl-agmt-dn`

The DN of the replication agreement used as the filtering service configuration entry point. The entry specified must exist in the configuration of the Directory Server instance.

`-f`

Force `fildif` to overwrite the contents of the specified output file, if it exists.

`-i input-file`

The input LDIF file whose contents are filtered.

`-o output-file`

The output LDIF file in which the filtered results are stored. If no output file is specified, the default output file is `./output.ldif`.

`-p`

The full path to the Directory Server instance whose configuration contains the replication agreement specified as a parameter of the `-b` option.

## Examples

### Example 1 Using All Options

The following example shows the `fildif` command to generate an output file `filt_data.ldif` that overwrites the file if it exists already.

```
$ fildif -i data.ldif -o filt_data.ldif -f \
-b "cn=ds.example.com:389,cn=replica,cn=dc=example\,dc=com,\
cn=mapping tree,cn=config"
-p /local/dsInst
```

## Exit Status

The following exit values are returned:

**0**

Successful completion.

**1**

An error occurred.

On error, verbose error messages are output to standard output.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Stable

## See Also

[insync\(1\)](#), [entrycmp\(1\)](#)

## insync

indicate the synchronization state between a supplier replica and one or more consumer replicas

### Synopsis

```
install-path/bin/insync
[-D bindDN] [-w password] [-t] [-n] [-d] [-j file] [-p port]
[-T timeout] [-J file] [-W keypassword] [-K keydbpath]
[-N certname] [-P certdbpath] [-e SSL port] [-b ReplicaRoot]
ServerSpec [interval]
```

### Description

The `insync` command indicates the synchronization state between a supplier replica and one or more consumer replicas. `insync` compares the RUVs of replicas and displays the time difference or delay (in seconds) between the servers.

### Options

The following options are supported:

`-b`

The suffix (replica root) that has been specified for replication. If `-b` is not specified, the delay for all suffixes is displayed.

`-d`

Displays the date of the last change recorded on the master. Using the `-d` option twice (`-d -d`) displays the time difference (in days, minutes and seconds) between the time of the last change and the current time.

`-D`

The distinguished name with which to bind to the server. This parameter is optional if the server is configured to support anonymous access. If a DN is specified in the *ServerSpec*, this overrides the `-D` option.

`-j`

If specifying the default password at the command-line poses a security risk, the password can be stored in a file. The `-j` option specifies this file.

`-n`

Specifies that `insync` should not run in interactive mode. Running in interactive mode allows you to re-enter the `bindDN`, password, host and port, if a bind error occurs.

`-p`

The TCP port used by Directory Server. The default port is 389. If a port is specified in the *ServerSpec*, this overrides the `-p` option.

`-t`

Displays the mode of transport (SSL or CLEAR)

-T

Specifies the number of seconds after which `insync` will time out if the server connection goes down.

-w

The password associated with the distinguished name specified by the `-D` option. If a password is specified in the *ServerSpec*, this overrides the `-w` option.

### **ServerSpec**

The server specification. The server specification is of one of the following forms.

`-s|-S HostSpec [-c|-C HostSpec ...]`

`-c|-C HostSpec [-s|-S HostSpec ...]`

Here, `-s` refers to the supplier replica. `-c` refers to the consumer replica. Lower case specifies non-SSL options. Upper case specifies SSL options.

### **Host Spec**

The host specification, which takes the form

`[bindDN: [password] ]@] host[:port]`. The following is an example:

**cn=admin, cn=Administrators, cn=config:mykeyword@myserver:1389**

If you are using SSL, use `-S` and `-C` in the server specification. In this case, *HostSpec* specifies the certificate name and key password, rather than the bindDN and password. Specifying both more than one `-s`, and also more than one `-c` generates an error. If no `-c` option is specified, the `-s HostSpec` may refer to any server, either a consumer or a supplier.

### **interval**

The amount of time (in seconds) after which the synchronization query will start again (in an infinite loop). If no interval is specified, the synchronization query will run only once.

## **SSL Options**

You can use the following options to specify that `insync` uses LDAPS when communicating with the Directory Server. You can also use these options if you want to use certificate-based authentication. These options are valid only when LDAPS has been turned on and configured.

-e

Default SSL port, 636.

-J

This option has the same function as the `-j` option, for the key password.

-K

Specifies the name of the certificate key used for certificate-based client authentication. For example, `-K Server-Key`.

-N

Specifies the certificate name to use for certificate-based client authentication. For example, `-N Server-Cert`. If this option is specified, the `-w` option is required.

-P

Specifies the location of the certificate database.

-W

Specifies the password for the certificate database identified by the -P option. For example, -W *serverpassword*.

## Examples

### Example 1 Single Server, Repeat Each 30 Seconds

Note that the delay changes to 5, indicating that the consumer is 5 seconds behind the supplier.

```
$ insync -D cn=admin,cn=Administrators,cn=config -w mypwd \  
-s portugal:1389 30
```

ReplicaDn	Consumer	Supplier	Delay
dc=example,dc=com	france.example.com:2389	portugal:1389	0
dc=example,dc=com	france.example.com:2389	portugal:1389	5
dc=example,dc=com	france.example.com:2389	portugal:1389	0

### Example 2 Getting Date of Last Change

```
$ insync -D cn=admin,cn=Administrators,cn=config -w mypwd \  
-s portugal:1389 -b o=rtest -d
```

## Exit Status

The following exit values are returned:

**0**

Successful completion.

**1**

An error occurred.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Stable

## See Also

[entrycmp\(1\)](#), [repldisc\(1\)](#)

## Notes

The node on which you are running the `entrycmp`, `insync`, and `repldisc` tools must be able to reach all the specified hosts. If these hosts are unavailable due to a firewall, VPN, or other network setup reasons, you will encounter difficulties using these tools. For the same reason ensure that all servers are up and running before using these tools.

When identifying hosts, you must use either symbolic names or IP addresses for all hosts since the replication monitoring commands do not address resolution between symbolic names and IP addresses. Using a combination of the two can cause problems. Moreover, on multi-homed hosts, referring to the same Directory Server instance using different names may cause unexpected results.

When SSL is enabled, the directory server on which you are running the tools must have a copy of all the certificates used by the other servers in the topology.

If a delay of -1 is returned, `insync` was unable to obtain any replication information. This may indicate that a Total Update has just been run, or that no changes have been sent to the supplier server.

The replication monitoring tools rely on access to `cn=config` to obtain the replication status. This should be taken into account particularly when replication is configured over SSL.

## ldapcmp

compare LDAP entries from two directories

### Synopsis

```
install-path/dsrk/bin/ldapcmp  
[-h host1 -p port1 [-h host2 -p port2]] [options] -b basedn
```

### Description

The `ldapcmp` command compares a Lightweight Directory Access Protocol (LDAP) entry or subtree of entries from one directory with the an entry or subtree of entries from another directory. It detects entries that do not appear in both directories and detects attribute differences in entries that do appear in both directories.

The `ldapcmp` command reports comparison results using the following output syntax:

**1only: DN**

Entry appears only in the first directory specified.

**2only: DN**

Entry appears only in the second directory specified.

**DN**

Entry appears in both directories, attributes differ. The `ldapcmp` command then explains the differences found:

**different: attrname**

Entries differed by attribute value.

**different: attrname(\*)**

Specified attribute found only in one directory.

**1: attrvalue**

Specified value found in first directory.

**2: attrvalue**

Specified value found in second directory.

### Options

Although the `-h` (host) and `-p` (port) options are not required, you generally use these options to specify how to access the two directories. If you do not specify any `-h` or `-p` options, the `ldapcmp` command compares the content of the directory listening on the default port of the `localhost` system with itself.

Unless the `LDAP_BASEDN` environment variable is set, you must at minimum provide a `basedn` argument to the `-b` option. The `basedn` argument specifies the distinguished name (DN) of the LDAP entry at the base of the search scope.

The following additional options are supported:

`-0`

Ignore LDAP library version mismatches.

When this option is omitted, the default behavior is to assert that the revision number of the LDAP API be greater than or equal to that used to compile the tool. Also, if the library and the tool have the same vendor name, the tool will assert that the vendor version number of the API be greater than or equal to that used to compile the tool. Revision and version numbers are based on the contents of the `LDAPAPIInfo` structure defined in `<ldap.h>` or header files included by `<ldap.h>`.

-3

Check host names in SSL certificates.

-B

Allow binary values to be printed, even if the `-o` option is used.

-D ***binddn***

Use the specified bind DN for accessing both directories, usually enclosed in double quotes (" ") for the shell.

If the bind DN and its password are omitted, the `ldapcmp` command binds anonymously. The bind DN determines what entries and attributes appear in the comparison results, according to the search permissions for the bind DN.

-E

Request that the directories expose (report) bind identities.

-H

-help

--help

-?

Display usage information.

-I ***filename***

Read SSL key password for the client key database specified using the `-P` option from *filename*.

The default is `key3.db`.

-J ***controloid[:criticality[:value::base64value]:<fileurl!]***

Use the specified control OID.

The *criticality* is false by default.

An LDAP control can be associated with a value. Proxy authorization takes a proxy authorization ID, for example, passed with the control OID, and criticality. If a value is necessary you specify it using *value*, *base64value*, or *<fileurl*.

-K ***pathname***

Use the SSL key database located in *pathname*, the full path to the key database file.

The default is to search for the key database file, `key3.db`, in the directory specified by the `-P` option.

-M

Manage referrals, returning the entry containing the referral instead of the entry obtained by following the referral.

-N ***certificate***

Use the specified *certificate* for certificate-based client authentication, for example: `-N "Directory-Cert"`.

Both directories must recognize the specified certificate to perform the comparison.

-O **limit**

Follow at maximum *limit* referral hops. Default is 5.

-P **filename**

Use the certificate database located in *filename*, the full path to the certificate database file.

The default is to search for the certificate database file, `cert8.db`, in the current directory.

-Q [**token**][:**certificate-name**]

Use PKCS 11.

-R

Do not follow referrals automatically.

-V **n**

Use LDAP protocol version *n*, where *n* is 2 or 3. Default is 3.

-W -

Prompt for the password for the client key database specified using the -P option.

The -W option is required for certificate-based client authentication.

-W **password**

Specify the password for the client key database specified using the -P option.

The -W option is required for certificate-based client authentication.

-Y **proxydn**

Use the specified proxy DN for accessing both directories, usually enclosed in double quotes (" ") for the shell.

-Z

Use SSL to provide certificate-based client authentication.

The -Z option requires the -N and -W options and any other SSL options needed to identify the certificate and the key database.

-d **level**

Set LDAP debug level to the specified value.

The following debug levels are supported:

1

Display verbose debugging messages; LDAP\_DEBUG\_TRACE.

2

Display messages about the content of network packets; LDAP\_DEBUG\_PACKETS.

320

Display messages about LDIF parsing; LDAP\_DEBUG\_PARSE.

16384

Display informational messages; LDAP\_DEBUG\_ANY.

Use the sum of the levels to specify more than one debug level. For example, to set the debug level to display both verbose debugging messages, and messages about the content of network packets, specify -d 3.

**-h *host***

Contact the LDAP server on the specified host, which may be a host name or an IP address.

The default is `localhost`.

Specify the host twice to specify hosts for each of the two directories. When you specify the host twice, the first host specified corresponds to the first directory, and the second host corresponds to the second, regardless of the order of other options.

**-i *charset***

Use the specified character set to override the value of the `LANG` environment variable. This option is useful, as the command converts certain arguments you specify to UTF-8 before sending the request to the server. The following arguments are converted: base DN, bind DN, LDAP filter, and password.

You can prevent the command from converting passwords by using the `-k` option.

Examples of *charset* values include `ISO8859-1`, `ISO8859-15`, `ibm-1275`, and `windows-1251`.

**-j *filename***

Read the bind password for simple authentication from the specified file.

**-k**

Do not convert the passwords to UTF-8.

**-l *timelimit***

Interrupt the comparison if the specified time limit is exceeded.

**-m *pathname***

Use the security module database located in the specified directory.

Use the `-m` option if the security module database is in a different directory from the certificate database itself.

**-n**

Show what would be done, but do not actually do it.

**-o *attrname=attrvalue***

Use the specified attribute values when performing SASL authentication.

The following *attrname* arguments are supported:

**authid**

Use the specified authentication identity.

**authzid**

Use the specified authorization identity.

**mech**

Request the specified SASL mechanism for the bind.

**realm**

Use the specified realm to complete the bind.

**secProp**

Use the specified security level.

The *attrvalue* is a valid value corresponding to the *attrname* you specify.

**-p *port***

Contact the LDAP server on the specified port.

The default is 389 (636 if SSL is used).

Specify the port twice to specify ports for each of the two directories. When you specify the port twice, the first port specified corresponds to the first directory, and the second port corresponds to the second, regardless of the order of other options.

**-s *scope***

Use the specified search scope.

The following values are supported for *scope*:

**base**

Examine only the entry specified by the argument to the **-b** option.

**one**

Examine only to the entry specified by the argument to the **-b** option and its immediate children.

**sub**

(Default) Examine the subtree whose root is the entry specified by the argument to the **-b** option.

**-v**

Run in verbose mode, displaying diagnostics on standard output.

**-w -**

Prompt for the bind password for simple authentication.

**-w *password***

Use the specified bind password for simple authentication.

**-z *sizelimit***

Interrupt the comparison if the specified maximum number of entries returned is exceeded.

## Examples

All examples in this section use the following conventions:

- All entries to compare are stored under `dc=example,dc=com`.
- The directories have been configured to support anonymous access for search and read. Therefore, you do not have to specify any bind information.
- The directory servers are located on systems named `host1` and `host2`.
- The servers both listen on port number 389, the default.

### Example 1 Comparing Two Suffixes

When you specify the root DN of the suffix as the base DN, `ldapcmp` compares all entries of the entire suffix in both directories.

```
$ ldapcmp -h host1 -h host2 -b "dc=example,dc=com"
```

You should have some idea of the size and differences between your directories before comparing them. Comparing two directories is useful for finding small difference between directories. When comparing completely different subtrees, the output can be

very large. Narrow your comparison by specifying the base DN of a similar subtree in both directories.

### Example 2 Comparing Two Entries

The following command compares a single user entry in both directories:

```
$ ldapcmp -h host1 -h host2 -s base \
-b "uid=bjensen,ou=People,dc=example,dc=com"
```

### Example 3 Setting the Base DN

The following commands set the `LDAP_BASEDN` environment variable, and then compare all entries of the entire base suffix in both directories, running in verbose mode. The syntax of the first command may not work for your shell. Refer to the documentation about your shell for instructions on setting environment variables.

```
$ LDAP_BASEDN="dc=example,dc=com"; export LDAP_BASEDN
$ ldapcmp -v -h host1 -h host2
```

### Example 4 Comparing Directory Configurations

The following command compares root DSE entries for both directories:

```
$ ldapcmp -h host1 -h host2 -s base -b ""
```

### Example 5 Comparing Directory Schema

The following command compares schema entries for both directories:

```
$ ldapcmp -h host1 -h host2 -b "cn=schema"
```

## Exit Status

The exit status returned reflects the return values of the underlying functions used, which may depend on return values sent by the server. The return values are defined through `<ldap.h>` files both on the client side and on the server side. Common exit status codes follow:

**0**

Successful completion; `LDAP_SUCCESS`; 0x00.

**1**

Server encountered errors while processing the request; `LDAP_OPERATIONS_ERROR`; 0x01.

**2**

Server encountered errors, such as a BER-decoding error, while processing the request; `LDAP_PROTOCOL_ERROR`; 0x02.

**3**

Search exceeded the time limit for operations on the server; `LDAP_TIMELIMIT_EXCEEDED`; 0x03.

**4**

Search returned more results than the maximum number allowed by the server; `LDAP_SIZELIMIT_EXCEEDED`; 0x04.

**10**

Base DN belongs to an entry handled by neither server, and the referral URL identifies another server that handles the entry; LDAP\_REFERRAL; 0x0a.

**11**

Search returned more results than the maximum number a client application is allowed by the server to retrieve; LDAP\_ADMINLIMIT\_EXCEEDED; 0x0b.

**32**

Base DN belongs to an entry handled by neither server, and no referral URL is available for the entry; LDAP\_NO\_SUCH\_OBJECT; 0x20.

**50**

Bind DN user does not have permission to read the entry from the directory; LDAP\_INSUFFICIENT\_ACCESS; 0x32.

**81**

One of the directories did not respond to the request, or the connection was lost; LDAP\_SERVER\_DOWN; 0x51.

**82**

An error occurred while receiving results; LDAP\_LOCAL\_ERROR; 0x52.

**83**

The request could not be BER-encoded; LDAP\_ENCODING\_ERROR; 0x53.

**84**

A result could not be decoded; LDAP\_DECODING\_ERROR; 0x54.

**85**

The search exceeded the time limit specified using the -1 option; LDAP\_TIMEOUT; 0x55.

**89**

An option or argument is not valid; LDAP\_PARAM\_ERROR; 0x59.

**90**

Needed memory could not be allocated; LDAP\_NO\_MEMORY; 0x5a.

**91**

A specified host name or port is not valid; LDAP\_CONNECT\_ERROR; 0x5b.

**92**

At least one server supports only LDAPv2, and the -v 2 option was not used; LDAP\_NOT\_SUPPORTED; 0x5c.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWldapcsdk-tools
Stability Level	Evolving

**See Also**

[ldapcompare\(1\)](#), [ldapdelete\(1\)](#), [ldapmodify\(1\)](#), [ldappasswd\(1\)](#),  
[ldapsearch\(1\)](#)

## ldapcompare

compare a value with an LDAP entry attribute value

### Synopsis

```
install-path/dsrk/bin/ldapcompare  
[options] attrtype:attrvalue [dn]...
```

```
install-path/dsrk/bin/ldapcompare  
[options] attrtype::base64value [dn]...
```

```
install-path/dsrk/bin/ldapcompare  
[options] attrtype:<fileurl [dn]...
```

### Description

The `ldapcompare` command asserts that a value you specify is the same as an entry attribute value stored by the directory server.

Specify the attribute type, followed by the attribute value, either as a string, a base64-encoded value, or a URL to a file containing the attribute value, such as a photo or certificate. You typically enclose the attribute type/value pair in single quotes ( ' ') for the shell.

Also specify one or more entry DN's, separated by space, and typically enclosed in double quotes ( " ") for the shell. The `ldapcompare` command then compares the specified attribute value to that of attributes on each of the entries indicated by the DN's you provide.

### Options

The following options are supported:

-0

Ignore LDAP library version mismatches.

When this option is omitted, the default behavior is to assert that the revision number of the LDAP API be greater than or equal to that used to compile the tool. Also, if the library and the tool have the same vendor name, the tool will assert that the vendor version number of the API be greater than or equal to that used to compile the tool. Revision and version numbers are based on the contents of the `LDAPAPIInfo` structure defined in `<ldap.h>` or header files included by `<ldap.h>`.

-3

Check host names in SSL certificates.

-D **bindDN**

Use the specified bind DN to authenticate to the directory server.

If the bind DN and its password are omitted, the `ldapcompare` command binds anonymously. The bind DN determines what entries and attributes appear in the comparison results, according to the search permissions for the bind DN.

-E

Request that the directories expose (report) bind identities.

-H

-help

--help

-?

Display usage information.

-I **filename**

Read SSL key password for the client key database specified using the -P option from *filename*.

The default is `key3.db`.

-J **controloid[:criticality[:value::base64value]:<fileurl>]**

Use the specified control OID.

The *criticality*, a boolean, is false by default.

An LDAP control can be associated with a value. Proxy authorization takes a proxy authorization ID, for example, passed with the control OID, and criticality. If a value is necessary you specify it using *value*, *base64value*, or *<fileurl*.

-K **pathname**

Use the SSL key database located in *pathname*, the full path to the key database file.

The default is to search for the key database file, `key3.db`, in the directory specified by the -P option.

-M

Manage referrals, comparing the entry containing the referral instead of the entry obtained by following the referral.

-N **certificate**

Use the specified *certificate* for certificate-based client authentication, for example: -N "Client-Cert", where Client-Cert is the subject name of the user certificate.

-O **limit**

Follow at maximum *limit* referral hops. Default is 5.

-P **pathname**

Use the certificate database located in *pathname*, the full path to the certificate database file.

The default is to search for the certificate database file, `cert8.db`, in the current directory.

-Q [**token**][:**certificate-name**]

Use PKCS 11.

-R

Do not follow referrals automatically.

-V **n**

Use LDAP protocol version *n*, where *n* is 2 or 3. Default is 3.

-W -

Prompt for the password for the client key database specified using the -P option.

The -W option is required for certificate-based client authentication.

**-w password**

Specify the password for the client key database specified using the `-P` option.

The `-w` option is required for certificate-based client authentication.

**-Y proxydn**

Use the rights of the entry having the specified DN for performing LDAP operations. When using this option, you must also specify how to bind before you assume the rights of the proxy. Thus, when using simple authentication, you would also use the `-D` and `-w` options with this option.

Before proxy authentication can work in Directory Server, you must set up the appropriate access control instructions.

**-Z**

Use SSL to provide certificate-based client authentication.

The `-Z` option requires the `-N` and `-w` options and any other SSL options needed to identify the certificate and the key database.

**-ZZ**

Use Start TLS to provide certificate-based client authentication.

The `-ZZ` option requires the `-N` and `-w` options and any other SSL options needed to identify the certificate and the key database.

**-c**

Run in continuous mode, not stopping on errors.

In continuous mode, errors are reported but the `ldapcompare` command continues performing comparisons. When not running in continuous mode, the `ldapcompare` command quits after the first error.

**-d level**

Set LDAP debug level to the specified value.

The following debug levels are supported:

1

Display verbose debugging messages; `LDAP_DEBUG_TRACE`.

2

Display messages about the content of network packets; `LDAP_DEBUG_PACKETS`.

320

Display messages about LDIF parsing; `LDAP_DEBUG_PARSE`.

16384

Display informational messages; `LDAP_DEBUG_ANY`.

Use the sum of the levels to specify more than one debug level. For example, to set the debug level to display both verbose debugging messages, and messages about the content of network packets, specify `-d 3`.

**-f filename**

Read DN's from the specified file.

The file format is one DN per line without quotes around DN's. The `ldapcompare` command reads each line as one literal DN, performing the comparison for each entry whose DN is specified.

**-h *host***

Contact the LDAP server on the specified host, which may be a host name or an IP address. Enclose IPv6 addresses in brackets ([]) as described in RFC 2732.

For example, when mapping the IPv4 address 192.168.0.99 to IPv6, pass the `-h` option with its argument as `-h [::ffff:192.168.0.99]`. Notice the brackets.

When using GSSAPI with Directory Server, specify the *host* as a fully-qualified host name which matches the value of the `nsslapd-localhost` attribute on the `cn=config` entry. The GSSAPI authentication process requires that the host name provided by the client match the one provided by the server.

The default is `localhost`.

**-i *charset***

Use the specified character set to override the value of the `LANG` environment variable. This option is useful, as the command converts certain arguments you specify to UTF-8 before sending the request to the server. The following arguments are converted: base DN, bind DN, LDAP filter, and password.

You can prevent the command from converting passwords by using the `-k` option.

Examples of *charset* values include `ISO8859-1`, `ISO8859-15`, `ibm-1275`, and `windows-1251`.

**-j *filename***

Read the bind password for simple authentication from the specified file.

**-k**

Do not convert the passwords to UTF-8.

**-m *pathname***

Use the security module database located in the specified directory.

Use the `-m` option if the security module database is in a different directory from the certificate database itself.

**-n**

Show what would be done, but do not actually do it.

**-o *attrname=attrvalue***

Use the specified attribute values when performing SASL authentication.

The following *attrname* arguments are supported:

**authid**

Use the specified authentication identity.

**authzid**

Use the specified authorization identity.

**mech**

Request the specified SASL mechanism for the bind.

**realm**

Use the specified realm to complete the bind.

**secProp**

Use the specified security level.

The *attrvalue* is a valid value corresponding to the *attrname* you specify.

**-p port**

Contact the LDAP server on the specified port.

The default is 389 (636 if SSL is used).

**-q**

Run in quiet mode, displaying no information about results of comparisons, but only about LDAP errors.

**-v**

Run in verbose mode, displaying diagnostics on standard output.

**-w -**

Prompt for the bind password for simple authentication.

**-w password**

Use the specified bind password for simple authentication.

## Examples

Examples in this section use the following conventions:

- The directory server is located on a system named `host`.
- The directory server has been configured to support anonymous access for search and read. Therefore, you do not have to specify bind information.
- The directory server listens on port number 389, the default.

### Example 1 Comparing String Values

The following command compares a specified string with an attribute value:

```
$ ./ldapcompare -h host 'givenname:Barbara' \  
"uid=bjensen,ou=People,dc=example,dc=com"  
comparing type: "givenname" value: "Barbara"  
in entry "uid=bjensen,ou=People,dc=example,dc=com"  
compare TRUE
```

### Example 2 Comparing Base 64 Encoded Values

The following command compares a base64-encoded value with an attribute value:

```
$ ./ldapcompare -h host 'cn::QmFicyBKZW5zZW4=' \  
"uid=bjensen,ou=People,dc=example,dc=com"  
comparing type: "cn" value: "Babs Jensen"  
in entry "uid=bjensen,ou=People,dc=example,dc=com"  
compare TRUE
```

### Example 3 Comparing Binary Values in Files

The following command compares an image with an attribute value:

```
$ ./ldapcompare -h host 'jpegphoto:<file:///home/bjensen/bjensen.jpg' \  
"uid=bjensen,ou=People,dc=example,dc=com"  
comparing type: "jpegphoto" value: "NOT ASCII (3674 bytes)"  
in entry "uid=bjensen,ou=People,dc=example,dc=com"  
compare TRUE
```

## Exit Status

The exit status returned either corresponds to 5 (LDAP\_COMPARE\_FALSE) or 6 (LDAP\_COMPARE\_TRUE), or reflects the return values of the underlying functions used, which may depend on return values sent by the server. Common exit status codes follow:

**1**

Server encountered errors while processing the request; LDAP\_OPERATIONS\_ERROR; 0x01.

**2**

Server encountered errors, such as a BER-decoding error, while processing the request; LDAP\_PROTOCOL\_ERROR; 0x02.

**3**

Search exceeded the time limit for operations on the server; LDAP\_TIMELIMIT\_EXCEEDED; 0x03.

**5**

Operation was successful but the values did not match; LDAP\_COMPARE\_FALSE; 0x05.

**6**

Operation was successful and the values match; LDAP\_COMPARE\_TRUE; 0x06.

**10**

DN of the entry to compare belongs to an entry handled by neither server, and the referral URL identifies another server that handles the entry; LDAP\_REFERRAL; 0x0a.

**32**

DN of the entry to compare belongs to an entry handled by neither server, and no referral URL is available for the entry; LDAP\_NO\_SUCH\_OBJECT; 0x20.

**34**

DN of the entry to compare is not a valid DN; LDAP\_INVALID\_DN\_SYNTAX; 0x22.

**50**

Bind DN user does not have permission to read the entry from the directory; LDAP\_INSUFFICIENT\_ACCESS; 0x32.

**81**

One of the directories did not respond to the request, or the connection was lost; LDAP\_SERVER\_DOWN; 0x51.

**82**

An error occurred while receiving results; LDAP\_LOCAL\_ERROR; 0x52.

**83**

The request could not be BER-encoded; LDAP\_ENCODING\_ERROR; 0x53.

**84**

A result could not be decoded; LDAP\_DECODING\_ERROR; 0x54.

**89**

An option or argument is not valid; LDAP\_PARAM\_ERROR; 0x59.

**90**

Needed memory could not be allocated; LDAP\_NO\_MEMORY; 0x5a.

**91**

A specified host name or port is not valid; LDAP\_CONNECT\_ERROR; 0x5b.

**92**

At least one server supports only LDAPv2, and the `-v 2` option was not used, or the `-v 2` option was used, but the server no longer supports LDAP v2; LDAP\_NOT\_SUPPORTED; 0x5c.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWldapcsdk-tools
Stability Level	Evolving

**See Also**

[ldapcmp\(1\)](#), [ldapdelete\(1\)](#), [ldapmodify\(1\)](#), [ldapsearch\(1\)](#), [ldappasswd\(1\)](#)

---

## ldapdelete

delete LDAP entries

### Synopsis

```
install-path/dsrk/bin/ldapdelete  
[options] [dn]...
```

```
install-path/dsrk/bin/ldapdelete  
[options] < filename
```

### Description

The `ldapdelete` command requests deletion of entries stored by a directory server. You must bind as a user having access to delete the entries specified.

Specify one or more entry DN's, separated by space, and typically enclosed in double quotes ( " ") for the shell. Alternatively, include DN's in a file, one per line without quotes around DN's. The `ldapdelete` command reads each line as one literal DN.

When deleting a subtree, you must delete child entries before you delete their parent entries.

### Options

The following options are supported:

-0

Ignore LDAP library version mismatches.

When this option is omitted, the default behavior is to assert that the revision number of the LDAP API be greater than or equal to that used to compile the tool. Also, if the library and the tool have the same vendor name, the tool will assert that the vendor version number of the API be greater than or equal to that used to compile the tool. Revision and version numbers are based on the contents of the `LDAPAPIInfo` structure defined in `<ldap.h>` or header files included by `<ldap.h>`.

-3

Check host names in SSL certificates.

-D **bindDN**

Use the specified bind DN to authenticate to the directory server.

If the bind DN and its password are omitted, the `ldapdelete` command binds anonymously. The bind DN determines whether the delete operation can complete, according to the user permissions.

-E

Request that the directories expose (report) bind identities.

-H

-help

--help

-?

Display usage information.

**-I filename**

Read SSL key password for the client key database specified using the **-P** option from *filename*.

The default is `key3.db`.

**-J controloid[:criticality[:value[:base64value[:<fileurl!]]]**

Use the specified control OID.

The *criticality*, a boolean, is false by default.

An LDAP control can be associated with a value. Proxy authorization takes a proxy authorization ID, for example, passed with the control OID, and criticality. If a value is necessary you specify it using *value*, *base64value*, or *<fileurl*.

**-K pathname**

Use the SSL key database located in *pathname*, the full path to the key database file.

The default is to search for the key database file, `key3.db`, in the directory specified by the **-P** option.

**-M**

Manage referrals, deleting the entry containing the referral instead of the entry obtained by following the referral.

**-N certificate**

Use the specified *certificate* for certificate-based client authentication, for example: **-N** "Client-Cert", where Client-Cert is the subject name of the user certificate.

**-O limit**

Follow at maximum *limit* referral hops. Default is 5.

**-P pathname**

Use the certificate database located in *pathname*, the full path to the certificate database file.

The default is to search for the certificate database file, `cert8.db`, in the current directory.

**-Q [token][:certificate-name]**

Use PKCS 11.

**-R**

Do not follow referrals automatically.

**-V n**

Use LDAP protocol version *n*, where *n* is 2 or 3. Default is 3.

**-W -**

Prompt for the password for the client key database specified using the **-P** option.

The **-W** option is required for certificate-based client authentication.

**-W password**

Specify the password for the client key database specified using the **-P** option.

The **-W** option is required for certificate-based client authentication.

**-Y proxydn**

Use the rights of the entry having the specified DN for performing LDAP operations. When using this option, you must also specify how to bind before you assume the

rights of the proxy. Thus, when using simple authentication, you would also use the `-D` and `-w` options with this option.

Before proxy authentication can work in Directory Server, you must set up the appropriate access control instructions.

`-Z`

Use SSL to provide certificate-based client authentication.

The `-Z` option requires the `-N` and `-w` options and any other SSL options needed to identify the certificate and the key database.

`-ZZ`

Use Start TLS to provide certificate-based client authentication.

The `-ZZ` option requires the `-N` and `-w` options and any other SSL options needed to identify the certificate and the key database.

`-c`

Run in continuous mode, not stopping on errors.

In continuous mode, errors are reported but the `ldapdelete` command continues. When not running in continuous mode, the `ldapdelete` command quits after the first error.

`-d level`

Set LDAP debug level to the specified value.

The following debug levels are supported:

1

Display verbose debugging messages; `LDAP_DEBUG_TRACE`.

2

Display messages about the content of network packets; `LDAP_DEBUG_PACKETS`.

320

Display messages about LDIF parsing; `LDAP_DEBUG_PARSE`.

16384

Display informational messages; `LDAP_DEBUG_ANY`.

Use the sum of the levels to specify more than one debug level. For example, to set the debug level to display both verbose debugging messages, and messages about the content of network packets, specify `-d 3`.

`-f filename`

Read DN's from the specified file.

The file format is one DN per line without quotes around DN's. The `ldapdelete` command reads each line as one literal DN.

This option has no effect when you also specify DN's on standard input.

`-h host`

Contact the LDAP server on the specified host, which may be a host name or an IP address. Enclose IPv6 addresses in brackets (`[]`) as described in RFC 2732.

For example, when mapping the IPv4 address `192.168.0.99` to IPv6, pass the `-h` option with its argument as `-h [::ffff:192.168.0.99]`. Notice the brackets.

When using GSSAPI with Directory Server, specify the *host* as a fully-qualified host name which matches the value of the `nsslapd-localhost` attribute on the `cn=config` entry. The GSSAPI authentication process requires that the host name provided by the client match the one provided by the server.

The default is `localhost`.

**-i *charset***

Use the specified character set to override the value of the `LANG` environment variable. This option is useful, as the command converts certain arguments you specify to UTF-8 before sending the request to the server. The following arguments are converted: base DN, bind DN, LDAP filter, and password.

You can prevent the command from converting passwords by using the `-k` option.

Examples of *charset* values include `ISO8859-1`, `ISO8859-15`, `ibm-1275`, and `windows-1251`.

**-j *filename***

Read the bind password for simple authentication from the specified file.

**-k**

Do not convert the passwords to UTF-8.

**-m *pathname***

Use the security module database located in the specified directory.

Use the `-m` option if the security module database is in a different directory from the certificate database itself.

**-n**

Show what would be done, but do not actually do it.

**-o *attrname=attrvalue***

Use the specified attribute values when performing SASL authentication.

The following *attrname* arguments are supported:

**authid**

Use the specified authentication identity.

**authzid**

Use the specified authorization identity.

**mech**

Request the specified SASL mechanism for the bind.

**realm**

Use the specified realm to complete the bind.

**secProp**

Use the specified security level.

The *attrvalue* is a valid value corresponding to the *attrname* you specify.

**-p *port***

Contact the LDAP server on the specified port.

The default is `389` (`636` if SSL is used).

**-v**  
Run in verbose mode, displaying diagnostics on standard output.

**-w -**  
Prompt for the bind password for simple authentication.

**-w *password***  
Use the specified bind password for simple authentication.

## Examples

Examples in this section use the following conventions:

- The bind DN given corresponds to a user with permission to delete entries.
- The directory server is located on a system named *host*.
- The directory server listens on port number 389, the default for non-SSL traffic.
- The directory server listens on port number 636, the default for SSL traffic. SSL is enabled.

### Example 1 Deleting an Entry

The following command deletes a single entry from the directory:

```
$ ./ldapdelete -h host -D uid=kvaughan,ou=people,dc=example,dc=com \
-w - uid=scarter,ou=People,dc=example,dc=com
Enter bind password:
$
```

### Example 2 Deleting an Entry Interactively

The following commands demonstrate deleting an entry whose DN is specified on standard input:

```
$ ./ldapdelete -h host -D uid=kvaughan,ou=People,dc=example,dc=com \
-w - -c -v
Enter bind password:
ldapdelete: started Tues Oct 18 08:31:14 2005

ldap_init( host, 389 )

uid=scarter, ou=People, dc=example,dc=com
deleting entry uid=scarter, ou=People, dc=example,dc=com
entry removed
^D
$
```

### Example 3 Deleting Multiple Entries Specified in a File

The following commands demonstrate reading DN's of entries to delete from a file. Notice that the `-c` option is used to continue if an error occurs.

```
$ cat DNfile
uid=scarter, ou=People, dc=example,dc=com
uid=bjensen, ou=People, dc=example,dc=com
$ ./ldapdelete -h host -D uid=kvaughan,ou=People,dc=example,dc=com \
-c -f DNfile -w -
Enter bind password:
$
```

**Example 4 Using Server Authentication**

The following command uses server authentication during the bind, where the server only accepts binds by clients with trusted certificates. Notice only the `-P` option is used without other SSL-related options.

```
$ ./ldapdelete -h host -p 636 -c -f DNfile -P /home/kvaughan/security \  
-D uid=kvaughan,ou=People,dc=example,dc=com -w -  
Enter bind password:
```

**Example 5 Using Client Authentication**

The following command uses client authentication during the bind, where the server only accepts binds by clients with trusted certificates, and the client must sign the certificate with a password-protected private key. Notice the options used in this example.

```
$ ./ldapdelete -h host -p 636 -c -f DNfile -Z -P /home/kvaughan/security \  
-N "kvs-cert" -K /home/kvaughan/security -W keypassword
```

**Exit Status**

The exit status returned reflects the return values of the underlying functions used, which may depend on return values sent by the server. Common exit status codes follow:

**0**

Successful completion; LDAP\_SUCCESS; 0x00.

**1**

Server encountered errors while processing the request; LDAP\_OPERATIONS\_ERROR; 0x01.

**2**

Server encountered errors, such as a BER-decoding error, while processing the request; LDAP\_PROTOCOL\_ERROR; 0x02.

**10**

DN of the entry to delete belongs to an entry handled by neither server, and the referral URL identifies another server that handles the entry; LDAP\_REFERRAL; 0x0a.

**32**

DN of the entry to delete belongs to an entry handled by neither server, and no referral URL is available for the entry; LDAP\_NO\_SUCH\_OBJECT; 0x20.

**34**

DN of the entry to delete is not a valid DN; LDAP\_INVALID\_DN\_SYNTAX; 0x22.

**50**

Bind DN user does not have permission to read the entry from the directory; LDAP\_INSUFFICIENT\_ACCESS; 0x32.

**53**

Directory is read-only; LDAP\_UNWILLING\_TO\_PERFORM; 0x35.

**66**

Entry specified has child-entries that must be deleted first; LDAP\_NOT\_ALLOWED\_ON\_NONLEAF; 0x42.

**81**

One of the directories did not respond to the request, or the connection was lost; LDAP\_SERVER\_DOWN; 0x51.

**82**

An error occurred while receiving results; LDAP\_LOCAL\_ERROR; 0x52.

**83**

The request could not be BER-encoded; LDAP\_ENCODING\_ERROR; 0x53.

**84**

A result could not be decoded; LDAP\_DECODING\_ERROR; 0x54.

**89**

An option or argument is not valid; LDAP\_PARAM\_ERROR; 0x59.

**90**

Needed memory could not be allocated; LDAP\_NO\_MEMORY; 0x5a.

**91**

A specified host name or port is not valid; LDAP\_CONNECT\_ERROR; 0x5b.

**92**

At least one server supports only LDAPv2, and the `-v 2` option was not used, or the `-v 2` option was used, but the server no longer supports LDAP v2; LDAP\_NOT\_SUPPORTED; 0x5c.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWldapcsdk-tools
Stability Level	Evolving

**See Also**

[ldapcmp\(1\)](#), [ldapcompare\(1\)](#), [ldapmodify\(1\)](#), [ldappasswd\(1\)](#), [ldapsearch\(1\)](#)

## ldapmodify

add, modify, rename, move, or delete LDAP entries

### Synopsis

```
install-path/dsrk/bin/ldapmodify  
[options]
```

### Description

The `ldapmodify` command requests the addition, modification, rename, move, or deletion of entries stored by a directory server.

You must bind as a user having access to perform the requested operation.

The directory server may check all modifications against its schema, and reject updates that cause entries not to conform to the schema.

You must specify additions and modifications in the proper order, because the directory server performs the updates in the order you request them. For example, to add entries to a subtree that does not yet exist, you must first update the base entry at the root of the subtree before adding entries under the base entry. When a requested operation fails, the `ldapmodify` command stops processing further input unless you use the `-c` option. The `ldapmodify` command does not save rejected entries unless you use the `-e` option.

### Options

The following options are supported:

`-0`

Ignore LDAP library version mismatches.

When this option is omitted, the default behavior is to assert that the revision number of the LDAP API be greater than or equal to that used to compile the tool. Also, if the library and the tool have the same vendor name, the tool will assert that the vendor version number of the API be greater than or equal to that used to compile the tool. Revision and version numbers are based on the contents of the `LDAPAPIInfo` structure defined in `<ldap.h>` or header files included by `<ldap.h>`.

`-3`

Check host names in SSL certificates.

`-A`

Display non-ASCII values when the `-v` option is used.

`-B baseDN`

Bulk import entries into the suffix under the specified DN.

---

---

**Note:** Bulk import using the `ldapmodify` command erases the existing entries under the target suffix.

---

---

`-D bindDN`

Use the specified bind DN to authenticate to the directory server.

If the bind DN and its password are omitted, the `ldapmodify` command binds anonymously. The bind DN determines what entries and attributes appear in the comparison results, according to the search permissions for the bind DN.

-E

Request that the directories expose (report) bind identities.

-F

Force application of all modifications, even if some lines are duplicates.

-H

-help

--help

-?

Display usage information.

-I **filename**

Read SSL key password for the client key database specified using the `-P` option from *filename*.

The default is `key3.db`.

-J **controloid[:criticality[:value::base64value]:<fileurl>]**

Use the specified control OID.

The *criticality*, a boolean, is false by default.

An LDAP control can be associated with a value. Proxy authorization takes a proxy authorization ID, for example, passed with the control OID, and criticality. If a value is necessary you specify it using *value*, *base64value*, or *<fileurl>*.

-K **pathname**

Use the SSL key database located in *pathname*, the full path to the key database file.

The default is to search for the key database file, `key3.db`, in the directory specified by the `-P` option.

-M

Manage referrals, modifying the entry containing the referral instead of the entry obtained by following the referral.

-N **certificate**

Use the specified *certificate* for certificate-based client authentication, for example: `-N "Client-Cert"`, where `Client-Cert` is the subject name of the user certificate.

-O **limit**

Follow at maximum *limit* referral hops. Default is 5.

-P **filename**

Use the certificate database located in *filename*, the full path to the certificate database file.

The default is to search for the certificate database file, `cert8.db`, in the current directory.

-Q **[token][:certificate-name]**

Use PKCS 11.

-R

Do not follow referrals automatically.

**-V *n***

Use LDAP protocol version *n*, where *n* is 2 or 3. Default is 3.

**-W -**

Prompt for the password for the client key database specified using the **-P** option.

The **-W** option is required for certificate-based client authentication.

**-W *password***

Specify the password for the client key database specified using the **-P** option.

The **-W** option is required for certificate-based client authentication.

**-Y *proxydn***

Use the rights of the entry having the specified DN for performing LDAP operations. When using this option, you must also specify how to bind before you assume the rights of the proxy. Thus, when using simple authentication, you would also use the **-D** and **-w** options with this option.

Before proxy authentication can work in Directory Server, you must set up the appropriate access control instructions.

**-Z**

Use Start TLS to provide certificate-based client authentication.

The **-ZZ** option requires the **-N** and **-W** options and any other SSL options needed to identify the certificate and the key database.

**-ZZ**

Use a start TLS request .

The **-Z** option requires the **-N** and **-W** options and any other SSL options needed to identify the certificate and the key database.

**-a**

Add LDAP entries, rather than modifying existing entries.

**-b**

Handle binary files.

---

---

**Note:** This option is deprecated. Use standard LDIF notation as described in RFC 2849 instead.

---

---

When you use the **-b** option, the `ldapmodify` command scans every attribute value to determine whether it specifies a valid file reference, such as `/home/bjensen/bjensen.jpg`. If so, the `ldapmodify` command uses the content of the specified file as the attribute value.

**-c**

Run in continuous mode, not stopping on errors.

In continuous mode, errors are reported but the `ldapmodify` command continues performing comparisons. When not running in continuous mode, the `ldapmodify` command quits after the first error.

**-d *level***

Set LDAP debug level to the specified value.

The following debug levels are supported:

1  
Display verbose debugging messages; LDAP\_DEBUG\_TRACE.

2  
Display messages about the content of network packets; LDAP\_DEBUG\_PACKETS.

320  
Display messages about LDIF parsing; LDAP\_DEBUG\_PARSE.

16384  
Display informational messages; LDAP\_DEBUG\_ANY.

Use the sum of the levels to specify more than one debug level. For example, to set the debug level to display both verbose debugging messages, and messages about the content of network packets, specify `-d 3`.

**-e *filename***  
Save rejected entries in the specified file.

**-f *filename***  
Read modifications from the specified file.

The file format is standard LDIF notation as described in RFC 2849.

**-h *host***  
Contact the LDAP server on the specified host, which may be a host name or an IP address. Enclose IPv6 addresses in brackets ([]) as described in RFC 2732.

For example, when mapping the IPv4 address 192.168.0.99 to IPv6, pass the `-h` option with its argument as `-h [::ffff:192.168.0.99]`. Notice the brackets.

When using GSSAPI with Directory Server, specify the *host* as a fully-qualified host name which matches the value of the `nsslapd-localhost` attribute on the `cn=config` entry. The GSSAPI authentication process requires that the host name provided by the client match the one provided by the server.

The default is `localhost`.

**-i *charset***  
Use the specified character set to override the value of the `LANG` environment variable. This option is useful, as the command converts certain arguments you specify to UTF-8 before sending the request to the server. The following arguments are converted: base DN, bind DN, LDAP filter, and password.

You can prevent the command from converting passwords by using the `-k` option.

Examples of *charset* values include `ISO8859-1`, `ISO8859-15`, `ibm-1275`, and `windows-1251`.

**-j *filename***  
Read the bind password for simple authentication from the specified file.

**-k**  
Do not convert the passwords to UTF-8.

**-m *pathname***  
Use the security module database located in the specified directory.

Use the `-m` option if the security module database is in a different directory from the certificate database itself.

-n

Show what would be done, but do not actually do it.

-o **attrname=attrvalue**

Use the specified attribute values when performing SASL authentication.

The following *attrname* arguments are supported:

**authid**

Use the specified authentication identity.

**authzid**

Use the specified authorization identity.

**mech**

Request the specified SASL mechanism for the bind.

**realm**

Use the specified realm to complete the bind.

**secProp**

Use the specified security level.

The *attrvalue* is a valid value corresponding to the *attrname* you specify.

-p **port**

Contact the LDAP server on the specified port.

The default is 389 (636 if SSL is used).

-q

Run in quiet mode, not displaying information about the operations performed.

-v

Run in verbose mode, displaying diagnostics on standard output.

-w -

Prompt for the bind password for simple authentication.

-w **password**

Use the specified bind password for simple authentication.

## Examples

Examples in this section use the following conventions:

- The bind DN given corresponds to a user with permission to update entries.
- The directory server is located on a system named `host`.
- The directory server listens on port number 389, the default for non-SSL traffic.
- The directory server listens on port number 636, the default for SSL traffic. SSL is enabled.

### Example 1 Adding an Entry

The following commands demonstrate adding a single entry to the directory:

```
$ cat add.ldif
dn: uid=bcubbins,ou=People,dc=example,dc=com
objectclass: top
```

```

objectclass: person
objectclass: organizationalPerson
objectclass: inetOrgPerson
uid: bcubbins
givenName: Bartholomew
sn: Cubbins
cn: Bartholomew Cubbins
mail: bcubbins@example.com
userPassword: bcubbins
facsimiletelephonenumber: +1 234 567 8910

$ ldapmodify -a -h host -D uid=bjensen,ou=people,dc=example,dc=com \
-w - -f add.ldif
Enter bind password:
adding new entry uid=bcubbins,ou=People,dc=example,dc=com

$

```

### Example 2 Modifying an Entry

The following commands demonstrate modifying an entry. Notice a line with a single dash (-) separates multiple modifications to a single entry.

```

$ cat modify.ldif
dn: uid=bcubbins,ou=People,dc=example,dc=com
changetype: modify
add: description
description: Added with ldapmodify
-
replace: mail
mail: bart@example.com

$ ./ldapmodify -h host -c -v \
-D uid=bjensen,ou=People,dc=example,dc=com -w - -f modify.ldif
Enter bind password:
modifying entry uid=bcubbins,ou=People,dc=example,dc=com

$

```

### Example 3 Deleting an Entry Interactively

The following commands delete the entry added and modified in previous examples.

```

$ ./ldapmodify -h host -D uid=bjensen,ou=People,dc=example,dc=com -w -
Enter bind password:
dn: uid=bcubbins,ou=People,dc=example,dc=com
changetype: delete
deleting entry uid=bcubbins,ou=People,dc=example,dc=com
^D

$

```

### Example 4 Using Server Authentication

The following command uses server authentication during the bind, where the server only accepts binds by clients with trusted certificates. Notice only the -P option is used without other SSL-related options.

```

$ ./ldapmodify -h host -p 636 -c -f modify.ldif -P /home/bjensen/security \

```

```
-D "uid=bjensen,ou=People,dc=example,dc=com" -w -  
Enter bind password:
```

### Example 5 Using Client Authentication

The following command uses client authentication during the bind, where the server only accepts binds by clients with trusted certificates, and the client must sign the certificate with a password-protected private key. Notice the options used in this example.

```
$ ldapmodify -h host -p 636 -c -Z -P /home/bjensen/security \  
-N "bjscert" -K /home/bjensen/security -W keypassword -f modify.ldif
```

### Example 6 Moving an Entry

The following command moves an entry from one branch of a suffix to another:

```
$./ldapmodify -h host -D uid=hmiller,ou=people,dc=example,dc=com -w -  
Enter bind password:  
dn: uid=jwallace,ou=people,dc=example,dc=com  
changetype: modrdn  
newrdn: uid=jwallace  
deleteoldrdn: 0  
newsuperior: ou=special users,dc=example,dc=com  
^D
```

## Exit Status

The exit status returned reflects the return values of the underlying functions used, which may depend on return values sent by the server. Common exit status codes follow:

#### 0

Successful completion; LDAP\_SUCCESS; 0x00.

#### 1

Server encountered errors while processing the request; LDAP\_OPERATIONS\_ERROR; 0x01.

#### 2

Server encountered errors, such as a BER-decoding error, while processing the request; LDAP\_PROTOCOL\_ERROR; 0x02.

#### 10

DN of the entry to modify belongs to an entry handled by neither server, and the referral URL identifies another server that handles the entry; LDAP\_REFERRAL; 0x0a.

#### 16

Attribute to be modified does not exist; LDAP\_NO\_SUCH\_ATTRIBUTE; 0x10.

#### 19

Attribute modification requested is not a proper modification. For example, a requested change to `userpassword` would result in a user password shorter than the minimum length allowed; LDAP\_CONSTRAINT\_VIOLATION; 0x13.

- 20**  
Attribute to add already exists with the specified value; LDAP\_TYPE\_OR\_VALUE\_EXISTS; 0x14.
- 21**  
The value modified does not respect the syntax for the attribute type; LDAP\_INVALID\_SYNTAX; 0x15.
- 32**  
DN of the entry to modify belongs to an entry handled by neither server, and no referral URL is available for the entry; LDAP\_NO\_SUCH\_OBJECT; 0x20.
- 34**  
DN of the entry to modify is not a valid DN; LDAP\_INVALID\_DN\_SYNTAX; 0x22.
- 50**  
Bind DN user does not have permission to read the entry from the directory; LDAP\_INSUFFICIENT\_ACCESS; 0x32.
- 53**  
Directory is read-only; LDAP\_UNWILLING\_TO\_PERFORM; 0x35.
- 65**  
Requested modification would cause the entry not to comply with the directory schema; LDAP\_OBJECT\_CLASS\_VIOLATION; 0x41.
- 66**  
Entry specified has child-entries that must be deleted first; LDAP\_NOT\_ALLOWED\_ON\_NONLEAF; 0x42.
- 67**  
Requested modification would cause the entry to be missing attributes that are components of the entry DN; LDAP\_NOT\_ALLOWED\_ON\_RDN; 0x43.
- 68**  
An entry already exists with the same DN as the entry to add; LDAP\_ALREADY\_EXISTS; 0x44.
- 81**  
One of the directories did not respond to the request, or the connection was lost; LDAP\_SERVER\_DOWN; 0x51.
- 82**  
An error occurred while receiving results; LDAP\_LOCAL\_ERROR; 0x52.
- 83**  
The request could not be BER-encoded; LDAP\_ENCODING\_ERROR; 0x53.
- 84**  
A result could not be decoded; LDAP\_DECODING\_ERROR; 0x54.
- 89**  
An option or argument is not valid; LDAP\_PARAM\_ERROR; 0x59.
- 90**  
Needed memory could not be allocated; LDAP\_NO\_MEMORY; 0x5a.

**91**

A specified host name or port is not valid; LDAP\_CONNECT\_ERROR; 0x5b.

**92**

At least one server supports only LDAPv2, and the `-v 2` option was not used, or the `-v 2` option was used, but the server no longer supports LDAP v2; LDAP\_NOT\_SUPPORTED; 0x5c.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWldapcsdk-tools
Stability Level	Evolving

**See Also**

[ldapcmp\(1\)](#), [ldapcompare\(1\)](#), [ldapdelete\(1\)](#), [ldappasswd\(1\)](#), [ldapsearch\(1\)](#)

## ldappasswd

change the password of an LDAP entry

### Synopsis

```
install-path/dsrk/bin/ldappasswd
[options] [auth-id]
```

### Description

The `ldappasswd` command changes the password of an LDAP entry, identified by an *auth-id* such as `uid=bjensen,ou=people,dc=example,dc=com`, stored by a directory server.

The `ldappasswd` command relies on the Password Modify Extended Operation (OID 1.3.6.1.4.1.4203.1.11.1).

### Options

The following options are supported:

-0

Ignore LDAP library version mismatches.

When this option is omitted, the default behavior is to assert that the revision number of the LDAP API be greater than or equal to that used to compile the tool. Also, if the library and the tool have the same vendor name, the tool will assert that the vendor version number of the API be greater than or equal to that used to compile the tool. Revision and version numbers are based on the contents of the `LDAPAPIInfo` structure defined in `<ldap.h>` or header files included by `<ldap.h>`.

-3

Check host names in SSL certificates.

-A

Prompt for old password.

-D **bindDN**

Use the specified bind DN to authenticate to the directory server.

If the bind DN and its password are omitted, the `ldappasswd` command binds anonymously.

-E

Request that the directory expose (report) the bind identity.

-H

-help

--help

-?

Display usage information.

-I **filename**

Read SSL key password for the client key database specified using the `-P` option from *filename*.

The default is `key3.db`.

-J **controloid[:criticality[:value[:base64value[:<fileurl!]]]**

Use the specified control OID.

The *criticality*, a boolean, is false by default.

An LDAP control can be associated with a value. Proxy authorization takes a proxy authorization ID, for example, passed with the control OID, and criticality. If a value is necessary you specify it using *value*, *base64value*, or *<fileurl*.

-K **pathname**

Use the SSL key database located in *pathname*, the full path to the key database file.

The default is to search for the key database file, `key3.db`, in the directory specified by the -P option.

-M

Manage referrals, modifying the entry containing the referral instead of the entry obtained by following the referral.

-N **certificate**

Use the specified *certificate* for certificate-based SSL client authentication, for example:

-N "Client-Cert", where `Client-Cert` is the subject name of the user certificate.

-O **limit**

Follow at maximum *limit* referral hops.

Default is 5.

-P **pathname**

Use the SSL certificate database located in the specified file system directory.

The default is to search for the certificate database file, `cert8.db`, in the current directory.

-R

Do not follow referrals automatically.

-S

Prompt for the new password.

-T **filename**

Read the new password from the specified file.

-V **n**

Use LDAP protocol version *n*, where *n* is 2 or 3. Default is 3.

-W -

Prompt for the password for the client key database specified using the -P option.

The -W option is required for certificate-based client authentication.

-w **password**

Specify the password for the client key database specified using the -P option.

The -w option is required for certificate-based client authentication.

-Y **proxydn**

Use the rights of the entry having the specified DN for performing LDAP operations. When using this option, you must also specify how to bind before you assume the

rights of the proxy. Thus, when using simple authentication, you would also use the `-D` and `-w` options with this option.

Before proxy authentication can work in Directory Server, you must set up the appropriate access control instructions.

`-Z`

Use SSL to provide certificate-based client authentication.

The `-Z` option requires the `-N` and `-w` options and any other SSL options needed to identify the certificate and the key database.

`-ZZ`

Use start TLS when possible to connect to the directory.

`-a password`

Use the specified old password.

`-h host`

Contact the LDAP server on the specified host, which may be a host name or an IP address. Enclose IPv6 addresses in brackets (`[]`) as described in RFC 2732.

For example, when mapping the IPv4 address `192.168.0.99` to IPv6, pass the `-h` option with its argument as `-h [::ffff:192.168.0.99]`. Notice the brackets.

When using GSSAPI with Directory Server, specify the *host* as a fully-qualified host name which matches the value of the `nsslapd-localhost` attribute on the `cn=config` entry. The GSSAPI authentication process requires that the host name provided by the client match the one provided by the server.

The default is `localhost`.

`-i charset`

Use the specified character set to override the value of the `LANG` environment variable. This option is useful, as the command converts certain arguments you specify to UTF-8 before sending the request to the server. The following arguments are converted: base DN, bind DN, LDAP filter, and password.

You can prevent the command from converting passwords by using the `-k` option.

Examples of *charset* values include `ISO8859-1`, `ISO8859-15`, `ibm-1275`, and `windows-1251`.

`-j filename`

Read the bind password for simple authentication from the specified file.

`-k`

Do not convert the passwords to UTF-8.

`-m pathname`

Use the security module database located in the specified file system directory.

Use the `-m` option if the security module database is in a different directory from the certificate database itself.

`-n`

Show what would be done, but do not actually do it.

`-o attrname=attrvalue`

Use the specified attribute values when performing SASL authentication.

The following *attrname* arguments are supported:

**authid**

Use the specified authentication identity.

**authzid**

Use the specified authorization identity.

**mech**

Request the specified SASL mechanism for the bind.

**realm**

Use the specified realm to complete the bind.

**secProp**

Use the specified security level.

The *attrvalue* is a valid value corresponding to the *attrname* you specify.

**-p *port***

Contact the LDAP server on the specified port.

The default is 389 (636 if SSL is used).

**-s *password***

Use the specified new password.

**-t *filename***

Read the old password from the specified file.

**-v**

Run in verbose mode, displaying diagnostics on standard output.

**-w -**

Prompt for the bind password for simple authentication.

**-w *password***

Use the specified bind password for simple authentication.

## Examples

Examples in this section use the following conventions:

- The directory server is located on a system named *host*.
- The directory server supports the Password Modify Extended Operation (OID 1.3.6.1.4.1.4203.1.11.1)
- The directory server listens on port number 389, the default for non-SSL traffic.
- The directory server listens on port number 636, the default for SSL traffic. SSL is enabled.

### Example 1 Changing Your User Password

The following command lets Barbara Jensen change her own user password, connecting over simple authentication:

```
$ ./ldappasswd -h host -D uid=bjensen,ou=people,dc=example,dc=com \  
-j old.pwd -T new.pwd -t old.pwd uid=bjensen,ou=people,dc=example,dc=com  
ldappasswd: password successfully changed  
$
```

### Example 2 Changing The Password For Another User

The following command lets Kirsten Vaughan change Barbara Jensen's password, connecting over simple authentication:

```
$ ./ldappasswd -h host -D uid=kvaughan,ou=people,dc=example,dc=com \
-w - -A -S uid=bjensen,ou=people,dc=example,dc=com
Old Password:
New Password:
Re-enter new Password:
Enter bind password:
ldappasswd: password successfully changed
$
```

### Example 3 Using Server Authentication

The following command uses server authentication during the bind, where the server only accepts binds by clients with trusted certificates. Notice only the `-P` option is used without other SSL-related options.

```
$ ./ldappasswd -h host -p 636 -P /home/bjensen/security \
-D "uid=bjensen,ou=People,dc=example,dc=com" -w - -A -S -Z \
uid=bjensen,ou=People,dc=example,dc=com
Old Password:
New Password:
Re-enter new Password:
Enter bind password:
ldappasswd: password successfully changed
$
```

### Example 4 Using Client Authentication

The following command uses client authentication during the bind, where the server only accepts binds by clients with trusted certificates, and the client must sign the certificate with a password-protected private key. Notice the options used in this example.

```
$ ./ldappasswd -h host -p 636 -A -S -P /home/bjensen/security \
-N "bjscert" -W keypassword uid=bjensen,ou=People,dc=example,dc=com
Old Password:
New Password:
Re-enter new Password:
ldappasswd: password successfully changed
$
```

## Exit Status

The exit status returned reflects the return values of the underlying functions used, which may depend on return values sent by the server. Common exit status codes follow:

**0**

Successful completion; LDAP\_SUCCESS; 0x00.

**1**

Server encountered errors while processing the request; LDAP\_OPERATIONS\_ERROR; 0x01.

**2**

Server encountered errors, such as a BER-decoding error, while processing the request; LDAP\_PROTOCOL\_ERROR; 0x02.

**10**

Entry to modify belongs to an entry handled by neither server, and the referral URL identifies another server that handles the entry; LDAP\_REFERRAL; 0x0a.

**32**

Authentication ID belongs to an entry not handled by the server, and no referral URL is available for the entry; LDAP\_NO\_SUCH\_OBJECT; 0x20.

**50**

Bind DN user does not have permission to read the entry from the directory; LDAP\_INSUFFICIENT\_ACCESS; 0x32.

**53**

Directory does not allow this user to perform this operation; LDAP\_UNWILLING\_TO\_PERFORM; 0x35.

**81**

One of the directories did not respond to the request, or the connection was lost; LDAP\_SERVER\_DOWN; 0x51.

**83**

The request could not be BER-encoded; LDAP\_ENCODING\_ERROR; 0x53.

**84**

A result could not be decoded; LDAP\_DECODING\_ERROR; 0x54.

**89**

An option or argument is not valid; LDAP\_PARAM\_ERROR; 0x59.

**91**

A specified host name or port is not valid; LDAP\_CONNECT\_ERROR; 0x5b.

**92**

At least one server supports only LDAPv2, and the `-v 2` option was not used, or the `-v 2` option was used, but the server no longer supports LDAP v2; LDAP\_NOT\_SUPPORTED; 0x5c.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWldapcsdk-tools
Stability Level	Evolving

## See Also

[ldapcmp\(1\)](#), [ldapcompare\(1\)](#), [ldapdelete\(1\)](#), [ldapmodify\(1\)](#), [ldapsearch\(1\)](#)

## ldapsearch

find LDAP entries

### Synopsis

```
install-path/dsrk/bin/ldapsearch
-b baseDN [options] filter [attribute]...
```

```
install-path/dsrk/bin/ldapsearch
-b baseDN [options] -f filename [attribute]...
```

### Description

The `ldapsearch` command searches for entries stored by a directory server based on the specified LDAP filter.

The `ldapsearch` command displays results found in LDIF format, including the specified attributes, or all attributes returned if none are specified.

Filter files, which are specified using the `-f filename` option, contain one filter per line. Specified LDAP filters must comply with RFC 2254.

### Options

Unless the `LDAP_BASEDN` environment variable is set, you must at minimum provide a *baseDN* argument to the `-b` option. The *baseDN* argument specifies the distinguished name (DN) of the LDAP entry at the base of the search scope.

The following options are supported:

`-0`

Ignore LDAP library version mismatches.

When this option is omitted, the default behavior is to assert that the revision number of the LDAP API be greater than or equal to that used to compile the tool. Also, if the library and the tool have the same vendor name, the tool will assert that the vendor version number of the API be greater than or equal to that used to compile the tool. Revision and version numbers are based on the contents of the `LDAPAPIInfo` structure defined in `<ldap.h>` or header files included by `<ldap.h>`.

`-1`

Omit leading `version: 1` indication in LDIF output, meaning the output is not RFC 2849 compliant.

`-3`

Check host names in SSL certificates.

`-A`

Display non-ASCII values when the `-v` option is used.

`-C ps:changetype[:changesonly[:entrychangecontrols]]`

Perform a persistent search that stops when you type Control-C.

By default, when used with the `-C` option the `ldapsearch` command requests that the directory server return entry change controls with persistent search results. Adjust this behavior with the following arguments:

**changetype**

Determines which modifications to an entry are detected and displayed in the output. Possible values include:

- add
- any
- delete
- modify
- moddn

**changesonly**

Determines when to display search results. Possible values include:

**0**

**f**

**false**

Display initial search results immediately, not waiting for changes. Then display new changes as they occur.

**1**

Display changes when they occur (default).

**entrychangecontrols**

Determines whether to display entry change controls. Possible values include:

**0**

**f**

**false**

Do not display entry change controls.

**1**

Display entry change controls (default).

**-D bindDN**

Use the specified bind DN to authenticate to the directory server.

If the bind DN and its password are omitted, the `ldapsearch` command binds anonymously. The bind DN determines what entries and attributes appear in the search results, according to the search permissions for the DN.

**-E**

Request that the directories expose (report) bind identities.

**-F sep**

Print specified separator character instead of = between attribute types and values.

**-G pattern**

Retrieve a virtual list view displaying a portion of the total search results. Use this option with the `-S` and `-x` options to sort entries returned.

The specified pattern may take one of two forms to specify the size of the virtual list view around a target entry:

**entriesbefore:entriesafter.value**

Return the target entry, which is the first entry in the sorted results whose sort attribute is greater than or equal to the specified value, as well as the specified

number of entries before the target entry and the specified number of entries after the target entry.

For example, `-S sn -x -G 5:10:johnson` returns 16 entries in alphabetical order of the surname attribute: 5 less than johnson, the entry equal to or following johnson, and the 10 subsequent entries.

***entriesbefore:entriesafter:index:count***

Return the target entry, as well as the specified number of entries before the target entry and the specified number of entries after the target entry. The target entry depends on the *index* and estimated *count* arguments.

The *count* argument may take the following values, with the following results:

***count == 0***

The target is the entry at the specified *index* position, starting from 1, and relative to the entire list of sorted results.

***count == 1***

The target is the first entry in the list of sorted results.

***count > 1***

The target is the first entry in the slice of the list represented by the fraction *index/count*.

Use an *index* argument greater than the *count* argument to target the last result in the list.

For example, `-G 5:10:2:4` specifies the *index* closest to the beginning of the second quarter of the entire list. If the search yielded 100 entries, the target index would be 26, and this pattern would return entries 21 through 36.

The number of entries displayed before and after the target entry may be limited by the beginning and end of the virtual list. The `ldapsearch` command displays the control response, giving the count of entries in the virtual list and the index of the target entry. Use these values to refine *index* and *count* arguments.

`-H`

`-help`

`--help`

`-?`

Display usage information.

`-I filename`

Read SSL key password for the client key database specified using the `-P` option from *filename*.

The default is `key3.db`.

`-J controloid[:criticality[:value::base64value]:<fileurl!]`

Use the specified control OID.

The *criticality*, a boolean, is false by default.

An LDAP control can be associated with a value. Proxy authorization takes a proxy authorization ID, for example, passed with the control OID, and criticality. If a value is necessary you specify it using *value*, *base64value*, or *<fileurl*.

`-K pathname`

Use the SSL key database located in *pathname*, the full path to the key database file.

The default is to search for the key database file, `key3.db`, in the directory specified by the `-P` option.

`-M`

Manage referrals, searching the entry containing the referral instead of the entry obtained by following the referral.

`-N certificate`

Use the specified *certificate* for certificate-based client authentication, for example: `-N "Client-Cert"`, where `Client-Cert` is the subject name of the user certificate.

`-O limit`

Follow at maximum *limit* referral hops. Default is 5.

`-P filename`

Use the certificate database located in *filename*, the full path to the certificate database file.

The default is to search for the certificate database file, `cert8.db`, in the current directory.

`-Q [token][:certificate-name]`

Use PKCS 11.

`-R`

Do not follow referrals automatically.

`-S attrtype`

Sort the results based on the specified attribute.

`-T`

Do not break long lines within individual attribute values.

Default is to break long attribute values according to LDIF rules.

`-U`

When generating temporary file output using the `-t` option, include URLs as attribute types whose value is a file, such as a photo or certificate.

`-V n`

Use LDAP protocol version *n*, where *n* is 2 or 3. Default is 3.

`-W -`

Prompt for the password for the client key database specified using the `-P` option.

The `-W` option is required for certificate-based client authentication.

`-W password`

Specify the password for the client key database specified using the `-P` option.

The `-W` option is required for certificate-based client authentication.

`-X attrlist`

When performing a search to get effective rights using the `-c` option, use the list of attributes provided.

`-Y proxydn`

Use the rights of the entry having the specified DN for performing LDAP operations. When using this option, you must also specify how to bind before you assume the

rights of the proxy. Thus, when using simple authentication, you would also use the `-D` and `-w` options with this option.

Before proxy authentication can work in Directory Server, you must set up the appropriate access control instructions.

`-Z`

Use SSL to provide certificate-based client authentication.

The `-Z` option requires the `-N` and `-w` options and any other SSL options needed to identify the certificate and the key database.

`-ZZ`

Use Start TLS to provide certificate-based client authentication.

The `-ZZ` option requires the `-N` and `-w` options and any other SSL options needed to identify the certificate and the key database.

`-a deref`

Dereference aliases as specified during a search. Possible values for the *deref* argument include the following values:

`always`

Dereference aliases both when finding the base DN, and when searching below it.

`find`

Dereference aliases when finding the base DN.

`never`

Never dereference aliases (default).

`search`

Dereference aliases when searching below the base DN, but not when finding the base DN.

This option has no effect when used with directories that do not support alias dereferencing.

`-c authzid`

Use the specified authorization ID when to perform a get effective rights search. The following authorization IDs are supported:

`" "`

`" "` represents an empty string, meaning use the authorization ID already specified for the operation.

`"bindDN"`

Use the specified bind DN, such as `uid=bjensen,ou=People,dc=example,dc=com`.

`"dn: "`

Use anonymous as the authorization ID.

`-d level`

Set LDAP debug level to the specified value.

The following debug levels are supported:

`1`

Display verbose debugging messages; `LDAP_DEBUG_TRACE`.

2

Display messages about the content of network packets; LDAP\_DEBUG\_PACKETS.

320

Display messages about LDIF parsing; LDAP\_DEBUG\_PARSE.

16384

Display informational messages; LDAP\_DEBUG\_ANY.

Use the sum of the levels to specify more than one debug level. For example, to set the debug level to display both verbose debugging messages, and messages about the content of network packets, specify `-d 3`.

**-e**

Minimize base64-encoding of resulting attribute values.

**-f filename**

Read the search filters from the specified file.

File format is one search filter per line, where search filters conform to RFC 2254.

**-h host**

Contact the LDAP server on the specified host, which may be a host name or an IP address. Enclose IPv6 addresses in brackets ([]) as described in RFC 2732.

For example, when mapping the IPv4 address 192.168.0.99 to IPv6, pass the `-h` option with its argument as `-h [::ffff:192.168.0.99]`. Notice the brackets.

When using GSSAPI with Directory Server, specify the *host* as a fully-qualified host name which matches the value of the `nsslapd-localhost` attribute on the `cn=config` entry. The GSSAPI authentication process requires that the host name provided by the client match the one provided by the server.

The default is `localhost`.

**-i charset**

Use the specified character set to override the value of the `LANG` environment variable. This option is useful, as the command converts certain arguments you specify to UTF-8 before sending the request to the server. The following arguments are converted: base DN, bind DN, LDAP filter, and password.

You can prevent the command from converting passwords by using the `-k` option.

Examples of *charset* values include `ISO8859-1`, `ISO8859-15`, `ibm-1275`, and `windows-1251`.

**-j filename**

Read the bind password for simple authentication from the specified file.

**-k**

Do not convert the passwords to UTF-8.

**-l timelimit**

Interrupt the search if the specified time limit is exceeded.

**-m pathname**

Use the security module database located in the specified directory.

Use the `-m` option if the security module database is in a different directory from the certificate database itself.

-n

Show what would be done, but do not actually do it.

-o ***attrname=attrvalue***

Use the specified attribute values when performing SASL authentication.

The following *attrname* arguments are supported:

**authid**

Use the specified authentication identity.

**authzid**

Use the specified authorization identity.

**mech**

Request the specified SASL mechanism for the bind.

**realm**

Use the specified realm to complete the bind.

**secProp**

Use the specified security level.

The *attrvalue* is a valid value corresponding to the *attrname* you specify.

-p ***port***

Contact the LDAP server on the specified port.

The default is 389 (636 if SSL is used).

-s ***scope***

Use the specified search scope.

The following values are supported for *scope*:

**base**

Examine only the entry specified by the argument to the -b option.

**one**

Examine only to the entry specified by the argument to the -b option and its immediate children.

**sub**

(Default) Examine the subtree whose base is the entry specified by the argument to the -b option.

-t

Write a temporary file as output for each attribute of each entry in the search results. Such files are written to the system temporary directory, typically /tmp. On standard output, write file names in place of attribute values.

When the -t option is used, no base64 encoding is performed on any attribute values, regardless of their content.

-u

Include user friendly entry names (*ufn: userfriendly*) in the results returned.

-v

Run in verbose mode, displaying diagnostics on standard output.

-w -

Prompt for the bind password for simple authentication.

-w **password**

Use the specified bind password for simple authentication.

-x

Have the directory server sort results based on entry DNs before returning the results.

-z **sizelimit**

Interrupt the search if the specified maximum number of entries returned is exceeded.

## International Searches

This section focuses on international searches, and in particular the matching rule filter portion of the `ldapsearch` command.

When you perform search operations, you can request that the directory sort the results based on any language for which the server has a supported collation order.

A matching rule provides special guidelines for how the directory compares strings during a search operation. In an international search, the matching rule tells the system what collation order and operator to use when performing the search operation. The syntax of the matching rule filter is as follows.

```
attr:matchingRule:=value
```

Here *attr*, *matchingRule*, and *value* mean the following.

- *attr* is an attribute belonging to entries you're searching for, such as `cn` or `mail`.
- *matchingRule* is a string that identifies either the collation order or the collation order and a relational operator, depending on the format you prefer.
- *value* is either the attribute value for which you want to search or a relational operator plus the attribute value for which you want to search. The syntax of the value portion of the filter depends on the matching rule format you use.

The matching rule portion of a search filter can be represented in one of the following ways.

- Use an OID for the matching rule.

Each locale supported by Directory Server has an associated collation order OID. Locales supported for Directory Server are listed in the reference documentation on *Identifying Supported Locales in Reference for Oracle Directory Server Enterprise Edition*. When you use this approach, the matching rule filter has the following form.

```
attr:OID:=relational-operator value
```

The relational operator is included in the value portion of the string, separated from the value by a single space. For example, to search for all `departmentNumber` attributes that are at or after `N4709` in the Swedish collation order, use the following filter.

```
departmentNumber:2.16.840.1.113730.3.3.2.46.1:=> N4709
```

- Use a language tag for the matching rule.

Each locale supported by Directory Server has an associated language tag. When you use this approach, the matching rule filter has the following form.

```
attr:language-tag:=relational-operator value
```

The relational operator is included in the value portion of the string, separated from the value by a single space. For example, to search the directory for all description attributes with a value of `estudiante` using the Spanish collation order, use the following filter.

```
cn:es:== estudiante
```

- Use an OID and suffix for the matching rule.

As an alternative to using a relational operator-value pair, you can append a suffix that represents a specific operator to the OID in the matching rule portion of the filter. Combine the OID and suffix.

```
attr:OID+suffix:=value
```

For example, to search for `businessCategory` attributes with the value `Softwareprodukte` in the German collation order, use the following filter.

```
businessCategory:2.16.840.1.113730.3.3.2.7.1.3:=Softwareprodukte
```

The `.3` in the previous example is the equality suffix.

- Use a language tag and suffix for the matching rule.

As an alternative to using a relational operator-value pair, you can append a suffix that represents a specific operator to the language tag in the matching rule portion of the filter. Combine the language tag and suffix.

```
attr:language-tag+suffix:=value
```

For example, to search for all surnames that come at or after `La Salle` in the French collation order, use the following filter.

```
sn:fr.4:=La Salle
```

Directory Server supports the following types of international searches, designated in your search filter by adding either the search operator, or the search suffix to the OID or language code specifying the appropriate, collation dependent, matching rule.

#### **equality**

Search operator: =

Suffix operator: .1

#### **less than**

Search operator: <

Suffix operator: .2

#### **less than or equal to**

Search operator: <=

Suffix operator: .3

#### **greater than or equal to**

Search operator: >=

Suffix operator: .4

#### **greater than**

Search operator: >

Suffix operator: . 5

**substring**

Search operator: =\*

Suffix operator: . 6

Approximate, or phonetic, and presence searches are supported only in English.

## Examples

Examples in this section use the following conventions:

- The directory server is located on a system named `host`.
- The directory server has been configured to support anonymous access for search and read. Therefore, you do not have to specify bind information.
- The directory server listens on port number 389, the default for non-SSL traffic.
- The directory server listens on port number 636, the default for SSL traffic. SSL is enabled.

### Example 1 Returning All Entries

The following command returns all entries in the suffix under the base DN. Use this only when you need to retrieve all entries and attributes:

```
$ ldapsearch -h host -b "dc=example,dc=com" "(objectclass=*)"
```

### Example 2 Narrowing a Search

The following command employs a more specific filter to narrow the search:

```
$ ldapsearch -h host -b "dc=example,dc=com" "(cn=Babs Jensen)"
```

### Example 3 Searching the Root DSE Entry

The following command searches the root DSE entry, requesting supported naming contexts and supported LDAP versions. Notice you specify the scope as only the base entry:

```
$ ldapsearch -h host -b "" -s base "(objectclass=*)" \
namingContexts supportedLDAPVersion
version: 1
dn:
namingContexts: dc=example,dc=com
supportedLDAPVersion: 2
supportedLDAPVersion: 3
```

### Example 4 Searching the Schema Entry

The following command searches the schema entry, which contains the directory schema. Notice that you can request the operational attribute `subSchemaSubEntry` on any entry to determine which entry holds the schema attributes, in this case `cn=schema`. Then you specify the scope as only the base entry:

```
$ ldapsearch -h host -b "" -s base "(objectclass=*)" subSchemaSubEntry
version: 1
dn:
subSchemaSubEntry: cn=schema
$ ldapsearch -h host -b "cn=schema" -s base "(objectclass=*)"
```

```
version: 1
dn: cn=schema
...
```

### Example 5 Setting the Base DN

The following commands set the `LDAP_BASEDN` environment variable, and then use it when searching the directory. The syntax of the first command may not work for your shell. Refer to the documentation about your shell for instructions on setting environment variables.

```
$ LDAP_BASEDN="dc=example,dc=com"; export LDAP_BASEDN
$ ldapsearch -h host "(givenname=Barbara)" cn uid
version: 1

dn: uid=bjablons, ou=People, dc=example,dc=com
cn: Barbara Jablonski
uid: bjablons

dn: uid=bhal2, ou=People, dc=example,dc=com
cn: Barbara Hall
uid: bhal2

dn: uid=bjensen, ou=People, dc=example,dc=com
cn: Barbara Jensen
cn: Babs Jensen
uid: bjensen

dn: uid=bmaddox, ou=People, dc=example,dc=com
cn: Barbara Maddox
uid: bmaddox

dn: uid=bfrancis, ou=People, dc=example,dc=com
cn: Barbara Francis
uid: bfrancis
$
```

### Example 6 Using a Filter File

The following commands demonstrate use of a filter file. The results show the directory server responds to separate searches for each filter.

```
$ cat filters
sn=Francis
givenname=Barbara
$ ldapsearch -b "dc=example,dc=com" -h host -f filters cn uid
version: 1

dn: uid=rfrancis, ou=People, dc=example,dc=com
cn: Richard Francis
uid: rfrancis

dn: uid=bfrancis, ou=People, dc=example,dc=com
cn: Barbara Francis
uid: bfrancis

dn: uid=bjablons, ou=People, dc=example,dc=com
cn: Barbara Jablonski
uid: bjablons
```

```
dn: uid=bhal2, ou=People, dc=example,dc=com
cn: Barbara Hall
uid: bhal2

dn: uid=bjensen, ou=People, dc=example,dc=com
cn: Barbara Jensen
cn: Babs Jensen
uid: bjensen

dn: uid=bmaddox, ou=People, dc=example,dc=com
cn: Barbara Maddox
uid: bmaddox

dn: uid=bfrancis, ou=People, dc=example,dc=com
cn: Barbara Francis
uid: bfrancis
$
```

### Example 7 Escaping Commas

The following command demonstrates use of the backslash (\) to escape a comma within a base DN.

```
$ ldapsearch -b "o=Example Company\, Inc.,dc=example,dc=com" \
-h host "(givenname=Barbara)"
```

## SSL Authentication Examples

The following examples demonstrate using SSL authentication for searches.

### Example 1 Using Server Authentication

The following command uses server authentication during the bind, where the server only accepts binds by clients with trusted certificates. Notice only the `-P` option is used without other SSL-related options.

```
$ ldapsearch -h host -p 636 -b dc=example,dc=com \
-P /home/bjensen/security -D uid=bjensen,ou=people,dc=example,dc=com \
-w - "(givenname=Barbara)"
Enter bind password:
```

### Example 2 Using Client Authentication

The following command uses client authentication during the bind, where the server only accepts binds by clients with trusted certificates, and the client must sign the certificate with a password-protected private key. Notice the options used in this example.

```
$ ldapsearch -h host -p 636 -b dc=example,dc=com \
-P /home/bjensen/security -N "bjscert" -K /home/bjensen/security \
-W keypassword "(givenname=Barbara)"
```

## International Search Examples

The following examples show search filters used to perform international searches on directory data. Each example gives all the possible matching rule filter formats so that you can become familiar with the formats and select the one that works best for you.

**Example 1 International Less Than Search**

When you perform a locale-specific search using the less than operator (<) or suffix (.1), you search for all attribute values that come before the given attribute in a specific collation order.

Any of the following filters can be used to search for all surnames that come before the surname *Marquez* in the Spanish collation order.

```
sn:2.16.840.1.113730.3.3.2.15.1:=< Marquez
sn:es:=< Marquez
sn:2.16.840.1.113730.3.3.2.15.1.1:=Marquez
sn:es.1:=Marquez
```

**Example 2 International Less Than or Equal To Search**

When you perform a locale-specific search using the less than or equal to operator (<=) or suffix (.2), you search for all attribute values that come at or before the given attribute in a specific collation order.

Any of the following filters can be used to search for all room numbers that come at or before room number *CZ422* in the Hungarian collation order.

```
roomNumber:2.16.840.1.113730.3.3.2.23.1:=<= CZ422
roomNumber:hu:=<= CZ422
roomNumber:2.16.840.1.113730.3.3.2.23.1.2:=CZ422
roomNumber:hu.2:=CZ422
```

**Example 3 International Equality Search**

When you perform a locale-specific search using the equal to operator (=) or suffix (.3), you search for all attribute values that match the given attribute in a specific collation order.

Any of the following filters can be used to search for all *businessCategory* attributes with the value *Softwareprodukte* in the German collation order.

```
businessCategory:2.16.840.1.113730.3.3.2.7.1:== Softwareprodukte
businessCategory:de:== Softwareprodukte
businessCategory:2.16.840.1.113730.3.3.2.7.1.3:=Softwareprodukte
businessCategory:de.3:=Softwareprodukte
```

**Example 4 International Greater Than or Equal To Search**

When you perform a locale-specific search using the greater than or equal to operator (>=) or suffix (.4), you search for all attribute values that come at or after the given attribute in a specific collation order.

Any of the following filters can be used to search for all localities that come at or after *Québec* in the French collation order.

```
locality:2.16.840.1.113730.3.3.2.18.1:=>= Québec
locality:fr:=>= Québec
locality:2.16.840.1.113730.3.3.2.18.1.4:=Québec
locality:fr.4:=Québec
```

**Example 5 International Greater Than Search**

When you perform a locale-specific search using the greater than operator (>) or suffix (.5), you search for all attribute values that come at or before the given attribute in a specific collation order.

Any of the following filters can be used to search for all mail hosts that come after host schranka4 in the Czech collation order.

```
mailHost:2.16.840.1.113730.3.3.2.5.1:=> schranka4
mailHost:cs:=> schranka4
mailHost:2.16.840.1.113730.3.3.2.5.1.5:=schranka4
mailHost:cs.5:=schranka4
```

**Example 6 International Substring Search**

When you perform an international substring search, you search for all values that match the given pattern in the specified collation order.

Any of the following filters can be used to search for all user IDs that end in ming in the Chinese collation order.

```
uid:2.16.840.1.113730.3.3.2.49.1:=* *ming
uid:zh:=* *ming
uid:2.16.840.1.113730.3.3.2.49.1.6*_:=*ming_*
uid:zh.6*_:=*ming_*
```

**Exit Status**

The exit status returned reflects the return values of the underlying functions used, which may depend on return values sent by the server. Common exit status codes follow:

**0**

Successful completion; LDAP\_SUCCESS; 0x00.

**1**

Server encountered errors while processing the request; LDAP\_OPERATIONS\_ERROR; 0x01.

**2**

Server encountered errors, such as a BER-decoding error, while processing the request; LDAP\_PROTOCOL\_ERROR; 0x02.

**3**

Search exceeded the time limit for operations on the server; LDAP\_TIMELIMIT\_EXCEEDED; 0x03.

**4**

Search returned more results than the maximum number allowed by the server; LDAP\_SIZELIMIT\_EXCEEDED; 0x04.

**10**

Base DN belongs to an entry handled by neither server, and the referral URL identifies another server that handles the entry; LDAP\_REFERRAL; 0x0a.

**11**

Search returned more results than the maximum number a client application is allowed by the server to retrieve; LDAP\_ADMINLIMIT\_EXCEEDED; 0x0b.

**32**

Base DN belongs to an entry handled by neither server, and no referral URL is available for the entry; LDAP\_NO\_SUCH\_OBJECT; 0x20.

**34**

Base DN is not a valid DN; LDAP\_INVALID\_DN\_SYNTAX; 0x22.

**50**

Bind DN user does not have permission to read the entry from the directory; LDAP\_INSUFFICIENT\_ACCESS; 0x32.

**53**

Directory is read-only; LDAP\_UNWILLING\_TO\_PERFORM; 0x35.

**81**

The directory server did not respond to the request, or the connection was lost; LDAP\_SERVER\_DOWN; 0x51.

**82**

An error occurred while receiving results; LDAP\_LOCAL\_ERROR; 0x52.

**83**

The request could not be BER-encoded; LDAP\_ENCODING\_ERROR; 0x53.

**84**

A result could not be decoded; LDAP\_DECODING\_ERROR; 0x54.

**85**

The search exceeded the time limit specified using the -l option; LDAP\_TIMEOUT; 0x55.

**87**

An error occurred while parsing and BER-encoding the specified filter; LDAP\_FILTER\_ERROR; 0x57.

**89**

An option or argument is not valid; LDAP\_PARAM\_ERROR; 0x59.

**90**

Needed memory could not be allocated; LDAP\_NO\_MEMORY; 0x5a.

**91**

A specified host name or port is not valid; LDAP\_CONNECT\_ERROR; 0x5b.

**92**

The directory server supports only LDAPv2, and the -v 2 option was not used, or the -v 2 option was used, but the server no longer supports LDAP v2; LDAP\_NOT\_SUPPORTED; 0x5c.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWldapcsdk-tools
Stability Level	Evolving

## See Also

[ldapcmp\(1\)](#), [ldapcompare\(1\)](#), [ldapdelete\(1\)](#), [ldapmodify\(1\)](#), [ldappasswd\(1\)](#)

---

## ldapsubtdel

recursively delete a subtree of LDAP entries

### Synopsis

```
install-path/dsrk/bin/ldapsubtdel  
-b baseDN [options]
```

### Description

The `ldapsubtdel` command attempts recursively to delete a subtree of LDAP entries under the entry having the distinguished name (DN) specified as a parameter to the `-b` option. You must bind as a user having access to delete the entries specified.

### Options

The `ldapsubtdel` command supports the following options:

`-b DN`

Delete entries under the entry with the specified DN.

Default is to delete entries under the specified entry, but not to delete the specified entry itself. Use the `-r` option to delete the specified entry as well.

`-D bindDN`

Use the specified bind DN to authenticate to the directory.

If the bind DN is not specified, the `ldapsubtdel` command attempts anonymous authentication.

`-H`

Display a usage message.

`-h hostname`

Connect to the directory on the specified host.

Default is to connect to the local host on the loopback address, `127.0.0.1`.

`-j filename`

Use the bind password in the specified file to authenticate to the directory.

`-M`

Manage referrals, deleting the entries containing referrals instead of the entries obtained by following referrals.

Default is to follow referrals and delete the entries to which the entries in the subtree refer.

`-n`

Display what would be done, but do not carry out any deletions.

Default is to carry out the deletions.

`-p port`

Connect to the directory on the specified port.

Default is to connect to the default simple authentication port for LDAP, 389.

**-r**

Also delete the entry having the DN specified as the parameter to the **-b** option.

Default is not to delete the entry specified.

**-V *LDAPVersion***

Use the specified LDAP version, either 2 or 3.

Default is to use version 3.

**-v**

Display verbose output, including information about each deletion performed.

**-w *password***

Use the specified bind password to authenticate to the directory.

**-w -**

Prompt for the bind password so it does not appear on the command line.

## Examples

The example in this section uses the following conventions:

- The `ldapsubtdel` command is found in a directory present in the `PATH` used for the examples.
- The directory server is located on a system named `host`.
- The directory server listens on port 389, the default for non-SSL connections.

### Example 1 `ldapsubtdel`: Deleting an Entire Subtree

The following command demonstrates deletion of an entire test subtree of LDAP entries:

```
$ ldapsubtdel -h host -D uid=hmiller,ou=people,dc=example,dc=com -w - \
-b ou=test,dc=example,dc=com -r -v
Enter bind password:
Processing subtree ou=test,dc=example,dc=com
Deleting entry uid=test0,ou=test,dc=example,dc=com
...
Deleting entry uid=test99,ou=test,dc=example,dc=com

Deleting entry ou=test,dc=example,dc=com

Successfully deleted subtree ou=test,dc=example,dc=com
```

If you read `Example.ldif`, you see that `hmiller`'s password is `hillock`.

## Exit Status

The `ldapsubtdel` command exits with status 0 if it completes successfully. Otherwise it exits with non-zero status.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	Zip distribution only
Stability Level	Evolving

## ldif

format input by adding base64 encoding to make it suitable for inclusion in an LDIF file

### Synopsis

```
install-path/bin/ldif  
[-b] attrtype
```

### Description

The `ldif` command formats input by adding base64 encoding to make it suitable for inclusion in an LDIF file. This makes it easy to include binary data, such as JPEG images, along with other textual attribute values. In an LDIF file, base64 encoded attribute values are indicated as `::encoded data`.

In addition to binary data, other values that must be base64 encoded include any value that begins with a semicolon (;) or a space, and any value that contains non-ASCII data, including newlines. The `ldif` command takes any input and formats it with the correct line continuation and appropriate attribute information.

### Options

The following options are supported:

`-b`

Specifies that the `ldif` command should interpret the entire input as a single binary value.

As an alternative to the `-b` option, you can use the `:<URL` specifier notation, which is simpler to use. For example, `jpegphoto:<file:///tmp/myphoto.jpg`. Although the official notation requires three `///` the use of one `/` is tolerated.

### Exit Status

The following exit values are returned:

**0**

Successful completion.

**1**

An error occurred.

On error, verbose error messages are output to standard output.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**[ldapmodify\(1\)](#)

## ldifxform

reformat LDIF text

### Synopsis

```
install-path/dsrk/bin/ldifxform  
[-h] [-i input.ldif] [-o output.ldif] -c command...
```

### Description

The `ldifxform` command reformats LDAP Data Interchange Format (LDIF) text, converting between all of the most common character sets, extracting attribute values, modifying attribute names, ordering entries based on attribute values, or giving detailed statistics. In all cases, input LDIF is not changed.

### Options

The `ldifxform` command supports the following options:

**-c *command***

Apply the specified reformatting operation.

The `ldifxform` command supports the following reformatting operations:

#### Attribute Modification

The `ldifxform` command can replace attribute values and remove attribute. To modify attributes, use the following options:

**-c suppressoptions**

Remove all options other than binary from attribute types.

**-c tcut=*attribute***

Remove the specified attribute from output.

Use this option once for each attribute to remove.

**-c tpreserve=*attribute***

Remove all attributes except the specified attribute from output.

Use this option once for each attribute to retain.

**-c treplace=*old: new***

Replace the old attributes with the new attribute type in output.

Use this option once for each attribute to rename.

#### Character Set Conversions

The `ldifxform` command can convert LDIF from one character set to another. To convert character sets, use the following options:

**-c to=*charSet***

Convert to the specified character set to UTF-8.

**-c from=*charSet***

Convert from the specified character set to UTF-8.

The following replacements for *charSet* are supported on all platforms:

88591

ISO-8859-1 character set

Conversions to this format strip characters not available in the character set.

ascii

ASCII character set

Non ASCII characters are replaced with ? when converting to this format.

mstxt

Windows Unicode Text character set

t61

T.61 character set used by X.500 and LDAP v2 servers

Conversions to this format strip characters not available in the character set.

Additional character sets may be supported for your platform. Use the `-h` option to display further character sets supported for your platform.

### Directory Analysis

The `ldifxform` command can generate statistical information to help you analyze directory content. To generate statistical information, use the following options:

`-c stats`

Generate statistical information and append it to the output.

`-c statsonly`

Generate statistical information instead of other output.

### Sorting and Ordering

Many directory servers return search results in the order that entries were loaded into the database. The `ldifxform` command can sort and order the entries before they are imported into the directory. To sort LDIF, use the following options:

`-c order`

Sort entries into hierarchical order.

`-c sort=attribute`

Sort entries in increasing order according to their values for the specified attribute. This is equivalent to alphabetical order for string-valued attributes.

`-c sort=^attribute`

Sort entries in decreasing order according to their values for the specified attribute. This is equivalent to reverse alphabetical order for string-valued attributes.

`-c split=number`

Generate the specified number of LDIF files, which can be loaded into the server by multiple clients in parallel. Each output file has a name of the form `output_ldifxform_c_n`, where

*output*

Reflects the file name passed to the `-o` option

*c*

Corresponds to the number of components in the root DN of the LDIF file

*n*

The number of the part from 1 to *number*, inclusive.

### Text Transformations

The `ldifxform` command can perform a number of text transformations affecting the presentation and encoding of the LDIF text. To perform text transformations, use the following options:

`-c cleanzero`

Remove trailing zero bytes from attribute values.

Use this option when processing LDIF from a buggy encoder.

`-c longlines`

Do not wrap long lines at the 79th column.

The output can be parsed again, but common tools such as `sed` and `grep` on some platforms may not handle lines longer than 1024 characters.

`-c nob64`

Undo base64 encoding.

The output cannot be parsed again if any attributes have values that are binary or that begin with special characters.

`-c nocomments`

Remove comments from the output.

`-c nodn`

Remove DN's from the output.

The output is no longer LDIF.

`-c notypes`

Remove attribute types from the output.

The output is no longer LDIF.

`-c sevenbit`

Base64 encode any attribute values containing bytes not present in ASCII.

`-h`

Display a usage message briefly describing all options.

`-i input.ldif`

Read input from the file specified.

When this option is omitted, the `ldifxform` command reads from standard input.

`-o output.ldif`

Write output to the file specified.

When this option is omitted, the `ldifxform` command writes to standard output.

### Extended Description

The `ldifxform` command acts as a stream filter, reading input from one file, performing transformations and writing the output to another file. Each

transformation is specified by a *command* parameter to the `-c` option. Multiple compatible transformations may be performed simultaneously.

Some transformations produce LDIF output destined to be reloaded into a directory. For example, renaming an attribute can be more easily processed on an LDIF file than online through requests to a directory server.

Other transformations do not produce LDIF; they are intended to provide an analysis of directory contents. For example, you may extract all different values of a specific attribute and list them under the DN in which they occur. The statistical operations provide counts of entries and attributes.

## Examples

The examples in this section use the following conventions:

- The `ldifxform` command is found in a directory present in the `PATH` used for the examples.
- The directory server is located on a system named `host`.
- The directory has been configured to support anonymous access for search and read. Therefore, you do not have to specify bind information.
- The directory server listens on port 389, the default for non-SSL connections.

### Example 1 `ldifxform`: Transforming Search Results to a List

The following command reformats search results into a simple list of employees placed in order by their room number:

```
$ ldapsearch -h host -b dc=example,dc=com "(uid=*jensen)" | ldifxform \
-c "tpreserve=roomNumber" -c "tpreserve=cn" -c "sort=roomNumber" -c nodn -c
notypes
version: 1
#:ordered: TRUE

Barbara Jensen
Babs Jensen
0209

Allison Jensen
0784

Kurt Jensen
1944

Richard Jensen
2631

Gern Jensen
4609

Ted Jensen
4717

Jody Jensen
4882
```

### Example 2 `ldifxform`: Generating Statistical Output

The following command generates statistical output from search results:

```

$ ldapsearch -h host -b dc=example,dc=com "(uid=*jensen)" | ldifxform -c statsonly
# Basic statistics
#:linecount: 121
#:entrycount: 7
# Number of nonleaf entries (at least one subordinate)
#:nonleafcount: 1
# Number of leaf entries (no subordinates)
#:leafcount: 7
# Largest number of entries immediately below a single nonleaf entry
#:maximmsubr: 7
# Number of levels in the DIT hierarchy
#:maxdepth: 4
# Largest number of AVAs in an RDN forming an entry's DN, normally 1.
#:maxrdns: 1
# Attribute types used in the LDIF file
# e is number entries containing this attr, v is total number of values,
# l is total length, m is max length of any one value, s is general syntax
# and x is extra encoding information.
#:attrstatsinfo: t=description e=1 v=1 l=49 m=49 i=1 s=cis x=ascii
#:attrstatsinfo: t=roomnumber e=7 v=7 l=28 m=4 i=1 s=int
#:attrstatsinfo: t=facsimiletelephonenumber e=7 v=7 l=105 m=15 i=1 s=tel
#:attrstatsinfo: t=telephonenumber e=7 v=7 l=105 m=15 i=1 s=tel
#:attrstatsinfo: t=mail e=7 v=7 l=130 m=19 i=1 s=cis x=mail
#:attrstatsinfo: t=uid e=7 v=7 l=49 m=7 i=1 s=cis x=alphanumeric
#:attrstatsinfo: t=l e=7 v=7 l=71 m=11 i=1 s=cis x=ascii
#:attrstatsinfo: t=ou e=7 v=14 l=144 m=19 i=2 s=cis x=ascii
#:attrstatsinfo: t=objectclass e=7 v=28 l=294 m=20 i=4 s=cis x=alphanumeric
#:attrstatsinfo: t=givenname e=7 v=7 l=36 m=7 i=1 s=cis x=alphanumeric
#:attrstatsinfo: t=sn e=7 v=7 l=42 m=6 i=1 s=cis x=alphanumeric
#:attrstatsinfo: t=cn e=7 v=8 l=96 m=14 i=2 s=cis x=ascii
# Counts of values of specific attribute types
#:attrdomaininfo: t=objectclass v=7 inetOrgPerson
#:attrdomaininfo: t=objectclass v=7 person
#:attrdomaininfo: t=objectclass v=7 top
#:attrdomaininfo: t=objectclass v=7 organizationalPerson

```

## Exit Status

The `ldifxform` command exits with status 0 if it completes successfully. Otherwise, it exits with non-zero status.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	Zip distribution only
Stability Level	Evolving

---

## logconv

analyze Directory Server access logs

### Synopsis

```
install-path/dsrk/bin/logconv  
[options] logfile...
```

### Description

The `logconv` command analyzes Directory Server access logs, specified as the *logfile* argument to the command, to extract usage statistics and count occurrences of significant events.

As the `logconv` command depends on the content of the access logs, output depends on the quantity of information present in the access logs. Refer to the Directory Server documentation for instructions on how adjust how much information Directory Server writes to the access logs.

The user running the `logconv` command must have at least read access to the Directory Server log files.

The `logconv` command ignores log files named `access.rotationinfo`.

### Options

The `logconv` command supports the following options.

Options specified here without a preceding dash (-) may be specified in any order, but must be specified together as a single option such as `-abcefgijlnrtux`.

**-A0 filename**

Write statistics on client activity based on the number of operations to the specified file.

This option overrides the use of options in the list `-abcefgijlnrtux`.

**-A1 filename**

Write statistics on client activity based on the number of connections to the specified file.

This option overrides the use of options in the list `-abcefgijlnrtux`.

**-a**

List the most frequently used base DN's.

**-B filename**

Write statistics on the most frequently used bind DN's to the specified file.

This option overrides the use of options in the list `-abcefgijlnrtux`.

**-b**

List the most frequently used bind DN's.

**-C filename**

Write statistics on the number of operations performed per connection to the specified file.

This option overrides the use of options in the list `-abcefgijlnrtux`.

**-c**

List the number of occurrences for each type of connection code.

**-DELIM**

Generate a field-delimited, formatted report when using the `-B` or `-R` options.

You can import this report into a spreadsheet application.

**-d rootDN**

Use the specified DN to identify operations performed by Directory Manager.

Default is `cn=Directory Manager`.

**-E errorCode**

Generate statistics on occurrences of the specified error code.

This option overrides the use of options in the list `-abcefgijlnrtux`.

**-e**

List the most frequently occurring error and return codes.

**-f**

List the bind DNs with the most failed binds due to invalid credentials.

**-g**

List details of all abandoned operations.

**-h**

Display the usage message.

**-I interval**

Use the specified interval for reporting when generating a report using the `-B` or `-R` options. The *interval* may be `MINUTE`, `HOUR`, `DAY`, or `MONTH`.

**-i**

List the IP addresses and connection codes for clients opening the most connections.

This option helps detect clients that may attempt to compromise security.

**-j**

Generate recommendations based on the data collected.

**-l**

List the most frequently occurring search filters.

**-N**

Resolve IP addresses to host names.

Using this option may impact performance.

**-n**

List the largest and most frequent number of entries per result (`nentries`).

**-P filename**

Write a report on pending operations to the specified file.

This option overrides the use of options in the list `-abcefgijlnrtux`.

**-R *filename***

Write a report on operations to the specified file.

This option overrides the use of options in the list `-abcefgijlnrtux`.

**-r**

List the most frequently requested attributes.

**-s *number***

Return the specified number of results per category.

Default is 20.

**-t**

List the longest and most frequent operation times (`etimes`).

**-u**

List details about unindexed searches.

**-V**

Enable verbose output. Same as `-abcefgijlnrtux`.

**-v**

Display version information and exit.

**-X *IPAddress***

Exclude operations originating from clients with the specified IP address, for example when repeated health check operations come from a load balancer.

Repeat this option to exclude multiple addresses.

**-x**

List the number and OID of all extended operations requested.

## Extended Description

The `logconv` command generates three types of statistics useful for monitoring Directory Server use and optimizing Directory Server configuration:

- Counts of events such as total binds and total searches performed
- Lists of the most frequently occurring parameters in LDAP requests
 

For example, the `logconv` command generates lists of the top ten bind DN's, base DN's, filter strings, and attributes returned. As generating such lists is computation intensive, you must explicitly request their generation using the appropriate options.
- Counts of occurrences for error codes such as those defined in `<ldap.h>`

Performance of the `logconv` command is affected by the volume of data in the access logs. To ensure acceptable performance, avoid running the `logconv` command on more than 1 GB of access logs at a time.

Furthermore, some of the data extracted depends on connection and operation numbers reset when you restart Directory Server. To obtain the most accurate counts, avoid analyzing logs that span a server restart.

## Examples

Examples in this section use the following conventions:

- The `logconv` command is found in a directory present in the `PATH` used for the examples.
- Directory Server stores access logs in `/var/ds/logs`.
- The current user has read access to the logs.

### Example 1 `logconv`: Generating Statistics and Recommendations

The following command generates statistics on client connections, binds, abandoned operations, and unindexed searches, and generates recommendations for performance improvements and further investigation:

```
$ logconv -ibgju /var/ds/logs/access*
```

### Example 2 `logconv`: Examining Binds with Invalid Credentials

The following command counts the number of times clients attempted to bind with invalid credentials, error 49 `LDAP_INVALID_CREDENTIALS`, resolving client IP addresses to host names:

```
$ logconv -N -E 49 /var/ds/logs/access*
```

### Example 3 `logconv`: Generating a Report

The following command generates a field delimited report on operations, suitable for import into a spreadsheet application:

```
$ logconv -DELIM -R report.txt /var/ds/logs/access
$ cat report.txt
Year|Month|Day|Time|Operations|Results|Performance|Connections|
  Searches|Modifications|Adds|Deletes|Modrdns|Binds|Extended Ops|Compares
2009|Apr|05|07:51:04|18119|18129|100.1%|10|0|0|0|0|18119|0|0
2009|Apr|05|08:09:30|12875|12883|100.1%|12878|0|0|0|0|12875|0|0
```

Long lines in this example have been wrapped for readability.

## Exit Status

The `logconv` command exits with status 0 if it completes successfully. Otherwise it exits with non-zero status.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	Zip distribution only
Stability Level	Evolving

---

## makeldif

generate LDIF for import into a directory

### Synopsis

```
install-path/dsrk/bin/makeldif  
[options] -t template -o output.ldif
```

### Description

The `makeldif` command generates LDAP Data Interchange Format (LDIF) files for import into a Lightweight Directory Access Protocol (LDAP) directory.

### Options

The `makeldif` command supports the following options:

**-b *filename***

Write bind information to this file when generating LDIF.

Lines of this file include a DN followed by a password, separated by a tab:

```
DN password
```

**-C *delimiter***

Use the specified character instead of a comma when reading from a comma-separated format using the `-c` option.

**-c *filename***

Use the specified comma-separated variable format file as input for generating LDIF.

**-D**

Run in debug mode, displaying additional information about errors.

**-d *filename***

Write DNs to this file when generating LDIF.

**-F *filename***

Write search filters constructed to find the entries generated to the specified file when generating search filters with the `-T` option.

**-f *filename***

Use the specified file containing a list of first names to use when generating LDIF.

When this option is not used, the `makeldif` command uses the `first.names` file expected in the current directory.

**-H**

Display usage information and exit.

**-I**

Ignore the first line when reading from a comma-separated format using the `-c` option. Use this option when the initial line is a header not containing data.

**-i attribute**

Use values of the specified attribute as login IDs when writing login information using the `-L` option.

**-L filename**

Write login information to this file when generating LDIF.

Lines of this file include a login ID followed by a password, separated by a tab:

```
loginID password
```

Specify the login ID attribute using the `-i` option. Default is `uid`.

**-l filename**

Use the specified file containing a list of last names to use when generating LDIF.

When this option is not used, the `makeldif` command uses the `last.names` file expected in the current directory.

**-M**

Generate a separate filter file for each relevant index type when generating search filters with the `-T` option.

**-m maximum**

Write no more than the specified maximum number of entries to a single file when generating LDIF.

Default is unlimited.

**-o output.ldif**

Create the specified file as output.

**-N minimum**

Only create filters that match at least the specified number of entries when generating substring search filters with the `-T` option.

Default is 1.

**-n number**

Create substring filters having the specified number of characters when generating substring search filters with the `-T` option.

Default is 3.

**-S**

Skip branch entries (parent entries) when generating LDIF.

**-s number**

Use the specified positive integer as a random number generator seed.

Default is to use a seed based on the current time.

You can consistently reproduce the same output by using the same random number generator seed and same templates.

**-T attribute:types**

Generate search filters of the specified types for the specified attributes.

The *types* is a comma-separated list of the following filter types:

```
eq
```

Filters matching for equality

- sub  
Filters matching substrings
- subAny  
Filters matching substrings anywhere within the string
- subFinal  
Filters matching substrings at the end of the attribute value
- subInitial  
Filters matching substrings at the beginning of the attribute value
- t **template**  
Use the specified LDIF template file when generating LDIF.  
Refer to EXTENDED DESCRIPTION for details.
- U  
Always use UNIX-style newline characters (\n).
- V  
Display version information and exit.
- w  
Wrap long lines when generating LDIF.  
Default is to write one attribute type and value per line, potentially resulting in very long lines for some values.
- X **maximum**  
Only create filters that match no more than the specified number of entries when generating substring search filters with the -T option.  
Default is unlimited.
- x **maximum**  
Write no more than the specified maximum number of entries under each branch for each template when generating LDIF.  
Default is unlimited.

## Extended Description

The `makeldif` command relies on a template file to customize how entries in the generated LDIF are organized and what they contain. Template files may contain the following definitions:

### Global Replacement Definitions

Define strings used to replace variables in the template file itself when generating LDIF

### Branch Entry Definitions

Define branches in the directory information tree (DIT) structure

### Template Definitions

Define how to generate leaf entries and attribute values

A sample you can customize, `example.template`, is installed with Directory Server Resource Kit.

## Global Replacement Definitions

Replacement definitions define strings used to replace variables in the template itself. For example, the following line defines a variable called `suffix` having the value `dc=example,dc=com`:

```
define suffix=dc=example,dc=com
```

Given this definition, all subsequent occurrences of the string `[suffix]` in the template file are replaced with `dc=example,dc=com`. The replacement takes place when lines of the template file are read into memory, with the result that replacements happen even in branch definitions and like places where other tokens are not parsed. Notice that the variable is surrounded by brackets, `[]`. When using brackets for purposes other than delimiting global replacement variables, escape them with a backslash, as in `\[` or `\]`. The backslash characters are removed during LDIF generation.

## Branch Entry Definitions

Branch entries are parents for other entries in a suffix. In other words, the branch entry at the root of the suffix for `Example.com` might be defined as:

```
branch: dc=example,dc=com
```

The `makeldif` command can then generate a corresponding branch entry represented in LDIF as follows:

```
dn: dc=example,dc=com
objectclass: top
objectclass: domain
dc=example
```

The `makeldif` command determines which object classes to use by examining the RDN of the entry, recognizing attribute types `c` (country), `dc` (domain component), `l` (location), `o` (organization), and `ou` (organizational unit). When you use RDNs having other attribute types, the `makeldif` command uses the object class `extensibleObject` for the entry.

To customize the branch entry itself, define additional attributes directly below the branch definition. For example, add a `description` attribute for the branch entry as follows:

```
branch: dc=example,dc=com
description: This is the description.
```

The resulting entry generated in LDIF appears as follows:

```
dn: dc=example,dc=com
objectclass: top
objectclass: domain
dc=example
description: This is the description.
```

To enable generation of entries below the branch entry, add `subordinateTemplate` definitions directly below the branch definition. For example, add a 1000 entries using the `person` template below `ou=people,dc=example,dc=com` as follows:

```
branch: ou=people,dc=example,dc=com
subordinateTemplate: person: 1000
```

You can add multiple `subordinateTemplate` definitions. For example, enable addition of 1000 entries using the `person` template and 500 entries using the `personWithCertificate` template below `ou=people,dc=example,dc=com` as follows:

```
branch: ou=people,dc=example,dc=com
subordinateTemplate: person: 1000
subordinateTemplate: personWithCertificate: 500
```

## Template Definitions

Template definitions contain prototype entries with special tags allowing the `makeldif` command to generate many unique, custom entries. For example, a `person` template definition might appear as follows:

```
template: person
rdnAttr: uid
objectclass: top
objectclass: person
objectclass: organizationalPerson
objectclass: inetOrgPerson
givenName: <first>
sn: <last>
cn: {givenName} {sn}
uid: {givenName}.{sn}
mail: {uid}@example.com
userPassword: <random:alphanumeric:8>
telephoneNumber: <random:telephone>
```

The first line of a template definition specifies the name of the template, here `person`. The `makeldif` command uses the name to identify the template when creating leaf entries under branch entries, based on `subordinateTemplate` definitions used with the branch entry definition. Each name must be unique.

A template entry may also have an `rdnAttr` line specifying the attribute type for the RDN of the generated entry. The `rdnAttr` takes a single value. Multi-valued RDNs are not supported. The default `rdnAttr` definition is `cn` if you do not provide one.

Other lines in a template definition reflect the attribute types and values to generate in the resulting LDIF. The `makeldif` command generates values for all recognized tokens.

### Supported Attribute Value Tokens

The `makeldif` command support the following tokens:

<ancestordn: { **depth** } >

Replace this value with the DN of the entry's ancestor at the specified depth.

A depth of 1 specifies the parent entry; a depth of 2 specifies the grandparent, and so forth. If the entry does not have an ancestor at the specified depth, the `makeldif` command replaces the value with an empty string.

<base64: { **value** } >

Replace this value with a base64-encoded representation of the specified value.

The value is decoded to a byte array using the UTF-8 character set, and then the byte array is base64-encoded.

<base64 : { **charset** } : { **value** } >

Replace this value with a base64-encoded representation of the specified value.

The value is decoded to a byte array using the specified character set, and then the byte array is base64-encoded.

<dn>

Replace this value with the DN of the current entry.

The RDN attribute for the entry must be assigned a value in the template before this token is used.

<exec : { **command** } >

Replace this value with the information sent to standard output when the specified command is executed on the system.

The replacement invokes a separate process each entry created using this template. Using this token can therefore slow LDIF generation considerably.

<exec : { **command** } , { **arg1** } , { **arg2** } , ... , { **argN** } >

Replace this value with the information sent to standard output when the specified command is executed on the system using the arguments provided.

The replacement invokes a separate process each entry created using this template. Using this token can therefore slow LDIF generation considerably.

<file : { **filename** } >

Replace this value with a randomly-chosen value from the specified file.

The file must contain one value per line. Weights cannot be assigned to the values in a file. To weight values, repeat their lines multiple times in the file.

<first>

Replace this value with a first name from the first name file specified using the `-f` option.

If both a first and last name are included in an entry, the combination of the first and last name is guaranteed to be unique. That is, no two entries in the generated LDIF file have the same combination of first and last name values. In order to guarantee uniqueness, the first and last names must be used in their entirety. You cannot use substrings of the form `{givenName:5}` for example.

<guid>

Replace this value with a GUID value in the containing hexadecimal digits in the form 12345678-90ab-cdef-1234-567890abcdef.

GUID values generated are unique within the LDIF generated.

<ifabsent : { **attribute** } >

Include this attribute only if the specified attribute is not present on the entry.

The specified attribute must be defined in the template file before it is referenced in the `ifabsent` tag.

<ifabsent : { **attribute** } : { **value** } >

Include this attribute only if the specified attribute is not present on the entry or if it does not have the specified value.

The specified attribute must be defined in the template file before it is referenced in the `ifabsent` tag. If the specified attribute has multiple values, the `makeldif` command checks only the first value.

<ifpresent: {**attribute**}>

Include this attribute only if the specified attribute is also present on the entry.

The specified attribute must be defined in the template file before it is referenced in the ifpresent tag.

<ifpresent: {**attribute**}: {**value**}>

Include this attribute only if the specified attribute is also present on the entry and has the specified value.

The specified attribute must be defined in the template file before it is referenced in the ifpresent tag. If the specified attribute has multiple values, the makeldif command checks only the first value.

<last>

Replace this value with a last name from the last name file specified using the -l option.

If both a first and last name are included in an entry, the combination of the first and last name is guaranteed to be unique. That is, no two entries in the generated LDIF file have the same combination of first and last name values. In order to guarantee uniqueness, the first and last names must be used in their entirety. You cannot use substrings of the form {givenName:5} for example.

<list: {**value1**}, {**value2**}, ..., {**valueN**}>

Replace this value with a randomly-chosen value from the specified, comma-delimited list.

Each value has an equal chance of being chosen.

<list: {**value1**}: {**weight1**}, {**value2**}: {**weight2**}, ..., {**valueN**}: {**weightN**}>

Replace this value with a randomly-chosen value from the specified, comma-delimited list.

The weight associated with each list item determines how likely that value is to be chosen. A list item with a weight of 2 is twice as likely to be chosen as an item with a weight of 1. Specified only positive integer weights.

<loop: {**start**}: {**end**}>

Process this definition ( $end - start + 1$ ) times, replacing this token each time with a number beginning at {start} and incrementing by one until reaching {end}.

You may include multiple loop tokens on the same line and using different {start} values, but only the first {end} value is used to determine how many copies of the line to create.

<parentdn>

Replace this value with the DN of the parent entry.

<presence: {**percent**}>

Include the attribute on the specified percentage of entries generated from this template definition. The percentage value is a number between 0 and 100.

Use this token only with attributes not required by the entry's object classes, and include something in the value of the attribute to be generated on entries including the attribute.

<random: alpha: {**length**}>

Replace this value with a string of {length} randomly-chosen alphabetic characters.

<random:alpha:{**minlength**}:{**maxlength**}>

Replace this value with a string of between {*minlength*} and {*maxlength*} randomly-chosen alphabetic characters.

<random:alphanumeric:{**length**}>

Replace this value with a string of {*length*} randomly-chosen alphanumeric characters.

<random:alphanumeric:{**minlength**}:{**maxlength**}>

Replace this value with a string of between {*minlength*} and {*maxlength*} randomly-chosen alphanumeric characters.

<random:base64:{**length**}>

Replace this value with a string of {*length*} randomly-chosen base64 characters.

If the specified length is not a multiple of 4, then the base64 value produced is padded with equal signs so that the total length is a multiple of 4.

<random:base64:{**minlength**}:{**maxlength**}>

Replace this value with a string of between {*minlength*} and {*maxlength*} randomly-chosen base64 characters.

<random:chars:{**characters**}:{**length**}>

Replace this value with a string of {*length*} characters that are randomly-selected from {*characters*}. {*characters*} may be any valid character other than the colon.

<random:hex:{**length**}>

Replace this value with a string of {*length*} randomly-chosen hexadecimal digits.

<random:hex:{**minlength**}:{**maxlength**}>

Replace this value with a string of between {*minlength*} and {*maxlength*} randomly-chosen hexadecimal digits.

<random:month>

Replace this value with the name of a randomly-chosen month. That is, t

The value is one of January, February, March, April, May, June, July, August, September, October, November, or December.

<random:month:{**length**}>

Replace this value with the first {*length*} characters of the name of a randomly-chosen month.

<random:numeric:{**length**}>

Replace this value with a string of {*length*} randomly-chosen numeric digits.

<random:numeric:{**min**}:{**max**}>

Replace this value with a randomly-chosen number between {*min*} and {*max*}, inclusive.

<random:numeric:{**min**}:{**max**}:{**length**}>

Replace this value with a randomly-chosen number between {*min*} and {*max*}, inclusive.

The value is padded with leading zeros so that it has at least {*length*} digits.

<random:telephone>

Replace this value with a string of randomly-chosen numeric digits in the form 123-456-7890.

This uses a US-format telephone number. You can generate telephone numbers in the format used by other countries by combining other random tags. For example, to generate a telephone number in the UK format, use `+44 <random:numeric:4><random:numeric:6>`.

```
<sequential>
```

Replace this value with a sequentially-increasing numeric value.

The first value is zero. Sequential counters are separate on a per-attribute basis, so it is possible to use multiple sequential counters in the different attributes of the same entry without impacting each other.

```
<sequential:{firstvalue}>
```

Replace this value with a sequentially-increasing numeric value, where the first number starts at the specified value.

Sequential counters are separate on a per-attribute basis, so it is possible to use multiple sequential counters in different attributes of the same entry without impacting each other.

In addition to supported tokens, you can cause the `makeldif` command to generate attribute values from the values of attributes on the entry previously defined in the template by constructing prototype values using those attribute types in braces. For example, the following excerpt reuses `givenName` and `sn` (surname) values to define `cn` (common name) values:

```
...
givenName: <first>
sn: <last>
cn: {givenName} {sn}
...
```

When generating values from multi-valued attributes, the `makeldif` command uses the first value in the list.

To use only the first few characters of an attribute value to generate a value, add a colon followed by the length of the substring to use. For example, use `{givenName:1}{sn:1}{employeeNumber}` to generate values taking the first letter of the first name, followed by the first letter of the last name, followed by the employee number.

### Subordinate Template Definitions

To create entries generated from one template definition below those generated by another template definition, include one or more `subordinateTemplate` definitions in the upper template definition.

Use this functionality with caution, however, as the `makeldif` command does not prevent you from generating circular references throwing the LDIF generation process into an infinite loop.

### Inheritance

Template definitions support inheritance, whereby you specify a template definition that builds on a previously defined template, using the `extends` definition.

For example, to generate 10000 entries using the `person` template and an additional 1000 entries having the same structure as those generated from the `person` but also including a value for the `userCertificate` attribute, you create a template definition extending the `person` template as follows:

```
template: certificatePerson
```

```
rdnAttr: uid
extends: person
userCertificate: <random:base64:1000>
```

Given the `person` template defined previously, the `certificatePerson` template then has the same effect as the following:

```
template: certificatePerson
rdnAttr: uid
objectclass: top
objectclass: person
objectclass: organizationalPerson
objectclass: inetOrgPerson
givenName: <first>
sn: <last>
cn: {givenName} {sn}
uid: {givenName}.{sn}
mail: {uid}@example.com
userPassword: <random:alphanumeric:8>
telephoneNumber: <random:telephone>
userCertificate: <random:base64:1000>
```

You may use multiple levels of inheritance, but you must make sure both to specify the `rdnAttr` value for the inherited template as the parent's RDN attribute is not automatically used, and to avoid circular references that cause infinite loops in the LDIF generation process.

## Examples

Examples in this section use the following conventions:

- The `makeldif` command is found in a directory present in the `PATH` used for the examples.
- The sample files are located in the current directory.

### Example 1 `makeldif`: Generating LDIF

The following command generates LDIF using the sample template and other files delivered with Directory Server Resource Kit.

```
$ makeldif -t example.template -o sample.ldif
Processed 1000 entries
Processed 2000 entries
Processed 3000 entries
Processed 4000 entries
Processed 5000 entries
Processed 6000 entries
Processed 7000 entries
Processed 8000 entries
Processed 9000 entries
Processed 10000 entries
Processing complete.
10002 total entries written.
```

### Example 2 `makeldif`: Generating Search Filters and LDIF

The following command generates LDIF and corresponding search filters base.

```
$ makeldif -T uid:eq -T cn:eq,sub -F filters.txt -t example.template -o
sample.ldif
```

```
Processed 1000 entries
Processed 2000 entries
Processed 3000 entries
Processed 4000 entries
Processed 5000 entries
Processed 6000 entries
Processed 7000 entries
Processed 8000 entries
Processed 9000 entries
Processed 10000 entries
Processing complete.
10002 total entries written.
Writing filters to filters.txt
Wrote 10000 equality filters for uid
Wrote 10000 equality filters for cn
Wrote 1827 subInitial filters for cn
Wrote 7328 subAny filters for cn
Wrote 2099 subFinal filters for cn
```

## Exit Status

The makeldif command exits with status 0 if it completes successfully. Otherwise it exits with non-zero status.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	Zip distribution only
Stability Level	Evolving

## mmldif

combine multiple ldif files into a single, authoritative set of entries

### Synopsis

```
install-path/bin/mmldif  
[-c ] [-D ] [-o out.ldif] files
```

### Description

The `mmldif` command combines multiple LDIF files into a single authoritative set of entries. Typically each LDIF file is from a master server cooperating in a multi-master replication environment (for example, masters that refuse to sync up). Optionally, the `mmldif` command can generate LDIF change files that could be applied to the original file to bring it up to date with the authoritative version. At least two input files must be specified.

### Options

The following options are supported:

`-c`

Write a change file (`.delta`) for each input file.

`-D`

Print debugging information.

`-o`

Write authoritative data to this file. If not specified, the command compares the input files, but does not generate output LDIF files.

#### **files**

Two or more LDIF files to combine into a single set of entries. For example, `in1.ldif` `in2.ldif`.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[insync\(1\)](#)

---

## modrate

measure modification performance for an LDAP directory

### Synopsis

```
install-path/dsrk/bin/modrate  
[options] -b baseDN -M attribute:length:regexp
```

### Description

The `modrate` command measures the rate at which an LDAP directory can perform random, user-defined modifications. As with all measures of performance, results depend on many factors, including what options you pass to the `modrate` command, and also how the directory service itself is tuned.

The command uses LDAP v3, and cannot be used to authenticate to an LDAP v2 directory not supporting LDAP v3.

### Options

The `modrate` command supports the following options:

-a

Run in asynchronous mode, not waiting for results before requesting subsequent modifications. The maximum number of threads the `modrate` command can use is limited by the number of file descriptors the operating system allows the process to use. The time is measured starts when the request is sent and finishes when the result is received.

-b **targetDN**

Use the specified DN for the target entry.

Refer to [Random Target Syntax](#) and [Random Target Substitution](#) for details.

-C **messages**

Display the specified number of results messages before exiting. Results messages appear by default as output on standard out, similar to the following:

```
Avg r= 272.00/thr ( 54.40/sec), total= 816
```

This shows output for three threads requesting modifications for five seconds. The average modify rate per thread is 54.40 per thread per second for the interval measured. The total shown for all threads is 816.

Default is to continue iterating until the command is interrupted.

-D **bindDN**

Use the specified bind DN to authenticate to the directory.

If the bind DN is not specified, the `modrate` command attempts anonymous authentication.

-E

Display the bind DN of entries for which modifications did not complete successfully.

- e  
Display the number of attempted modifications that did not complete successfully.
- h **hostname**  
Connect to the directory on the specified host.  
  
Enclose IPv6 addresses in brackets ( [ ] ) as described in RFC 2732.  
Default is to connect to the local host on the loopback address, 127.0.0.1.
- i **filename**  
Use the file specified to generate target entry base DNs at random.  
  
Refer to [Random Target Syntax](#) and [Random Target Substitution](#) for details.
- j **seconds**  
Display results each specified number of seconds.  
  
Default is to display results every 5 seconds.
- K  
Keep connections open and only bind once, measuring only the time required to perform the modify operation.  
  
Default is to measure the duration the connection is active as the modification sequence.
- k  
Keep connections open, measuring only the time required to perform the bind and modify operations.  
  
Default is to measure the duration the connection is active as the modification sequence.
- M **attribute:length:regexp**  
Generate random values for modifications on the specified attribute, having the specified integer length in characters. Generate the values from the specified regular expression, *regexp*, which has the form (c\*(c-c)\*)\* where c represents an ASCII character.  
  
For example, the *regexp* parameter could be [A-Z][a-z][0-9], or simply aString  
  
If the attribute specified does not exist on the target entry, it is added, subject to schema checking.
- m **maxIter**  
Perform no more than the specified number of modifications per thread.  
  
Default is for each thread to continue iterating until the command is interrupted.
- o **maxHops**  
Traverse no more than the specified number of hops when following referrals.  
  
Default is 5.
- p **port**  
Connect to the directory on the specified port.  
  
Default is to connect to the default simple authentication port for LDAP, 389.
- q  
Run in quiet mode, not displaying results.

Default is to display results every 5 seconds, which you can adjust using the `-j` option.

`-R`

Do not follow referrals.

Default is to follow referrals.

`-r maxRand`

Use the specified maximum to determine the range for random numbers replacing `%d` formatting specifications when modifying random target entries.

When you use this option twice, the first occurrence generates random numbers in the range `[0,maxRand1-1]` for the first `%d`, the second `[1,maxRand2]` for the second `%d`.

Refer to [Random Target Syntax](#) and [Random Target Substitution](#) for details.

`-s randSeed`

Use the specified seed, an unsigned `int`, for random number generation.

Default seed is 0.

`-t threads`

Use the specified number of the threads to connect to the server.

Default is to use one thread.

`-v`

Display verbose output.

`-W filename`

Read the bind password from the specified file.

`-w password`

Use the specified bind password to authenticate to the directory.

`-w -`

Prompt for the bind password so it does not appear on the command line or in a file.

## Extended Description

The `modrate` command repeatedly requests modification operations of a directory server. Threads may be configured to keep open connections or perform LDAP bind with each operation. The command-line options let you specify the bind credentials.

The command uses LDAP v3, and cannot be used to authenticate to an LDAP v2 directory not supporting LDAP v3. Furthermore, the `modrate` command uses simple authentication, not secure binding.

The `modrate` command cannot set a time limit for operations.

By default, the `modrate` command continues its task indefinitely, displaying results periodically, and displaying any errors encountered as well without interrupting operation.

### Random Target Syntax

Include randomly generated numbers by specifying `%d` and `%s` placeholders in the base DN. These placeholders are then replaced according to the following rules:

%d

Replace this placeholder with random integer values depending on the *maxRand* parameter to the *-r* option.

The *-r* option may be used at most two times to generate random target entries. Replacement values for the %d placeholder range over [0,*maxRand1*—1] for the first use of the *-r* option, and over [1,*maxRand2*] for the second.

%s

Replace this placeholder with random strings from the file specified using the *-i* option.

Replacement values for this placeholder are randomly selected lines of the file specified.

### Random Target Substitution

The *modrate* command requires that you apply the following rules for substitutions, displaying an error message when the used incorrectly:

- Use only one type of placeholder, either %d or %s, per invocation of the *modrate* command.
- Specify at least as many uses of the *-r* as %d placeholders used in the base DN.
- Use %%d and %%s to specify literal strings %d and %s, respectively.

In order to use this random modification mechanism, you must populate your directory accordingly. For example, you can measure the modification rate using the following command:

```
$ modrate -D uid=hmiller,ou=people,dc=example,dc=com -w hillock \  
-b "uid=test%d,ou=test,dc=example,dc=com" -C 3 -r 100 -M 'description:7:astring'
```

If you read *Example.ldif*, you see that *hmiller*'s password is *hillock*.

In order for the *modrate* command to work effectively, your directory should contain entries corresponding to the following LDIF excerpt:

```
dn: uid=test0,ou=test,dc=example,dc=com  
  
dn: uid=test1,ou=test,dc=example,dc=com  
  
dn: uid=test2,ou=test,dc=example,dc=com  
  
dn: uid=test10,ou=test,dc=example,dc=com  
  
dn: uid=test99,ou=test,dc=example,dc=com
```

## Examples

Examples in this section use the following conventions:

- The *modrate* command is found in a directory present in the *PATH* used for the examples.
- The directory server is located on a system named *host*.
- The directory server listens on port 389, the default for non-SSL connections.

**Example 1 modrate: Sample Output**

The following command performs modifications until it has displayed five results messages. Notice that each line concerns only the elapsed interval.

```
$ modrate -h host -D uid=hmiller,ou=people,dc=example,dc=com -w hmiller \
-C 5 -b "uid=test%d,ou=test,dc=example,dc=com" -r 100 -M "description:7:aString"
Enter bind password:
Avg r= 74.00/thr ( 14.80/sec), total= 74
Avg r= 118.00/thr ( 23.60/sec), total= 118
Avg r= 68.00/thr ( 13.60/sec), total= 68
Avg r= 39.00/thr ( 7.80/sec), total= 39
Avg r= 71.00/thr ( 14.20/sec), total= 71
All threads exited
```

If you read `Example.ldif`, you see that `hmiller`'s password is `hillock`.

Notice also that a result message provides the following items of information:

- The average rate of modification per thread of execution
- The average rate of modification per second
- The total number of modification operations performed during the interval the results message concerns

**Example 2 modrate: Modification Rate Alone**

The following command keeping the connection open and binds only once:

```
$ modrate -h host -D uid=hmiller,ou=people,dc=example,dc=com -w hmiller \
-C 5 -b "uid=test%d,ou=test,dc=example,dc=com" -r 100 -M "description:7:aString"
-K
Enter bind password:
Avg r= 272.00/thr ( 54.40/sec), total= 272
Avg r= 183.00/thr ( 36.60/sec), total= 183
Avg r= 180.00/thr ( 36.00/sec), total= 180
Avg r= 257.00/thr ( 51.40/sec), total= 257
Avg r= 226.00/thr ( 45.20/sec), total= 226
All threads exited
```

If you read `Example.ldif`, you see that `hmiller`'s password is `hillock`.

**Exit Status**

The `modrate` command returns the following exit status codes.

0  
Successful completion.

**non-zero**  
An error occurred.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	Zip distribution only
Stability Level	Evolving

**See Also**

[authrate\(1\)](#), [makeldif\(1\)](#), [searchrate\(1\)](#)

## pwdhash

print the encrypted form of a password by using one of the server's encryption algorithms

### Synopsis

```
install-path/bin/pwdhash
-D instance-path [-H ] [-c comparepwd | -s scheme] password...
```

### Description

The `pwdhash` command prints the encrypted form of a password using one of the encryption algorithms available to the server. If a user cannot log in, you can use this command to compare the user's password with the password stored in the directory.

### Options

The following options are supported:

`-c`

Specifies the encrypted password with which the user password is to be compared. The result of this comparison is either OK or password does not match.

`-D instance-path`

Specifies where the Directory Server instance is located.

`-H`

Specifies that the passwords are hex-encoded.

***password***

The clear password from which the encrypted form should be generated (or against which the password in the directory should be compared).

`-s`

Generates the encrypted passwords according to the encryption scheme. The available schemes are SSHA, SHA, CRYPT, and CLEAR.

### Examples

#### Example 1 Encrypting a Password

```
$ pwdhash -D /local/dsInst -s SSHA mypassword
{SSHA}mtHyZSHfhOZ4FHmvQe09FQjvLZpnW1wbmW05cw==
```

#### Example 2 Comparing Two Passwords

```
$ pwdhash -D /local/dsInst \
-c "{SSHA}mtHyZSHfhOZ4FHmvQe09FQjvLZpnW1wbmW05cw==" aPassword
pwdhash: password does not match
```

### Exit Status

The following exit values are returned:

**0**  
Successful completion.

**1**  
An error occurred.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Stable

## repldisc

discover a replication topology

### Synopsis

```
install-path/bin/repldisc
[-D bindDN] [-w password] [-j file ] [-t ] [-n ] [-a ]
[-p port] [-T timeout] [-J file] [-W keypassword] [-K keydbpath]
[-N certname] [-P certdbpath] [-e SSL port] [-b ReplicaRoot]
-s | -S HostSpec
```

### Description

The `repldisc` command enables the discovery of a replication topology. Topology discovery starts with one server and constructs a graph of all known servers (using the RUVs and Replication Agreements). `repldisc` then prints an adjacency matrix describing the topology.

### Options

The following options are supported:

-a

Specifies that only the arcs between pairs of connected hosts are printed. For more information, see EXAMPLES.

---



---

**Note:** If the total line length of the output exceeds 80 characters, symbolic host names are used, accompanied by a legend. Otherwise, full host names are printed. Using the `-a` option ensures that symbolic host names are not used.

---



---

-b

The suffix (replica root) that has been specified for replication. If `-b` is not specified, the delay for all suffixes is printed.

-D

Distinguished name with which to bind to the server. This parameter is optional if the server is configured to support anonymous access. If a DN is specified in the `HostSpec` option, this overrides the `-D` option.

-j

If specifying the default password at the command-line poses a security risk, the password can be stored in a file. The `-j` option specifies this file.

-n

Specifies that `repldisc` should not run in interactive mode. Running in interactive mode allows you to re-enter the `bindDN`, password, host and port, if a bind error occurs.

-p

The TCP port used by the instance. The default port is 389. If a port is specified in the `HostSpec`, this overrides the `-p` option.

-t

Prints the mode of transport (SSL or CLEAR).

-T

Specifies the number of seconds after which `repldisc` times out if the server connection goes down.

-w

Password associated with the distinguished name specified by the `-D` option. If a password is specified in the *HostSpec*, this overrides the `-w` option.

### **HostSpec**

Host specification, which takes the form `[binddn: [password]@]host[:port]`. The following is an example:

**cn=admin,cn=Administrators,cn=config:mykeyword@myserver:1389**

If you are using SSL, use `-S` in the server specification. In this case, *HostSpec* specifies the certificate name and key password, rather than the bindDN and password.

## SSL Options

You can use the following options to specify that `repldisc` uses LDAPS when communicating with Directory Server. You can also use these options if you want to use certificate-based authentication. These options are valid only when LDAPS has been turned on and configured.

-e

Default SSL port, 636.

-J

This option has the same function as the `-j` option, for the key password.

-K

Specifies the name of the certificate key used for certificate-based client authentication. For example, `-K Server-Key`.

-N

Specifies the certificate name to use for certificate-based client authentication. For example, `-N Server-Cert`. If this option is specified, the `-W` option is required.

-P

Specifies the location of the certificate database.

-W

Specifies the password for the certificate database identified by the `-P` option. For example, `-W serverpassword`.

## Examples

### **Example 1 Single Replication Scenario**

```
$ repldisc -D cn=admin,cn=Administrators,cn=config -w pwd \  
-b o=rtest -s myserver:1389
```

Topology for suffix: o=rtest

Legend:

^ : Host on row sends to host on column.  
 v : Host on row receives from host on column.  
 x : Host on row and host on column are in MM mode.

H1 : france.example.com:1389

H2 : spain:1389

H3 : portugal:389

```
  | H1 | H2 | H3 |
```

```
===+=====
```

```
H1 |   | ^ |   |
```

```
---+-----
```

```
H2 | v |   | ^ |
```

```
---+-----
```

```
H3 |   | v |   |
```

```
---+-----
```

### Example 2 Using the -a Option

Topology for suffix: o=rtest

Legend:

The direction of the replication is indicated with arrows.

Single-master: suppliers appear on left, consumers on right (->).

Multi-master : servers are shown linked by a double arrow (<->).

france.example.com:1389 -> spain:1389

spain:1389 -> portugal:389

### Exit Status

The following exit values are returned:

**0**  
Successful completion.

**1**  
An error occurred.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Stable

## See Also

[insync\(1\)](#), [entrycmp\(1\)](#)

## Notes

The node on which you are running the `entrycmp`, `insync`, and `repldisc` tools must be able to reach all the specified hosts. If these hosts are unavailable, you will encounter difficulties using these tools. Ensure that all servers are up and running before using these tools.

When you identify hosts, you must use either symbolic names or IP addresses for all hosts. The replication monitoring commands do not address resolution between symbolic names and IP addresses. Using a combination of symbolic names and IP addresses can cause problems. Moreover, on multi-homed hosts, referring to the same Directory Server instance using different names may cause unexpected results.

When SSL is enabled, the directory server on which you are running the tools must have a copy of all the certificates used by the other servers in the topology.

`repldisc` takes the host specification from the replication agreement, unless otherwise specified at the command line.

The replication monitoring tools rely on access to `cn=config` to obtain the replication status. This should be taken into account, particularly when replication is configured over SSL.

---

## searchrate

measure search performance for an LDAP directory

### Synopsis

```
install-path/dsrk/bin/searchrate  
[options] -b baseDN -f filter
```

### Description

The `searchrate` command measures the rate at which an LDAP directory can perform random, user-defined searches. As with all measures of performance, results depend on many factors, including what options you pass to the `searchrate` command, and also how the directory service itself is tuned.

### Options

The `searchrate` command supports the following options:

**-A *attribute***

Retrieve only the specified attribute.

Repeat this option to specify multiple attributes.

**-a**

Run in asynchronous mode, not waiting for results before requesting subsequent searches. The maximum number of threads the `searchrate` command can use is limited by the number of file descriptors the operating system allows the process to use. The time is measured starts when the request is sent and finishes when the result is received.

**-b *baseDN***

Use the specified base DN for the target entry.

Default is the root DSE, " ".

Refer to [Random Target Syntax](#) and [Random Target Substitution](#) for details on number and string substitutions.

**-C *messages***

Display the specified number of results messages before exiting. Results messages appear by default as output on standard out, similar to the following.

```
Avg r=2731.00/thr (1092.40/sec), total= 5462
```

This shows output for two threads searching for five seconds. The average search rate per thread is 2731 searches per thread for the interval measured, for 1092.40 searches per second on average. The total shown for both threads is 5462.

Default is to continue iterating until the command is interrupted.

**-D *bindDN***

Use the specified bind DN to authenticate to the directory.

If the bind DN is not specified, the `searchrate` command attempts anonymous authentication.

-E

Display the bind DN and filter for searches that failed to retrieve an entry.

-e

Display the number of attempted searches that failed to retrieve an entry.

-f **filter**

Use the specified RFC 2254 conformant filter for all searches.

Refer to [Random Target Syntax](#) and [Random Target Substitution](#) for details on number and string substitutions.

-h **hostname**

Connect to the directory on the specified host.

Enclose IPv6 addresses in brackets ([ ]) as described in RFC 2732.

Default is to connect to the local host on the loopback address, 127.0.0.1.

-i **filename**

Use the file specified to generate target entry base DNs at random.

Refer to [Random Target Syntax](#) and [Random Target Substitution](#) for details.

-j **seconds**

Display results each specified number of seconds.

Default is to display results every 5 seconds.

-K

Keep connections open and only bind once, measuring only the time required to perform the search operation.

Default is to measure the duration the connection is active as the search sequence.

-k

Keep connections open, measuring only the time required to perform the bind and search operations.

Default is to measure the duration the connection is active as the search sequence.

-l **seconds**

Set the search time-out at the specified number of seconds for synchronous searches.

Default is 10 seconds.

-m **maxlter**

Perform no more than the specified number of searches per thread.

Default is for each thread to continue iterating until the command is interrupted.

-p **port**

Connect to the directory on the specified port.

Default is to connect to the default simple authentication port for LDAP, 389.

-q

Run in quiet mode, not displaying results.

Default is to display results every 5 seconds, which you can adjust using the -j option.

**-r *maxRand***

Use the specified maximum to determine the range for random numbers replacing %d formatting specifications when searching random target entries.

When you use this option twice, the first occurrence generates random numbers in the range [0,*maxRand1*-1] for the first %d, the second [1,*maxRand2*] for the second %d.

Refer to [Random Target Syntax](#) and [Random Target Substitution](#) for details.

**-s *randSeed***

Use the specified seed, an unsigned int, for random number generation.

Default seed is 0.

**-s *scope***

Use the specified scope when searching.

The following values are supported for *scope*:

base

Examine only the entry specified by the argument to the -b option.

one

Examine only to the entry specified by the argument to the -b option and its immediate children.

sub

(Default) Examine the subtree whose root is the entry specified by the argument to the -b option.

**-t *threads***

Use the specified number of the threads to connect to the server.

Default is to use one thread.

-v

Display verbose output.

**-W *filename***

Read the bind password from the specified file.

**-w *password***

Use the specified bind password to authenticate to the directory.

-w -

Prompt for the bind password so it does not appear on the command line or in a file.

## Extended Description

The `searchrate` command repeatedly requests search operations of a directory server. Threads may be configured to keep open connections or perform LDAP binds with each operation. The command-line options let you specify the bind credentials.

The command uses LDAP v3, and cannot be used to authenticate to an LDAP v2 directory not supporting LDAP v3. Furthermore, the `searchrate` command uses simple authentication, not secure binding.

By default, the `searchrate` command continues its task indefinitely, displaying results periodically, and displaying any errors encountered as well without interrupting operation.

## Random Target Syntax

Include randomly generated numbers by specifying `%d` and `%s` placeholders in the base DN and filters. These placeholders are then replaced according to the following rules:

`%d`

Replace this placeholder with random integer values depending on the `maxRand` parameter to the `-r` option.

The `-r` option may be used at most two times to generate random base DNs or filters. Replacement values for the `%d` placeholder range over  $[0, \text{maxRand}1-1]$ .

`%s`

Replace this placeholder with random strings from the file specified using the `-i` option.

Replacement values for this placeholder are randomly selected lines of the file specified.

Multiple `-r` and `-i` options are matched to the `%d` and `%s` placeholders, respectively, in the order they are used.

## Random Target Substitution

The `searchrate` command requires that you apply the following rules for substitutions, displaying an error message when the used incorrectly:

- Use only one type of placeholder, either `%d` or `%s`, per invocation of the `searchrate` command.
- Specify at least as many uses of the `-r` as `%d` placeholders used.
- Use `%%d` and `%%s` to specify literal strings `%d` and `%s`, respectively.

In order to use this random mechanism, you must populate your directory accordingly. For example, you can measure the search rate using the following command:

```
$ searchrate -b "ou=test,dc=example,dc=com" -f "uid=test%d" -r 100
```

In order for the `searchrate` command to find entries, your directory must contain entries corresponding to the following LDIF excerpt:

```
dn: uid=test0,ou=test,dc=example,dc=com
userPassword: auth00
```

```
dn: uid=test1,ou=test,dc=example,dc=com
userPassword: auth11
```

```
dn: uid=test2,ou=test,dc=example,dc=com
userPassword: auth22
```

...

```
dn: uid=test10,ou=test,dc=example,dc=com
userPassword: auth1010
```

...

```
dn: uid=test99,ou=test,dc=example,dc=com
userPassword: auth9999
```

## Examples

Examples in this section use the following conventions:

- The `searchrate` command is found in a directory present in the `PATH` used for the examples.
- The directory server is located on a system named `host`.
- The directory has been configured to support anonymous access for search and read. Therefore, you do not have to specify bind information.
- The directory server listens on port 389, the default for non-SSL connections.

### Example 1 `searchrate`: Sample Output

The following command performs searches until it has displayed five results messages. Notice that each line concerns only the elapsed interval.

```
$ searchrate -h host -b dc=example,dc=com -f "(uid=bjensen)" -C 5
Avg r=1349.00/thr (269.80/sec), total= 1349
Avg r=1312.00/thr (262.40/sec), total= 1312
Avg r=1334.00/thr (266.80/sec), total= 1334
Avg r=1346.00/thr (269.20/sec), total= 1346
Avg r=1340.00/thr (268.00/sec), total= 1340
All threads exited
```

Notice also that a result message provides the following items of information:

- The average search rate per thread of execution
- The average search rate per second
- The total number of search operations performed during the interval the results message concerns

### Example 2 `searchrate`: Search Rate Alone

The following command keeping the connection open and binds only once:

```
$ searchrate -h host -b dc=example,dc=com -f "(uid=bjensen)" -C 5 -K
Avg r=2706.00/thr (541.20/sec), total= 2706
Avg r=2706.00/thr (541.20/sec), total= 2706
Avg r=2739.00/thr (547.80/sec), total= 2739
Avg r=2717.00/thr (543.40/sec), total= 2717
Avg r=2731.00/thr (546.20/sec), total= 2731
All threads exited
```

### Example 3 `searchrate`: Using a Filter File

The following commands substitute filters from a file to perform searches:

```
$ cat filters
=Jen*
=Jensen>=Jensen
<=Jensen
~=Jensen
$ searchrate -h host -b dc=example,dc=com -f "(sn%s)" -i filters -C 5 -K
Avg r= 59.00/thr ( 11.80/sec), total= 59
Avg r= 64.00/thr ( 12.80/sec), total= 64
Avg r= 63.00/thr ( 12.60/sec), total= 63
Avg r= 64.00/thr ( 12.80/sec), total= 64
Avg r= 61.00/thr ( 12.20/sec), total= 61
All threads exited
```

## Exit Status

The `searchrate` command returns the following exit status codes.

0  
Successful completion.

**non-zero**  
An error occurred.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	Zip distribution only
Stability Level	Evolving

## See Also

[authrate\(1\)](#), [makeldif\(1\)](#), [modrate\(1\)](#)

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## Administration Commands

This section describes commands used for Directory Server Enterprise Edition maintenance and administration purposes

## Intro\_2Admin

introduction to Directory Server Enterprise Edition administration commands

### Description

This section describes commands used for Directory Server Enterprise Edition maintenance and administration purposes.

### LIST OF COMMANDS

This reference manual section includes the following pages.

**[dpadm\(1M\)](#)**

Manage the administration of Directory Proxy Server

**[dpconf\(1M\)](#)**

Manage the configuration of Directory Proxy Server

**[dsadm\(1M\)](#)**

Manages a Directory Server instance

**[dscagent\(1M\)](#)**

Manages a DSCC agent instance

**[dscmon\(1M\)](#)**

Monitor servers registered with Directory Service Control Center

**[dscereg\(1M\)](#)**

Register servers with Directory Service Control Center

**[dscsetup\(1M\)](#)**

Set up Directory Service Control Center

**[dsconf\(1M\)](#)**

Manages Directory Server configuration

**[dsmig\(1M\)](#)**

Migrates a Directory Server Instance

**[dsrepair\(1M\)](#)**

repair replicated directory entries

**[idsktune\(1M\)](#)**

generate system tuning recommendations for running Directory Server Enterprise Edition server software

**[dsutil\(1M\)](#)**

activates or inactivates a user or a domain of users.

## dpadm

Manage the administration of Directory Proxy Server

### Synopsis

```
install-path/bin/dpadm
[subcommand] [global-options] [subcommand-options]
[subcommand-operands]
```

### Description

The `dpadm` command is the administration command for the Directory Proxy Server. Use the `dpadm` command with one of the subcommands described in this man page.

### Subcommands

The following subcommands are supported:

```
dpadm add-cert [-i] [-W CERT_PW_FILE] INSTANCE_PATH CERT_ALIAS
CERT_FILE
```

Adds a certificate to the certificate database.

```
dpadm add-selfsign-cert [-i] [-W CERT_PW_FILE] [ -S DN | _
newline--name NAME [--org ORG] [--org-unit ORG-UNIT] [--city CITY]
[--state STATE] [--country COUNTRY]] [--keyalg KEYALG] [--sigalg
SIGALG] [--validity DURATION] [--keysize SIZE] INSTANCE_PATH CERT_
ALIAS
```

Creates a self-signed certificate and adds it to the certificate database.

```
dpadm autostart [--off [--v6]] [-i] INSTANCE_PATH
```

Enables or disables Directory Proxy Server instance startup at system boot. This command is only available if you installed native packages.

```
dpadm backup INSTANCE_PATH ARCHIVE_DIR
```

Creates a backup archive of the Directory Proxy Server instance.

```
dpadm create [-i] [-p PORT] [-P SECURE_PORT] [-u USER_NAME -g
GROUP_NAME] [-D DN] [-w PWD_FILE] INSTANCE_PATH
```

Creates a Directory Proxy Server Instance.

```
dpadm delete INSTANCE_PATH
```

Deletes an instance of Directory Proxy Server.

```
dpadm disable-service [-T TYPE] [--v6] INSTANCE_PATH
```

Disables a Directory Proxy Server from being managed as a service. This command is on Windows distributions and Solaris native package distributions only.

```
dpadm enable-service [-T TYPE] INSTANCE_PATH
```

Enables a Directory Proxy Server instance to be managed as a service. This command is on Windows distributions and Solaris native package distributions only.

```
dpadm get-flags INSTANCE_PATH [FLAG...]
```

Displays the flag values for the Directory Proxy Server instance.

```
dpadm import-cert [-i] [-W CERT_PW_FILE] [-I INPUT_PW_FILE]
INSTANCE_PATH CERT_FILE
```

Imports the public and private keys of a certificate in the certificate database.

```
dpadm info INSTANCE_PATH
```

Displays information about the status and configuration of the Directory Proxy Server instance.

```
dpadm list-certs [-i] [-C] [-W CERT_PW_FILE] INSTANCE_PATH
```

Lists all certificates in the certificate database.

```
dpadm list-running-instances [--all]
```

Displays running instances on a host. By default, the only instances that are launched by the same installation as `dpadm` are listed.

```
dpadm remove-cert [-i] [-W CERT_PW_FILE] INSTANCE_PATH CERT_ALIAS
```

Removes a certificate from the certificate database.

```
dpadm renew-cert [-i] [-W CERT_PW_FILE] INSTANCE_PATH CERT_ALIAS
CERT_FILE
```

Renews a certificate in the certificate database.

```
dpadm request-cert [-i] [-W CERT_PW_FILE] [ -s DN | --name NAME
[--org ORG] [--org-unit ORG-UNIT] [--city CITY] [--state STATE]
[--country COUNTRY]] [--sigalg SIGALG] [--keyalg KEYALG] [--keysize
KEYSIZE ] [--validity DURATION] [-o OUTPUT_FILE] INSTANCE_PATH
CERT_ALIAS
```

Generates a certificate request.

```
dpadm restart [-i] [-W CERT_PW_FILE] [INSTANCE_PATH]
```

Restarts a Directory Proxy Server instance.

```
dpadm restore INSTANCE_PATH ARCHIVE_DIR
```

Restores a Directory Proxy Server instance from a backup archive.

```
dpadm set-flags [-i] [-W CERT_PW_FILE] INSTANCE_PATH FLAG=VAL
[FLAG=VAL...]
```

Sets flags values for a Directory Proxy Server instance.

```
dpadm show-cert [-i] [-W CERT_PW_FILE] [-o OUTPUT_FILE] [-F FORMAT]
INSTANCE_PATH [CERT_ALIAS]
```

Displays a certificate.

If no `CERT_ALIAS` is specified, the default server certificate is displayed.

```
dpadm split-ldif INSTANCE_PATH LDIF_FILE OUTPUT_FILE_DIR
```

Splits the LDIF file given by `LDIF_FILE` into multiple LDIF files according to the data distribution configured in Directory Proxy Server. One LDIF file is created for each data view defined in the `LDIF_FILE` file.

The LDIF files are stored in the `OUTPUT_FILE_DIR` directory and are automatically named after the data view, with the following format: `OUTPUT_FILE_DIR.DATA_VIEW_NAME.ldif`

The `dpadm split-ldif` command can be launched even if the Directory Proxy Server is running.

```
dpadm start [-Ei] [-W CERT_PW_FILE] INSTANCE_PATH
```

Starts a Directory Proxy Server instance.

`dpadm stop INSTANCE_PATH`  
Stops a Directory Proxy Server instance.

`dpadm stop-running-instances [-i] [--force]`  
Stops Directory Proxy Server instances. The instances launched by the same installation as `dpadm` will be stopped.

`dpadm upgrade [-i] INSTANCE_PATH`  
Upgrades Directory Proxy Server instance from versions 6.x, 7.0, and 11g R1 to version 11.1.1.7.0.

## Global Options

The following options are global, and are applicable to all commands and subcommands. The global options must follow their respective commands or subcommands to execute successfully.

`--?`  
`--help`  
Displays instructions for accessing help.

`-V`  
`--version`  
Displays the current version of `dpadm`. The version is provided in the format *year.monthday.time DISTRIB*. So version number 2009.1004.0035 was built on October 4th, 2009 at 00h35. *DISTRIB* indicates the distribution type. *NAT* refers to the native packages version. *ZIP* refers to the ZIP version. If the components used by `dpadm` are not aligned, the version of each individual component is displayed.

`-v`  
`--verbose`  
Displays instructions for accessing verbose help.

## Subcommands Options

The following options are applicable to the subcommands where they are specified.

`--all`  
Displays running instances from any installation path.

**-C**  
`--ca`  
Lists Certificate Authority certificates only. The default is to list server certificates only.

`--city CITY`  
Adds L=CITY to the subject DN. Default is none.

`--country COUNTRY`  
Adds C=COUNTRY to the subject DN. The default is none.

**-D DN**  
`--rootDN DN`  
Defines the Proxy Manager DN. The default is `cn=Proxy Manager`.

`-E`  
`--safe`  
Starts Directory Proxy Server with the configuration used at the last successful startup.

`--force`

When used with `stop-running-instances`, the command forcibly shuts down all the running server instances that are created using the same `dpadm` installation. When used with `stop`, the command forcibly shuts down the instance even if the instance is not initiated by the current installation.

**-F FORMAT**

`--format` **FORMAT**

Specifies the output format. The options are `readable` and `ascii`. The default is `readable`.

**-g GROUP\_NAME**

`--group` **GROUP\_NAME**

Specifies the group name for the owner of the server instance. The default is the name of the current group.

**-i**

`--no-inter`

Does not prompt for confirmation before performing the operation.

**-I INPUT\_PW\_FILE**

`--input-pwd-file` **INPUT\_PW\_FILE**

Specifies the certificate password. The default is to prompt for a password.

`--keyalg` **KEYALG**

Specifies the key-pair generation algorithm (DSA or RSA).

`--sigalg` **SIGALG**

Specifies the signature algorithm used to sign the certificate. The signature algorithm depends on the underlying key-pair generation algorithm. The default signature algorithm is `SHA1withDSA` when the key algorithm is `DSA`, and `SHA1withRSA` when the key algorithm is `RSA`.

`--name` **NAME**

Adds `CN=NAME` to the subject DN. The default is the hostname.

`--keysize` **SIZE**

Specifies the length of private key.

**-O OUTPUT\_PW\_FILE**

`--output-pwd-file` **OUTPUT\_PW\_FILE**

Reads the output password from the `OUTPUT_FILE` file. The default is a prompt for a password.

`--o` **OUTPUT\_FILE**

`--output` **OUTPUT\_FILE**

Stores the command results in the `OUTPUT_FILE` file. The default is `stdout`.

`--off`

Disables the autostart of an instance of Directory Proxy Server at system boot

`--org` **ORG**

Adds `O=ORG` to the subject DN. The default is none.

`--org-unit` **ORG-UNIT**

Adds `OU=ORG-UNIT` to the subject DN. The default is none.

**--p *PORT***  
**--port *PORT***  
 Specifies the port for LDAP traffic. The default is 389 or 1389.

**--P *SECURE\_PORT***  
**--secure-port *SECURE\_PORT***  
 Specifies the secure SSL port for LDAP traffic. The default is 636 or 1636.

**--S *DN***  
**--subjectDN *DN***  
 Specifies the subject DN. The default is `cn=CERT_ALIAS cn=hostname`.

**--state *STATE***  
 Adds `ST=STATE` to the subject DN. Default is the hostname.

**--T *TYPE***  
**--type *TYPE***  
 Service type. Can be `SMF` when using Solaris 10, or `WIN_SERVICE` when using Windows.

**-u *USER\_NAME***  
**--username *USER\_NAME***  
 Specifies the user name for the owner of the server instance. The default is the name of the current user.

**--v6**  
 Specifies that the version of the Directory Proxy Server instance is 6.x.

**--validity *DURATION***  
 Sets validity of the certificate to `DURATION` months.

**--W *CERT\_PW\_FILE***  
**--cert-pwd-file *CERT\_PW\_FILE***  
 Reads the certificate database password from the `CERT_PW_FILE` file. The default is a prompt for password.

**--w *PW\_FILE***  
**--pwd-file *PW\_FILE***  
 Reads the password from the `PW_FILE` file. The default is a prompt for password.

## Subcommand Operands

The following operands are supported:

### ***ARCHIVE\_DIR***

Specifies the path to the backup of the Directory Proxy Server instance.

### ***CERT\_ALIAS***

Specifies the certificate alias.

### ***CERT\_FILE***

Specifies the file that contains the certificate.

### ***FLAG***

Specifies a flag that represents a property operand when using the command `dpadm get-flags`. Possible flags: `cert-pwd-prompt`, `jvm-args`, `jvm-path`, `server-umask`.

**FLAG=VALUE**

Specifies a flag and its value. The *FLAG=VALUE* operand can have the following values:

`cert-pwd-prompt=off`

Sets the certificate database password storage mode to *on*. The certificate database password is stored on the file system. This is the default value.

`cert-pwd-prompt=on`

Sets the certificate database password storage mode to *off*. The certificate database password is *not* stored on the file system. You are prompted to supply the certificate database password when needed.

`jvm-args="arg1 arg2 ..."`

These values are arguments passed to the Java Virtual Machine (JVM).

The default value is `jvm-args=-Xmx250M -Xms250M`.

`-Xmxmemory` is the maximum memory size for the JVM. The default value is `-Xmx250M` (250 MB).

`-Xmsmemory` is the startup memory size for the JVM. The default value is `-Xms250M` (250 MB). The startup memory size `-Xmsmemory` should be the same as the maximum memory size `-Xmxmemory`.

`-XX:NewRatio=ratio` is applicable to the Sun Hotspot JVM only, and is the ratio between old and young generation memory. The recommended value is `-XX:NewRatio=1`, which is equal old and young generation memory.

The `-d` flag specifies which JVM is used (32-bits or 64-bits). By default, Directory Proxy Server is launched with a 64-bit JVM, if available, and with a 32-bit JVM otherwise. If you want to override this behavior and specify the JVM, set the `jvm-args` flag to either `d-32` or `d-64`, for example `jvm-args=-Xmx250M -Xms250M -d32`

You can use the `jvm-args` flag to pass a list of arguments to the JVM. For information about JVM arguments not described in this man page, see the `java(1)` man page.

`jvm-path=java path`

Sets `JAVA_HOME` that take precedence over `JAVA_HOME` defined in the environment.

`server-umask`

Sets the permissions of configuration and log files.

**INSTANCE\_PATH**

Specifies the path to the Directory Proxy Server instance.

**LDIF\_FILE**

Specifies the LDIF file that is to be split by using the `split_ldif` subcommand.

**OUTPUT\_FILE\_DIR**

Specifies the directory where LDIF files are placed after being split by the `split_ldif` subcommand.

**Exit Status**

The following exit status values are returned:

0  
Successful completion.

**non-zero**  
An error occurred.

## Examples

The following examples show how the `dpadm` command is used.

### Example 1 Creating a Directory Proxy Server Instance

The following example shows how to create a Directory Proxy Server instance.

```
$ dpadm create /local/dps
```

### Example 2 Starting a Directory Proxy Server Instance

The following example shows how to start a Directory Proxy Server instance.

```
$ dpadm start /local/dps
```

### Example 3 Getting Information about a Directory Proxy Server Instance

The following example shows how to get information about a Directory Proxy Server instance.

```
$ dpadm info /local/dps
```

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

## dpconf

Manage the configuration of Directory Proxy Server

### Synopsis

```
install-path/bin/dpconf
subcommand [global-options] [subcommand-options]
  [subcommand-operands]
```

### Description

The `dpconf` command manages the configuration of Directory Proxy Server. An instance of Directory Proxy Server must be running in order for you to run the `dpconf` command.

### Subcommands

The following subcommands are supported:

```
dpconf add-jdbc-attr [-h host] [-p port] TABLE_NAME ATTR_NAME
COLUMN_NAME
```

Add a JDBC attribute by using a SQL table.

```
dpconf add-virtual-transformation [-h host] [-p port] VIEW_NAME
MODEL ACTION ATTR_NAME [PARAM...]
```

Add a virtual transformation to a data view.

```
dpconf attach-jdbc-data-source [-h host] [-p port] POOL_NAME SRC_
NAME [SRC_NAME...]
```

Attach one or more JDBC data sources to a JDBC data source pool.

```
dpconf attach-ldap-data-source [-h host] [-p port] POOL_NAME SRC_
NAME [SRC_NAME...]
```

Attach one or more LDAP data sources to an LDAP data source pool.

```
dpconf create-connection-handler [-h host] [-p port] NAME [NAME...]
```

Create one or more new connection handlers.

```
dpconf create-connection-handler [-h host] [-p port] NAME [NAME...]
```

Create one or more new connection handlers.

```
dpconf create-coordinator-data-view [-h host] [-p port] VIEW_NAME
COORDINATED_VIEW [COORDINATED_VIEW...] SUFFIX_DN
```

Create a new Coordinator Data View using existing one or more than one data views.

```
dpconf create-jdbc-data-source [-h host] [-p port] -b DB_NAME -B
DB_URL -J DRIVER_URL [-J DRIVER_URL]... -S DRIVER_CLASS SRC_NAME
```

Create a JDBC data source that corresponds to an existing JDBC database.

```
dpconf create-jdbc-data-source-pool [-h host] [-p port] NAME
[NAME...]
```

Create one or more JDBC data source pools.

```
dpconf create-jdbc-data-view [-h host] [-p port] JDBC_VIEW_NAME
POOL_NAME SUFFIX_DN
```

Create a data view that enables LDAP applications to view JDBC tables.

```
dpconf create-jdbc-object-class [-h host] [-p port] JDBC_VIEW_NAME
OBJECTCLASS PRIMARY_TABLE [SECONDARY_TABLE...] DN_PATTERN
```

Create a JDBC object class and attach it to a JDBC data view. At least one JDBC table, the primary table, must be specified. Additional tables can be specified if the JDBC data view is to be a join data view of more than one JDBC table.

```
dpconf create-jdbc-table [-h host] [-p port] TABLE_NAME DB_TABLE
```

Create a JDBC table.

```
dpconf create-join-data-view [-h host] [-p port] JOIN_NAME PRIMARY_
NAME SECONDARY_NAME SUFFIX_DN
```

Create a virtual data view that combines or aggregates two separate data views. One of these data views is the primary data view, and the other the secondary data view. Before you can create a join data view, you must define at least one join rule on the secondary data view. To define join rules, set the `dn-join-rule` or `filter-join-rule` properties of the secondary data view.

```
dpconf create-ldap-data-source [-h host] [-p port] [-s] NAME
HOST:PORT
```

Create a new LDAP data source.

```
dpconf create-ldap-data-source-pool [-h host] [-p port] NAME
[NAME...]
```

Create one or more new LDAP data source pools.

```
dpconf create-ldap-data-view [-h host] [-p port] VIEW_NAME POOL_
NAME SUFFIX_DN
```

Create a new LDAP data view.

```
dpconf create-ldif-data-view [-h host] [-p port]VIEW_NAME LDIF_
FILE_NAME SUFFIX_DN
```

Create a new LDIF data view.

```
dpconf create-request-filtering-policy [-h host] [-p port]NAME
[NAME...]
```

Create one or more new request filtering policies.

```
dpconf create-resource-limits-policy [-h host] [-p port]NAME
[NAME...]
```

Create one or more new resource limits policies.

```
dpconf create-search-data-hiding-rule [-h host] [-p port]POLICY_
NAME RULE_NAME [RULE_NAME...]
```

Create one or more new search data hiding rules for a request filtering policy.

```
dpconf create-user-mapping [-h host] [-p port] NAME USER_DN USER_
PWD_FILE
```

Create a new user mapping.

```
dpconf delete-connection-handler [-h host] [-p port] NAME [NAME...]
```

Delete existing connection handlers.

```
dpconf delete-coordinator-data-view [-h host] [-p port] VIEW_NAME
```

[*VIEW\_NAME* ...]

Delete specified Coordinator data view.

dpconf delete-custom-search-size-limit [-h *host*] [-p *port*] *POLICY\_NAME* *LIMIT\_NAME* [*LIMIT\_NAME*...]

Delete existing custom search size limit for a resource limits policy.

dpconf delete-jdbc-data-source [-h *host*] [-p *port*] *NAME* [*NAME*...]

Delete one or more JDBC data sources.

dpconf delete-jdbc-data-source-pool [-h *host*] [-p *port*] *NAME* [*NAME*...]

Delete one or more JDBC data source pools.

dpconf delete-jdbc-data-view [-h *host*] [-p *port*] *NAME* [*NAME*...]

Delete one or more JDBC data views.

dpconf delete-jdbc-object-class [-h *host*] [-p *port*] *JDBC\_VIEW\_NAME* *OBJECTCLASS* [*OBJECTCLASS*...]

Delete one or more JDBC object classes.

dpconf delete-jdbc-table [-h *host*] [-p *port*] *NAME* [*NAME*...]

Delete one or more JDBC tables.

dpconf delete-join-data-view [-h *host*] [-p *port*] *JOIN\_NAME*

Delete a join data view.

dpconf delete-ldap-data-source [-h *host*] [-p *port*] *NAME* [*NAME*...]

Delete existing LDAP data sources.

dpconf delete-ldap-data-source-pool [-h *host*] [-p *port*] *NAME* [*NAME*...]

Delete existing LDAP data source pools.

dpconf delete-ldap-data-view [-h *host*] [-p *port*] *VIEW\_NAME* [*VIEW\_NAME*...]

Delete existing LDAP data views.

dpconf delete-ldif-data-view [-h *host*] [-p *port*] *VIEW\_NAME* [*VIEW\_NAME*...]

Delete existing LDIF data views.

dpconf delete-request-filtering-policy [-h *host*] [-p *port*] *NAME* [*NAME*...]

Delete existing request filtering policies.

dpconf delete-resource-limits-policy [-h *host*] [-p *port*] *NAME* [*NAME*...]

Delete existing resource limits policies.

dpconf delete-search-data-hiding-rule [-h *host*] [-p *port*] *POLICY\_NAME* *RULE\_NAME* [*RULE\_NAME*...]

Delete an existing search data hiding rule.

dpconf delete-user-mapping [-h *host*] [-p *port*] *NAME* [*NAME*...]

Delete existing user mappings.

dpconf detach-jdbc-data-source [-h *host*] [-p *port*] *POOL\_NAME* *SRC\_*

*NAME* [*SRC\_NAME*...]

Detach JDBC data sources from a JDBC data source pool.

`dpconf detach-ldap-data-source [-h host] [-p port] POOL_NAME SRC_NAME [SRC_NAME...]`

Detach LDAP data sources from an LDAP data source pool.

`dpconf get-access-log-prop [-h host] [-p port] [-M UNIT] [-Z UNIT] [PROP...]`

View the properties of the access log.

`dpconf get-attached-ldap-data-source-prop [-h host] [-p port] [-M UNIT] [-Z UNIT] POOL_NAME SRC_NAME [PROP...]`

View the properties of an attached LDAP data source.

`dpconf get-connection-handler-prop [-h host] [-p port] [-M UNIT] [-Z UNIT] NAME [PROP...]`

View the properties of a connection handler.

`dpconf get-coordinator-data-view-prop [-h host] [-p port] [-M UNIT] [-Z UNIT] VIEW_NAME [PROP...]`

View the properties of a Coordinator Data View.

`dpconf get-custom-search-size-limit-prop [-h host] [-p port] [-M UNIT] [-Z UNIT] POLICY_NAME LIMIT_NAME [PROP...]`

View the properties of custom search size limits for a resource limits policy.

`dpconf get-error-log-prop [-h host] [-p port] [-M UNIT] [-Z UNIT] NAME [PROP...]`

View the properties of the error log.

`dpconf get-jdbc-attr-prop [-h host] [-p port] [-M UNIT] [-Z UNIT] TABLE_NAME ATTR_NAME [PROP...]`

View the properties of a JDBC attribute.

`dpconf get-jdbc-data-source-pool-prop [-h host] [-p port] [-M UNIT] [-Z UNIT] NAME [PROP...]`

View the properties of a JDBC data source pool.

`dpconf get-jdbc-data-source-prop [-h host] [-p port] [-M UNIT] [-Z UNIT] NAME [PROP...]`

View the properties of a JDBC data source.

`dpconf get-jdbc-data-view-prop [-h host] [-p port] [-M UNIT] [-Z UNIT] NAME [PROP...]`

View the properties of a JDBC data view.

`dpconf get-jdbc-object-class-prop [-h host] [-p port] [-M UNIT] [-Z UNIT] NAME [PROP...]`

View the properties of a JDBC object class.

`dpconf get-jdbc-table-prop [-h host] [-p port] [-M UNIT] [-Z UNIT] TABLE_NAME [PROP]`

View the properties of a JDBC table.

`dpconf get-join-data-view-prop [-h host] [-p port] [-M UNIT] [-Z UNIT] JOIN_NAME [PROP...]`

View the properties of a join data view.

```
dpconf get-ldap-data-source-pool-prop [-h host] [-p port] [-M UNIT]
[-Z UNIT] NAME [PROP...]
```

View the properties of an LDAP data source pool.

```
dpconf get-ldap-data-source-prop [-h host] [-p port] [-M UNIT] [-Z
UNIT] NAME [PROP...]
```

View the properties of an LDAP data source.

```
dpconf get-ldap-data-view-prop [-h host] [-p port] [-M UNIT] [-Z
UNIT] VIEW_NAME [PROP...]
```

View the properties of an LDAP data view.

```
dpconf get-ldap-listener-prop [-h host] [-p port] [-M UNIT] [-Z
UNIT] NAME [PROP...]
```

View the properties of the LDAP listener.

```
dpconf get-ldaps-listener-prop [-h host] [-p port] [-M UNIT] [-Z
UNIT] [PROP...]
```

View the properties of the LDAPS listener.

```
dpconf get-ldif-data-view-prop [-h host] [-p port] [-M UNIT] [-Z
UNIT] VIEW_NAME [PROP...]
```

View the properties of an LDIF data view.

```
dpconf get-request-filtering-policy-prop [-h host] [-p port] [-M
UNIT] [-Z UNIT] NAME [PROP...]
```

View the properties of a request filtering policy.

```
dpconf get-resource-limits-policy-prop [-h host] [-p port] [-M
UNIT] [-Z UNIT] NAME [PROP...]
```

View the properties of the resource limits policy

```
dpconf get-search-data-hiding-rule-prop [-h host] [-p port] [-M
UNIT] [-Z UNIT] POLICY_NAME RULE_NAME [PROP...]
```

View the properties of search data hiding rules for a request filtering policy.

```
dpconf get-server-prop [-h host] [-p port] [-M UNIT] [-Z UNIT]
[PROP...]
```

View the properties of a Directory Proxy Server.

```
dpconf get-user-mapping-prop [-h host] [-p port] [-M UNIT] [-Z
UNIT] NAME [PROP...]
```

View the properties of a user mapping.

```
dpconf get-virtual-aci-prop [-h host] [-p port] [PROP...]
```

View the properties of the data view defined to provide access to virtual ACIs.

```
dpconf get-virtual-transformation-prop [-h host] [-p port] [-M
UNIT] [-Z UNIT] VIEW_NAME TRANSFORMATION_NAME [PROP...]
```

View the properties of a virtual transformation. Virtual transformation properties that can be specified include action, attr-name, model, internal-value and view-value.

```
dpconf help-properties [-r]
```

View information about the properties exposed by subcommands.

```
dpconf info
```

Display information about server configuration.

```
dpconf list-attached-jdbc-data-sources [-h host] [-p port] [-E]
[POOL_NAME...]
```

List JDBC data sources that are attached to a data source pool.

```
dpconf list-attached-ldap-data-sources [-h host] [-p port] [-E]
[POOL_NAME...]
```

List LDAP data sources that are attached to a data source pool.

```
dpconf list-connection-handlers [-h host] [-p port] [-E]
```

List the existing connection handlers.

```
dpconf list-coordinator-data-views [-h host] [-p port] [-E]
```

List the existing Coordinator Data Views.

```
dpconf list-custom-search-size-limits [-h host] [-p port] [-E]
[POLICY_NAME...]
```

List the existing custom search size limits for a resource limits policy.

```
dpconf list-jdbc-attrs [-h host] [-p port] [-E] [TABLE_NAME...]
```

List the JDBC attributes that have been defined using SQL tables.

```
dpconf list-jdbc-data-source-pools [-h host] [-p port] [-E]
```

List the existing JDBC data source pools.

```
dpconf list-jdbc-data-sources [-h host] [-p port] [-E]
```

List the existing JDBC data sources.

```
dpconf list-jdbc-object-classes [-h host] [-p port] [-E] [JDBC_
VIEW_NAME...]
```

List the JDBC object classes that are attached to a JDBC data view.

```
dpconf list-jdbc-tables [-h host] [-p port] [-E]
```

List all JDBC tables.

```
dpconf list-join-data-views [-h host] [-p port] [-E]
```

List the existing join data views.

```
dpconf list-ldap-data-source-pools [-h host] [-p port] [-E]
```

List the existing LDAP data source pools.

```
dpconf list-ldap-data-sources [-h host] [-p port] [-E]
```

List the existing LDAP data sources.

```
dpconf list-ldap-data-views [-h host] [-p port] [-E]
```

List the existing LDAP data views.

```
dpconf list-ldif-data-views [-h host] [-p port] [-E]
```

List the existing LDIF data views.

```
dpconf list-request-filtering-policies [-h host] [-p port] [-E]
```

List the existing request filtering policies.

```
dpconf list-resource-limits-policies [-h host] [-p port] [-E]
```

List the existing resource limits policies.

```
dpconf list-search-data-hiding-rules [-h host] [-p port] [-E]
[POLICY_NAME...]
```

List the existing search data hiding rules for a request filtering policy.

```
dpconf list-user-mappings [-h host] [-p port] [-E]
```

List the existing user mappings.

```
dpconf list-virtual-transformations [-h host] [-p port] [-E] [VIEW_
NAME...]
```

List the virtual transformations that are defined on a data view.

```
dpconf remove-jdbc-attr [-h host] [-p port] TABLE_NAME ATTR_NAME
[ATTR_NAME...]
```

Delete a JDBC attribute.

```
dpconf remove-virtual-transformation [-h host] [-p port] VIEW_NAME
TRANSFORMATION_NAME [TRANSFORMATION_NAME...]
```

Delete a virtual transformation.

```
dpconf rotate-log-now [-h host] [-p port] LOG_TYPE
```

Launch the rotation of a log file.

```
dpconf set-access-log-prop [-h host] [-p port] PROP:VAL
[PROP:VAL...]
```

Change the properties of the access log. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-attached-ldap-data-source-prop [-h host] [-p port] POOL_
NAME SRC_NAME PROP:VAL [PROP:VAL...]
```

Change the properties of an attached LDAP data source. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-connection-handler-prop [-h host] [-p port] NAME
PROP:VAL [PROP:VAL...]
```

Change the properties of a connection handler. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-coordinator-data-view-prop [-h host] [-p port] VIEW_NAME
PROP:VAL [PROP:VAL...]
```

Change the properties of the Coordinator data view. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-custom-search-size-limit-prop [-h host] [-p port]
POLICY_NAME LIMIT_NAME PROP:VAL [PROP:VAL...]
```

Change the properties of custom search size limits for a resource limits policy. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-error-log-prop [-h host] [-p port] PROP:VAL
```

[*PROP: VAL...*]

Change the properties of the error log. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-jdbc-attr-prop [-h host] [-p port] TABLE_NAME ATTR_NAME
PROP: VAL [PROP: VAL...]
```

Change the properties of a JDBC attribute. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-jdbc-data-source-pool-prop [-h host] [-p port] NAME
PROP: VAL [PROP: VAL...]
```

Change the properties of a JDBC data source pool. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-jdbc-data-source-prop [-h host] [-p port] NAME PROP: VAL
[PROP: VAL...]
```

Change the properties of a JDBC data source. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-jdbc-data-view-prop [-h host] [-p port] VIEW_NAME
PROP: VAL [PROP: VAL...]
```

Change the properties of a JDBC data view. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-jdbc-object-class-prop [-h host] [-p port] JDBC_VIEW_
NAME OBJECTCLASS PROP: VAL [PROP: VAL...]
```

Change the properties of a JDBC object class. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-jdbc-table-prop [-h host] [-p port] TABLE_NAME PROP: VAL
[PROP: VAL...]
```

Change the properties of a JDBC table. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-join-data-view-prop [-h host] [-p port] VIEW_NAME
PROP: VAL [PROP: VAL...]
```

Change the properties of a join data view. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-ldap-data-source-pool-prop [-h host] [-p port] NAME  
PROP: VAL [PROP: VAL...]
```

Change the properties of an LDAP data source pool. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-ldap-data-source-prop [-h host] [-p port] NAME PROP:VAL  
[PROP: VAL...]
```

Change the properties of an LDAP data source. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
set-ldap-data-view-prop [-h host] [-p port] VIEW_NAME PROP:VAL  
[PROP: VAL...]
```

Change the properties of an LDAP data view. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-ldap-listener-prop [-h host] [-p port] PROP:VAL  
[PROP: VAL...]
```

Change the properties of the LDAP listener. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-ldaps-listener-prop [-h host] [-p port] PROP:VAL  
[PROP: VAL...]
```

Change the properties of the LDAPS listener. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-ldif-data-view-prop [-h host] [-p port] VIEW_NAME  
PROP: VAL [PROP: VAL...]
```

Change the properties of an LDIF data view. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-request-filtering-policy-prop [-h host] [-p port] NAME  
PROP: VAL [PROP: VAL...]
```

Change the properties of a request filtering policy. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-resource-limits-policy-prop [-h host] [-p port] NAME
```

```
PROP:VAL [PROP:VAL...]
```

Change the properties of a resource limits policy. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-search-data-hiding-rule-prop [-h host] [-p port] POLICY_
NAME RULE_NAME PROP:VAL [PROP:VAL...]
```

Change the properties of search data hiding rules for a request filtering policy. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-server-prop [-h host] [-p port] PROP:VAL [PROP:VAL...]
```

Change the properties of a Directory Proxy Server instance. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-user-mapping-prop [-h host] [-p port] NAME PROP:VAL
[PROP:VAL...]
```

Change the properties of a user mapping. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-virtual-aci-prop [-h host] [-p port] PROP:VAL
[PROP:VAL...]
```

Change the properties of the data view defined to provide access to virtual ACIs. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

```
dpconf set-virtual-transformation-prop [-h host] [-p port] VIEW_
NAME TRANSFORMATION_NAME PROP:VAL [PROP:VAL...]
```

Change the properties of a virtual transformation that was defined on the data view. If you do not specify a *VAL*, the value of the property is reset.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

## GLOBAL OPTIONS

The following options are global to all commands and subcommands. The global options must follow their respective commands or subcommands to execute successfully.

```
-?
```

```
--help
```

Displays help information for a command or subcommand.

```
-c
```

```
--accept-cert
```

Does not ask for confirmation before accepting untrusted server certificates.

**-D USER\_DN**

**--user-dn USER\_DN**

Binds as *USER\_DN*. The `dpconf` command searches for a *USER\_DN* value in the following order:

- A *USER\_DN* specified in the command line
- A *USER\_DN* set by using the `$LDAP_ADMIN_USER` environment variable

If none of these are found, the default is to bind as the `cn=Proxy Manager` user.

**-e**

**--unsecured**

Connects over LDAP with no secure connection. To connect over a clear connection by default, set the `DIR_PROXY_UNSECURED` environment variable.

**-h HOST**

**--hostname HOST**

Connects to the proxy server on *HOST*. The `dpconf` command searches for a *HOST* value in the following order:

- A *HOST* specified in the command line
- A *HOST* set by using the `$DIR_PROXY_HOST` environment variable

If none of these are found, the default is to use the local host.

**-i**

**--no-inter**

Does not ask for confirmation or passwords.

**-j**

**--reject-cert**

Does not ask for confirmation before rejecting untrusted server certificates in this session.

**-p PORT**

**--port PORT**

Connects to the proxy on *PORT*. The `dpconf` command searches for a *PORT* value in the following order:

- A *PORT* specified in the command line
- A *PORT* set by using the `$DIR_PROXY_PORT` environment variable

If none of these are found, the default is to use port 389.

This option is mutually exclusive with `-P,--secure-port`.

**-P PORT**

**--secure-port PORT**

Connects over SSL to the proxy on *PORT*. The `dpconf` command searches for a *PORT* value in the following order:

- A *PORT* specified in the command line
- A *PORT* set by using the `$DIR_PROXY_PORT` environment variable

If none of these are found, the default is to use port 1636.

This option is mutually exclusive with `-p,--port`.

-r  
--attr-map  
Displays help properties and their corresponding attributes in `cn=config`.

-v  
--verbose  
Displays extra information. This option is especially useful in the `list` subcommands. For an example of the use of the verbose option, see Example 5.

-V--version  
Displays the current version of `dpconf`. The version is provided in the format *year.monthday.time*. So version number `2007.1204.0035` was built on December 4th, 2007 at 00h35. If the components used by `dpconf` are not aligned, the version of each individual component is displayed.

-w **FILE**  
--pwd-file **FILE**  
Specifies that the LDAP password is read from *FILE*. The `dpconf` command searches for a password *FILE* value in the following order:

- A password or password file specified in the command line
- A password file set by using the `$LDAP_ADMIN_PWF` environment variable

If none of these are found, the default is to prompt for the password.

## Subcommands Options

The following options can be used with the subcommands:

-b  
--db-name  
The name of the JDBC database for which you create a JDBC data source.

-B  
--db-url  
The URL to the JDBC database for which you create a JDBC data source.

-E  
--record  
Modifies the display output to show one property value per line.

-J  
--driver-url  
The URL to the JDBC driver.

-M **UNIT**  
--unit-time **UNIT**  
Display time data with *UNIT* unit. The value for *UNIT* can be *M*, *w*, *d*, *h*, *m*, *s*, or *ms* (month, week, day, hour, minute, second, or millisecond).

-s  
--secure  
Sets the `ssl-policy` property to `ALWAYS` to use secure connection.

-S  
--driver-class  
The class of the JDBC driver.

**-z UNIT**

**--unit-size UNIT**

Display memory size data with UNIT unit. The value for UNIT can be T, G, M, k, or b (Terabyte, Gigabyte, Megabyte, kilobyte, or byte).

## Subcommand Operands

The following operands can be used with the subcommands:

### **ACTION**

Describes what a transformation does to its target entry or entries. The following transformation actions are possible:

- **add-attr** Add a new attribute. The value of the new attribute is defined by the PARAM operand.
- **add-attr-value** Add a calculated value to an existing attribute. The value that must be added is defined by the PARAM operand.
- **attr-value-mapping** Map one attribute to another attribute to provide the attribute value. The value is defined by the **internal-value** and **view-value** PARAM operands.
- **def-value** Add a default value to an existing attribute. The value that must be added is defined by the PARAM operand.
- **remove-attr** Remove an attribute.
- **remove-attr-value** Remove a value from an existing attribute. This action is usually used in the case of multi-value attributes when one of the values should be removed.

### **ATTR\_NAME**

The name of a virtual attribute or JDBC attribute to be added or removed.

### **COLUMN\_NAME**

The name of a column in an SQL table.

### **COORDINATED\_VIEW**

The name of the view to be coordinated.

### **DB\_TABLE**

The name of an SQL table.

### **DN\_PATTERN**

The pattern that should be used to construct a DN from a JDBC table.

### **HOST**

Contacts the LDAP server on the specified host, which may be a host name or an IP address.

For example, when mapping the IPv4 address 192.168.0.99 to IPv6, pass the **-h** option with its argument as **-h ::ffff:192.168.0.99**.

### **JDBC\_VIEW\_NAME**

The name of a JDBC data view.

### **JOIN\_NAME**

The name of a join data view.

**LDIF\_FILE\_NAME**

The name of a file on the Directory Proxy Server that contains the LDIF data.

**LIMIT\_NAME**

The name of a custom search size limit.

**LOG\_TYPE**

The type of log, log type can be `access` or `error`.

**MODEL**

The direction in which a transformation action will be applied. The transformation model can be one of `mapping`, `read`, or `write`.

A mapping transformation is applied during the request, and its inverse is applied during the response. A write transformation is applied during the request, but not during the response. A write transformation changes the physical data in storage. A read transformation is applied only during the response to a request.

**NAME**

The name of an object to be created or deleted, or the name of an object for which you are getting or setting properties.

**OBJECTCLASS**

The name of a JDBC object class.

**PARAM**

The parameters to be applied to a virtual transformation. Depending on the transformation, *PARAM* can be one or more of the following:

- *value* specifies the value of the virtual attribute for all transformation actions other than `attrValueMapping`.
- `internal-value:value` used only with the `attrValueMapping` transformation action. Specifies the value of the virtual attribute that should be written to the physical data source.
- `view-value:value` used only with the `attrValueMapping` transformation action. Specifies the value of the virtual attribute that should be returned to the client.

**POLICY\_NAME**

The name of the resource limits policy or request filtering policy to which limits or rules are to be applied.

**POOL\_NAME**

The name of an existing LDAP or JDBC data source pool.

**PORT**

The port number of the object to be created.

**PRIMARY\_NAME**

The name of the primary data view that is the source for a join data view.

**PRIMARY\_TABLE**

The name of the primary table in a JDBC database.

**PROP**

The name of the property. For a list of property names and values, use this command:

```
dpconf help-properties.
```

The `rws` and `rwd` keywords of a property indicate whether changes to the property require the server to be restarted. If a property has an `rws` (read, write, static) keyword, the server must be restarted when the property is changed. If a property has an `rwd` (read, write, dynamic) keyword, modifications to the property are implemented dynamically (without restarting the server).

For multi-valued properties, use the syntax `PROP+:VAL` to add a value, and `PROP-:VAL` to remove a value.

Multi-valued properties are identified by the `M` keyword. For a list of multi-valued properties, use this command:

```
dpconf help-properties | grep " M "
```

**RULE\_NAME**

The name of a search data hiding rule.

**SECONDARY\_NAME**

The name of the secondary data view that is the source for a join data view.

**SECONDARY\_TABLE**

The name of the secondary table in a JDBC database.

**SRC\_NAME**

The name of an LDAP or JDBC data source.

**SUFFIX\_DN**

The DN of the suffix represented by the data view.

**TABLE\_NAME**

The name of a JDBC table.

**TRANSFORMATION\_NAME**

The name of a virtual transformation.

**USER\_DN**

The DN of the user to be mapped.

**USER\_PWD\_FILE**

The name of the password file, or the value `-` meaning to prompt for the password.

**VAL**

The new value of the property. For a complete list of property names and values, use the command `dpconf help-properties -v`.

When the `VAL` operand is used for passwords, it can have the following values:

- The name of the password file.
- The value `-`, meaning to prompt for the password.

**VIEW\_NAME**

The name of a data view.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

true or false.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form `hhmm-hhmm 0123456`, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple

specifiers. However, `MEMORY_SIZE` properties allow decimal values, for example, 1.5M.

**NAME**

A valid `cn` (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus `640` specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Exit Status

The following exit status values are returned:

0

Successful completion

**non-zero**

An error occurred

## Examples

This section contains examples of how the `dpconf` command is used.

### Example 1 Getting Help With a Subcommand

This example shows how to get help for using a subcommand:

```
$ dpconf create-connection-handler -?
Usage: dpconf create-connection-handler NAME [NAME ...]
Create new connection handlers
For global options, use dpconf --help.
NAME The name of a connection handler
For more information, see dpconf(1M).
```

### Example 2 Getting Information About Properties

This example shows how to get information about the properties of the resource limits policy.

- To view the properties exposed by all of the `dpconf` subcommands, run this command:

```
$ dpconf help-properties
```

### Example 3 Getting Properties for Access Logs

This example shows how to get the access log properties, specifying that the `log-rotation-size` property is quoted in bytes.

```
$ dpconf get-access-log-prop -h host -p port
-Z b
default-log-level           : info
log-file-name               : logs/access
log-file-perm               : 600
log-level-client-connections : -
log-level-client-disconnections : -
log-level-client-operations  : -
log-level-connection-handlers : -
log-level-data-sources       : -
log-level-data-sources-detailed : -
log-rotation-frequency      : 1h
log-rotation-policy         : size
log-rotation-size           : 104,857,600b
log-rotation-start-day      : 1
log-rotation-start-time     : 0000
log-search-filters          : false
max-log-files                : 10
```

### Example 4 Customizing Search Limits

This example shows how to define customized limits for search operations, based on the search base and search scope.

1. Create a custom search limit.

```
$ dpconf create-custom-search-size-limit -h host -p port
POLICY-NAME LIMIT-NAME
```

2. Set the criteria for the custom search limit.

```
$ dpconf set-custom-search-size-limit-prop -h host -p port
POLICY-NAME LIMIT-NAME
one-level-search-base-dn:VALUE
subtree-search-base-dn:VALUE
```

3. Define the limit for the number of results returned when a search meets one of the above criteria.

```
$ dpconf set-custom-search-size-limit-prop -h host -p port
POLICY-NAME CUSTOM-SEARCH-LIMIT-NAME
search-size-limit:VALUE
```

4. View the properties of a custom search limit.

```
$ dpconf get-custom-search-size-limit-prop -h host -p port
POLICY-NAME LIMIT-NAME
```

### Example 5 Comparing Properties of Connection Handlers

This example shows how to view the properties of one connection handler and how to compare the properties of a set of connection handlers.

1. View all of the properties of one connection handler.

```
$ dpconf get-connection-handler-prop -h host -p port
CONNECTION-HANDLER-NAME
```

These are the default properties of a connection handler:

```
allowed-auth-methods      : anonymous
allowed-auth-methods      : sasl
allowed-auth-methods      : simple
allowed-ldap-ports        : ldap
allowed-ldap-ports        : ldaps
bind-dn-filters            : any
data-view-routing-custom-list : -
data-view-routing-policy   : all-routable
description                : -
domain-name-filters        : any
enable-data-view-affinity  : false
ip-address-filters         : any
is-enabled                 : false
is-ssl-mandatory          : false
priority                   : 99
request-filtering-policy   : no-filtering
resource-limits-policy     : no-limits
user-filter                : any
```

2. View the key properties and relative priorities of all of the connection handlers.

```
$ dpconf list-connection-handlers -v
Name                is-enabled  priority  description
-----
anonymous           false       99        unauthenticated connections
myconnectionhandler true        99        -
default connection handler true        100       default connection handler
```

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpadm\(1M\)](#), [dsconf\(1M\)](#), and [dsadm\(1M\)](#)

## dsadm

Manages a Directory Server instance

### Synopsis

```
install-path/bin/dsadm
subcommand [global-options] [subcommand-options]
  [subcommand-operands]
```

### Description

The `dsadm` command is the local administration command for Directory Server instances. Use the `dsadm` command with any of the subcommands described in this man page.

While using the `dsadm` command, you may be required to stop the server depending upon the subcommands that are used with `dsadm`. The `dsadm` command must be run from the local machine where the server instance is located. This command must be run by the username that is the operating system owner of the server instance, or by `root`.

### Subcommands

The following subcommands are supported:

```
dsadm add-cert [-Ci] [-W CERT_PW_FILE] INSTANCE_PATH CERT_ALIAS
CERT_FILE
```

Adds a certificate to the certificate database.

```
dsadm add-selfsign-cert [-i] [-W CERT_PW_FILE] [-S DN] [--phone
PHONE] [--email EMAIL] ... [--dns DOMAIN] ... [--validity DURATION]
[--keysize SIZE] [--sigalg SIGALG] INSTANCE_PATH CERT_ALIAS
OR
```

```
dsadm add-selfsign-cert [-i] [-W CERT_PW_FILE] [--name NAME [--org
ORG] [--org-unit ORG-UNIT] [--city CITY] [--state STATE] [--country
COUNTRY] [--phone PHONE] [--email EMAIL] ... [--dns DOMAIN] ...
[--validity DURATION] [--keysize SIZE] [--sigalg SIGALG] INSTANCE_
PATH CERT_ALIAS
```

Creates a self-signed certificate and adds it to the certificate database.

```
dsadm analyze-indexes [-bri] [-o FILE] INSTANCE_PATH SUFFIX_DN
```

Analyzes indexes and displays statistics on their values.

```
dsadm autostart [--off [--v6]] [-i] INSTANCE_PATH
```

Enables or disables Directory Server instance startup at system boot. This command is only available if you installed native packages. This command must be run as `root`.

```
dsadm backup [-f FLAG] ... INSTANCE_PATH ARCHIVE_DIR
```

Creates a backup archive of the Directory Server instance.

```
dsadm create [-Bi] [-u USER_NAME -g GROUP_NAME] [-h HOST_NAME] [-p
```

*PORT*] [-P *SSL\_PORT*] [-D *DN*] [-w *PW\_FILE*] *INSTANCE\_PATH*

Creates a Directory Server instance.

dsadm delete *INSTANCE\_PATH*

Deletes a Directory Server instance.

dsadm disable-service [-T *TYPE*] [--v6] *INSTANCE\_PATH*

Disables a Directory Server instance from being managed as a service. This command is available on Windows and Solaris 10 distributions only. The command must be run as root.

dsadm enable-service [-T *TYPE*] *INSTANCE\_PATH*

Enables a Directory Server instance to be managed as a service. This command is available on Windows and Solaris 10 distributions only. The command must be run as root.

dsadm export [-biQ] [-s *DN*] ... [-x *DN*] ... [-f *FLAG*] ... [-y [-W *CERT\_PW\_FILE*]] *INSTANCE\_PATH SUFFIX\_DN [SUFFIX\_DN ...] LDIF\_FILE*

#### OR

dsadm export [-biQ] [-s *DN*] ... [-x *DN*] ... [-f *FLAG*] ... [-y [-W *CERT\_PW\_FILE*]] *INSTANCE\_PATH SUFFIX\_DN [ SUFFIX\_DN ...] GZ\_LDIF\_FILE*

Exports suffix data to LDIF format as a compressed or uncompressed exported file.

dsadm export-cert [-i] [-W *CERT\_PW\_FILE*] [-o *OUTPUT\_FILE*] [-O *OUTPUT\_PW\_FILE*] *INSTANCE\_PATH CERT\_ALIAS*

Exports an encrypted copy of the certificate and its public and private keys from the certificate database.

dsadm get-flags *INSTANCE\_PATH [FLAG ...]*

Displays the flag values for the Directory Server instance.

dsadm import [-biK] [-x *DN*] ... [-f *FLAG=VAL*] ... [-y [-W *CERT\_PW\_FILE*]] *INSTANCE\_PATH LDIF\_FILE [LDIF\_FILE ...] SUFFIX\_DN*

#### OR

dsadm import [-biK] [-x *DN*] ... [-f *FLAG=VAL*] ... [-y [-W *CERT\_PW\_FILE*]] *INSTANCE\_PATH GZ\_LDIF\_FILE [GZ\_LDIF\_FILE... ] SUFFIX\_DN*

Populates an existing suffix with LDIF data from a compressed or uncompressed LDIF file.

dsadm import-cert [-i] [-W *CERT\_PW\_FILE*] [-I *INPUT\_PW\_FILE*] *INSTANCE\_PATH CERT\_FILE*

Adds a new certificate and its keys to the certificate database.

dsadm import-selfsign-cert [-i] [-W *CERT\_PW\_FILE*] [-I *INPUT\_PW\_FILE*] *INSTANCE\_PATH CERT\_FILE*

Adds a new self-signed certificate and its keys to the certificate database.

dsadm info *INSTANCE\_PATH*

Displays Directory Server instance status and some configuration information.

dsadm list-certs [-Ci] [-W *CERT\_PW\_FILE*] *INSTANCE\_PATH*

Lists all certificates in the certificate database.

dsadm list-instance-dirs *INSTANCE\_PATH*

Lists all directories that comprise a Directory Server instance.

```
dsadm list-running-instances [--all]
```

Displays running instances on a host. By default, the only instances that are launched by the same installation as dsadm are listed.

```
dsadm reindex [-bl] -t ATTR_INDEX [-t ATTR_INDEX ...] INSTANCE_PATH SUFFIX_DN
```

Regenerates existing indexes.

```
dsadm remove-cert [-i] [-W CERT_PW_FILE] INSTANCE_PATH CERT_ALIAS
```

Removes a certificate from the certificate database. The instance must be stopped before running this command.

```
dsadm renew-cert [-i] [-W CERT_PW_FILE] INSTANCE_PATH CERT_ALIAS CERT_FILE
```

Replaces a certificate, but keeps the existing private key. The instance must be stopped before running this command.

```
dsadm renew-selfsign-cert [-i] [-W CERT_PW_FILE] [--validity DURATION] INSTANCE_PATH CERT_ALIAS
```

Renews a self-signed certificate in the certificate database. The instance must be stopped before running this command.

```
dsadm repack [-b backend] [-T FILE_TYPE ...] INSTANCE_PATH SUFFIX_DN [SUFFIX_DN...]
```

Repacks or compacts an existing suffix. The `-b` option enables you to specify the name of the backend instead of the suffix name. At least one suffix DN or one backend name must be specified. Can specify which type of file needs to be repacked. Possible values are `entries` | `indexes` | `changelog`. The instance must be stopped before running this command.

```
dsadm request-cert [-i] [-W CERT_PW_FILE] {-S DN | --name NAME [--org ORG] [--org-unit ORG-UNIT] [--city CITY] [--state STATE] [--country COUNTRY]} [--phone PHONE] [--email EMAIL] ... [--dns DOMAIN] ... [--keysize KEYSIZE] [--sigalg SIGALG] [-F FORMAT] [-o OUTPUT_FILE] INSTANCE_PATH
```

Generates a certificate request.

```
dsadm restart [-i] [--schema-push] [-W CERT_PW_FILE] INSTANCE_PATH
```

Restarts a Directory Server instance.

```
dsadm restore [-i] [-f FLAG] INSTANCE_PATH ARCHIVE_DIR
```

Restores Directory Server instance from a backup archive.

```
dsadm rewrite[-b] [-f FLAG=VAL] ... INSTANCE_PATH SUFFIX_DN
```

Rewrites all entries according to the current database format, and depending upon the flag.

```
dsadm set-flags [-i] [-W CERT_PW_FILE] INSTANCE_PATH FLAG=VAL [FLAG=VAL ...]
```

Sets flags for a Directory Server instance.

```
dsadm show-access-log [-A DURATION] INSTANCE_PATH
```

OR

```
dsadm show-access-log [-L LAST_LINES] INSTANCE_PATH
```

Displays the contents of the access log.

`dsadm show-cert [-i] [-W CERT_PW_FILE] [-o OUTPUT_FILE] [-F FORMAT] INSTANCE_PATH [CERT_ALIAS]`

Displays a certificate.

`dsadm show-error-log [-A DURATION] INSTANCE_PATH`  
OR

`dsadm show-error-log [-L LAST_LINES] INSTANCE_PATH`  
Displays the contents of the error log.

`dsadm start [-Ei] [--schema-push] [-W CERT_PW_FILE] INSTANCE_PATH`  
Starts a Directory Server instance.

`dsadm stop [--force] INSTANCE_PATH`  
Stops a Directory Server instance.

`dsadm stop-running-instances [-i] [--force]`  
Stops Directory Server instances. The instances launched by the same installation as dsadm will be stopped.

`dsadm upgrade [-i] INSTANCE_PATH`  
Upgrades Directory Server instance from versions 6.x, 7.0, and 11g R1 to version 11.1.1.7.0.

## Global Options

The following options are global, and are applicable to all commands and subcommands. The global options must follow their respective commands or subcommands to execute successfully.

`--?`

`--help`

Displays help information for a command or subcommand.

`-V`

`--version`

Displays the current version of dsadm. The version is provided in the format *year.monthday.time DISTRIB*. So version number 2009.1004.0035 was built on October 4th, 2009 at 00h35. *DISTRIB* indicates the distribution type. *NAT* refers to the native packages version. *ZIP* refers to the ZIP version. If the components used by dsadm are not aligned, the version of each individual component is displayed.

`-v`

`--verbose`

Displays instructions for accessing verbose help.

## Subcommands Options

The following options are applicable to the subcommands where they are specified.

`-A DURATION`

`--max-age DURATION`

Specifies the maximum age of lines to be returned from the access log or the error log. For example, to search for all entries younger than 24 hours, use `-A 24h`.

`--all`

Displays running instances from any installation path.

---

-B  
--below  
Creates the Directory Server instance in an existing directory, specified by the *INSTANCE\_PATH*. The existing directory must be empty. On UNIX machines, the user who runs this command must be root, or must be the owner of the existing directory. If the user is root, the instance will be owned by the owner of the existing directory.

-b  
--backend  
Enables to specify backend name instead of *SUFFIX\_DN*.

--C  
--ca  
Specifies a Certificate Authority certificate is to be used, or that the command should display information about CA certificates.

--city **CITY**  
Adds L=CITY to the subject DN. Default is none.

--country **COUNTRY**  
Adds C=COUNTRY to the subject DN. Default is none.

-D **DN**  
--rootDN **DN**  
Defines the Directory Manager DN. The default is `cn=Directory Manager`.

--dns **DOMAIN**  
Specifies DOMAIN as DNS subject alternate name extension

-E  
--safe  
Starts Directory Server with the configuration used at the last successful startup.

--email **EMAIL**  
Specifies EMAIL as email subject alternate name extension

--force  
When used with `stop-running-instances`, the command forcibly shuts down all the running server instances that are created using the same `dsadm` installation. When used with `stop`, the command forcibly shuts down the instance even if the instance is not initiated by the current installation.

-F **FORMAT**  
--format **FORMAT**  
Specifies output format. For `dsadm request-cert`, the default is `der`, and the other possible output format is `ascii`. For `dsadm show-cert`, the default is `readable`, and other possible output formats are `ascii` and `der`.

-f **FLAG**  
--flags **FLAG** or **FLAG=VAL**  
Customized values for options.  
Possible flags for the `dsadm backup` subcommand are as follows.

verify-db  
Check integrity of the backed up database.

`no-recovery`  
Skip recovery of the backed up database.

Possible flags for the `dsadm export` subcommand are as follows.

`compression-level`  
Compression level to use when a `GZ_LDIF_FILE` is given as operand. Default level is 3, level range is from 1 to 9.

`minimal-encode`  
Perform minimal base64 encoding.

`multiple-output-file`  
Generate multiple LDIF output files.

`not-export-unique-id`  
Do not export the unique ID generated on import.

`not-folded-output`  
Do not fold long lines.

`no-num-version`  
Delete the initial line specifying the LDIF version, `version: 1`, for backward compatibility.

`not-print-entry-ids`  
Do not include entry IDs in the LDIF output.

`use-main-db-file`  
Only export from the main database file.

Possible flags for the `dsadm import` subcommand are as follows.

`chunk-size`  
Merge chunk size.

`incremental-output-file`  
Import LDIF generated during incremental import.

`purge-csn`  
Purge the Change Sequence Number (CSN). The `purge-csn` flag is set to off by default. Setting the `purge-csn` to on prevents old CSN data from being imported by the `dsadm import` operation. This reduces the size of entries by removing traces of previous updates.

Possible flags for the `dsadm restore` subcommand are as follows.

`move-archive`  
Performs restore by moving files in place of copying them.

Possible flags for the `dsadm rewrite` subcommand are as follows.

`purge-csn`  
Purge the Change Sequence Number (CSN). The `purge-csn` flag is set to off by default. Setting the `purge-csn` to on prevents old CSN data from being kept by the operation. This reduces the size of entries by removing traces of previous updates.

`convert-pwp-opattr-to-DS6`  
Converts DS5 mode password policy operational attributes to run in D6-mode.

The `convert-pwp-opattr-to-DS6` flag is set to `off` by default. When a server is `DS6-migration-mode` enabled, setting `convert-pwp-opattr-to-DS6` to `on`, permits DS5 mode password policy operational attributes to be migrated using their ID (Internet Draft) and to run in DS6-mode. `DS6-migration-mode` is the only mode in which you can migrate operational attributes safely. When the migration has been successfully performed, run the server in `DS6-mode` when you are ready.

Note that the `dsadm rewrite -f convert-pwp-opattr-to-DS6=on` subcommand must be run on all servers in the topology that are in `DS6-migration-mode` in order to migrate their DS5 mode password policy operational attributes.

`-g` **GROUP\_NAME**

`--groupname` **GROUP\_NAME**

Sets the server instance owner's group ID. The default is the user's current UNIX group. This option is not available on Windows.

`-h` **HOST\_NAME**

`--hostname` **HOST\_NAME**

Specifies the hostname. The default is the name of the current host system.

`-I` **INPUT\_PW\_FILE**

`--input-pwd-file` **INPUT\_PW\_FILE**

Reads the input file password in the `INPUT_PW_FILE` file. The default is a prompt for password.

`-i`

`--no-inter`

Does not prompt for confirmation before performing the operation.

`-K`

`--incremental`

Specifies that the content of the imported LDIF file is appended to the existing LDAP entries. If this option is not specified, the contents of the imported file replace the existing entries.

`--keysize` **SIZE**

Specifies the length of private key.

`-L` **LAST\_LINES**

`--last-lines` **LAST\_LINES**

Specifies the number of lines to be returned from the access log or the error log. `LAST_LINES` must be an integer. For example, to return the last 50 lines, use `-L 50`. If no value is specified, the default number of lines returned is 20.

`--l`

`--vlv`

Specifies VLV (browsing) index.

`--name` **NAME**

Adds `CN=NAME` to the subject DN.

`-o` **FILE**

`--cache-file` **FILE**

Reads raw index data from `FILE` and writes them if necessary. The default location is: `INSTANCE_PATH/logs/db_stat_DBNAME`.

**--o OUTPUT\_PW\_FILE**  
**--output-pwd-file OUTPUT\_PW\_FILE**  
Reads the output password from the `OUTPUT_FILE` file. The default is a prompt for password.

**--o OUTPUT\_FILE**  
**--output OUTPUT\_FILE**  
Stores the command results in the `OUTPUT_FILE` file. The default is `stdout`, standard output.

**--off**  
Disables server instance startup at system boot.

**--org ORG**  
Adds `O=ORG` to the subject DN. The default is none.

**--org-unit ORG-UNIT**  
Adds `OU=ORG-UNIT` to the subject DN. The default is none.

**--P SSL\_PORT**  
**--ssl-port SSL\_PORT**  
Specifies the secure SSL port for LDAP traffic. The default is 636 if `dsadm` is run by the root user, or 1636 if `dsadm` is run by a non-root user.

**--p PORT**  
**--port PORT**  
Specifies the port for LDAP traffic. The default is 389 if `dsadm` is run by the root user, or 1389 if `dsadm` is run by a non-root user.

**--phone PHONE**  
Sets the contact phone number to `PHONE`.

**--Q --no-repl**  
Specifies that additional data needed for replication is not included in the export.

**-R**  
**--rebuild-data**  
Overwrites current raw index data if it already exists.

**--s DN**  
**--subject DN**  
Specifies the subject DN. The default depends on the subcommand used, and is either `CN=hostname` or `CN=CERT_ALIAS`.

**--s DN**  
**--include DN**  
Exports data from suffix DN.

**--schema-push**  
Ensures manually modified schema is replicated to consumers.

**--sigalg SIGALG**  
Specifies certificate signature algorithm. The default algorithm is `SHA1`. The other valid values are `MD5` and `SHA256`.

**--state STATE**  
Adds `ST=STATE` to the subject DN. Default is none.

**--T TYPE**  
**--type TYPE**  
 Service type. Can be `SMF` when using Solaris 10, or `WIN_SERVICE` when using Windows.

**--t ATTR\_INDEX**  
**--attr ATTR\_INDEX**  
 Specifies attribute index `ATTR_INDEX`

**--u USER\_NAME**  
**--username USER\_NAME**  
 Sets the server instance owner user ID. The default is the current UNIX user name. This option is not available on Windows.

**--v6**  
 Specifies that the version Directory Server instance is 6.x.

**--validity DURATION**  
 Sets validity of the certificate to `DURATION` months.

**--W CERT\_PW\_FILE**  
**--cert-pwd-file CERT\_PW\_FILE**  
 Reads certificate database password from `CERT_PW_FILE`. The default is to prompt for password.

**--w PW\_FILE**  
**--pwd-file PW\_FILE**  
 Sets the password file for the Directory Manager (-D). The default is to prompt for password.

**--x DN**  
**--exclude DN**  
 Excludes the specified DN from the command.

**--y**  
**--decrypt-attr**  
 Decrypts encrypted attributes.

## Operands

The following operands are supported:

### **ARCHIVE\_DIR**

Specifies the path to the backup of the Directory Server instance.

### **CERT\_ALIAS**

Certificate alias name. A user-specified name that identifies a certificate.

### **CERT\_FILE**

Specifies the file that contains the certificate.

### **FLAG**

Specifies a flag that represents a property operand when using the command `dsadm get-flags`. Possible flag: `cert-pwd-prompt`.

### **FLAG=VAL**

Specifies a property flag operand and its value when using the command `dsadm set-flags`.

`cert-pwd-prompt` flag. Possible values are: `off` `on`. Default: `off`. By default the `dsadm` command generates a certificate database password when creating a server instance. This password is stored, allowing `dsadm` to access the certificate database when necessary, for example, when the server starts listening for SSL connections. When the `cert-pwd-prompt` flag is changed to `on`, the `dsadm` command prompts for the certificate database password when needed.

`dsadm-startup-timeout` flag. Integer set to specify the number of seconds `dsadm` is waiting for the server to start or stop.

`dsadm-shutdown-timeout` flag. Integer set to specify the number of seconds `dsadm` is waiting for the server to start or stop.

**GZIP\_LDIF\_FILE**

Path and filename for file in gzip compressed LDIF format.

**INSTANCE\_PATH**

Path of the Directory Server instance.

**LDIF\_FILE**

Filename of LDIF file.

**SUFFIX\_DN**

Suffix DN (Distinguished name).

## Exit Status

The following exit status values are returned:

0  
Successful completion.

**non-zero**  
An error occurred.

## Examples

The following examples show how the `dsadm` command is used.

**Example 1 Creating a Directory Server Instance**

```
$ dsadm create -p 6389 -P 6636 /local/dsInst
```

This command creates the server instance files in the directory `/local/dsInst`. The server instance is owned by the UNIX user who creates the command.

In this example, the LDAP port is specified as 6389, and the secure port is specified as 6636. If you do not specify port numbers, the default port numbers 389 and 636 (for root user) or 1389 and 1636 (for not-root user) are used. If you do not specify port numbers and the default port numbers are already being used, the `dsadm create` command aborts. The `dsadm create` command also aborts if you specify the port numbers that are already in use.

**Example 2 Starting a Directory Server Instance**

The server instance path is `/local/dsInst`.

```
$ dsadm start /local/dsInst
```

**Example 3 Getting Information About a Directory Server instance**

This command shows information such as the owner, ports, and current state of the server instance. The instance path is `/local/dsInst`.

```
$ dsadm info /local/dsInst
```

**Example 4 Importing an LDIF File**

Import an LDIF file, specifying that no user confirmation is required, and giving the suffix DN.

```
$ dsadm import -i /local/dsInst /local/dsInst/ldif/example.ldif \
dc=example,dc=com
```

**Example 5 Exporting an LDIF File**

Export a suffix to an LDIF file.

```
$ dsadm export -x ou=People,dc=example,dc=com /local/dsInst \
dc=example,dc=com /local/dsInst/ldif/export.ldif
```

This command shows all data in the suffix `dc=example,dc=com`, excluding data in the subsuffix `ou=People,dc=example,dc=com`

**Example 6 Backing Up a Directory Server Instance**

This command backs up the suffix data. The instance path is `/local/dsInst` and the archive directory is `/local/dsbackup/20060722`.

```
$ dsadm backup /local/dsInst /local/dsbackup/20060722
```

**Example 7 Regenerating Attribute Indexes**

To regenerate the existing `cn` and `uid` indexes:

```
$ dsadm reindex -t cn -t uid /local/dsInst dc=example,dc=com
```

**Example 8 Renewing a Certificate**

Use the following command to renew an existing server certificate with a new server certificate from your Certificate Authority.

```
$ dsadm renew-cert /local/dsInst cert_alias /local/certfiles/new-cert
```

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#)

## dscagent

manages a DSCC agent instance.

### Synopsis

```
dscagent subcommand [global_options] [subcommand_options] [subcommand_operands]
```

### Description

The `dscagent` command is used to create, delete, start, and stop DSCC agent instances on the local system. You can also use the `dscagent` command to display status and DSCC agent information, and to enable and disable SNMP monitoring. Use the `dscagent` command with the subcommands described in this man page:

### Subcommands

The following subcommands are supported:

```
dscagent create [-i] [-p PORT] [-w FILE] [AGENT_PATH]
```

Creates a DSCC agent instance.

```
dscagent delete [AGENT_PATH]
```

Deletes a DSCC agent instance.

```
dscagent disable-service [AGENT_PATH]
```

Unregisters the DSCC agent instance as a service. Available on Solaris and Windows.

```
dscagent disable-snmp [AGENT_PATH]
```

Unconfigures the SNMP agent of a DSCC agent instance.

```
dscagent enable-service [AGENT_PATH]
```

Registers the DSCC agent instance as a service. Available on Solaris and Windows.

```
dscagent enable-snmp [--v3] [--snmp-port SNMP_PORT] [--ds-port DS_PORT] [AGENT_PATH]
```

Configures a DSCC agent instance as SNMP agent.

```
dscagent info [AGENT_PATH]
```

Displays the DSCC agent instance status and some configuration information.

```
dscagent start [AGENT_PATH]
```

Start a DSCC agent instance. The DSCC agent will be able to start if it was registered in the DSCC registry, or if the SNMP agent is enabled.

```
dscagent stop [AGENT_PATH]
```

Stops a DSCC agent instance.

### Global Options

The following options apply to all commands and subcommands:

-?

--help

Display usage for the command or for the specified subcommand.

-V  
--version  
Displays the current version of dscagent. The version is provided in the format *year.monthday.time*. So version number 2009.0601.0035 was built on June 1st, 2009 at 00h35. If the components used by dscagent are not aligned, the version of each individual component is displayed.

-v  
--verbose  
Display extra information for debugging purposes.

## Subcommand Options

The following options apply to the subcommands where they are specified:

--ds-port **DS\_PORT**  
Use DS\_PORT for traffic from Directory Servers to agent. (Default is 3995 or random.)

**-i, --no-inter**  
Does not prompt for password.

**-p PORT, --port PORT**  
Specifies DSCC agent port. (Default: 3997)

--snmp-port **SNMP\_PORT**  
Use SNMP\_PORT for SNMP traffic. (Default is 3996 or random.)

--v3  
Use SNMP version 3.

**-w FILE, --pwd-file FILE**  
Reads the DSCC agent password from PWD\_FILE. (Default: prompt for pwd)

## Operand

**AGENT\_PATH**  
Path of the DSCC agent instance. (Default: *INSTALL\_DIR/var/dcc/agent*).

## Exit Status

The following exit status values are returned:

0  
Successful completion

**non-zero**  
An error occurred.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	11g R1 (11.1.1.7.0)
Stability Level	Evolving

**See Also**

[dscereg\(1M\)](#), [dscsetup\(1M\)](#)

---

## dscmmon

Monitor servers registered with Directory Service Control Center

### Synopsis

```
install-path/bin/dscmmon subcommand [options]
```

### Description

The `dscmmon` command is used to monitor servers registered with Directory Service Control Center. Use the `dscmmon` command with the subcommands described in this man page.

### Subcommands

The following subcommands are supported:

```
dscmmon view-repl-agmts
```

Show monitoring information about the replication agreements between Directory Server instances.

The format of this subcommand is:

```
dscmmon view-repl-agmts [-d seconds] [-b] [-s suffix-dn]...
```

```
dscmmon view-servers
```

Show monitoring information about registered servers.

The format of this subcommand is:

```
dscmmon view-servers [-d seconds] [-t] [-E]
```

```
dscmmon view-suffixes
```

Show monitoring information about suffixes supported by registered servers.

The usage of this subcommand is:

```
dscmmon view-suffixes [-d seconds] [-b] [-G] [-s suffix-dn]...
```

### Global Options

The following options apply to all commands and subcommands:

```
-?
```

```
--help
```

Display usage for the command or for the specified subcommand.

```
-D user-dn
```

```
--user-dn user-dn
```

Bind using the specified *user-dn*.

By default, the value of the environment variable `LDAP_ADMIN_USER` is used. If `LDAP_ADMIN_USER` is not defined, `cn=admin`, `cn=Administrators`, `cn=dcc` is used.

-a  
--all  
Display hidden suffixes or servers, such as the server and suffixes used by Directory Service Control Center to manage metainformation about the directory service.

-h **hostname**  
--hostname **hostname**  
Connect to the Directory Service Control Center registry on the specified host or IP address.

By default, the value of the environment variable `DSCC_HOST` is used. If `DSCC_HOST` is not defined, `localhost` is used.

For example, when mapping the IPv4 address `192.168.0.99` to IPv6, pass the `-h` option with its argument as `-h ::ffff:192.168.0.99`.

-p **port-number**  
--port **port-number**  
Connect to the Directory Service Control Center registry on the specified port.

By default, the value of the environment variable `DSCC_PORT` is used. If `DSCC_PORT` is not defined, `3998` is used.

-u **uid**  
--username **uid**  
Bind using `cn=uid,cn=Administrators,cn=dcc`.

By default, the value of the environment variable `LDAP_ADMIN_USER` is used. If `LDAP_ADMIN_USER` is not defined, `cn=admin,cn=Administrators,cn=dcc` is used.

-V  
--version  
Displays the current version of `dsccmon`. The version is provided in the format *year.monthday.time*. So version number `2007.1204.0035` was built on December 4th, 2007 at 00h35. If the components used by `dsccmon` are not aligned, the version of each individual component is displayed.

-v  
--verbose  
Display extra information for debugging purposes.

-w **file**  
--pwd-file **file**  
Bind using the password specified in *file*.

By default, the value of the environment variable `LDAP_ADMIN_PWF` is used. If `LDAP_ADMIN_PWF` is not defined, `dsccmon` prompts for a password.

## Subcommands Options

The following options apply to the subcommands where they are specified:

-E  
--error  
Display detailed server error information.

---

-G  
--genid  
Display generation IDs.

-b  
--brief  
Do not display nonessential data, such as headers and notes.

-d **seconds**  
--period **seconds**  
Update monitoring information each specified number of seconds.

-s **suffix-dn**  
--suffix **suffix-dn**  
Display information for the specified suffix only.

-t  
--ipath  
Display the server instance path.

## Environment Variables

The following environment variables are supported:

DSCC\_HOST  
Bind to the registry on this host.

DSCC\_PORT  
Bind to the registry on this port number.

LDAP\_ADMIN\_PWF  
Read the bind password from this file.

LDAP\_ADMIN\_USER  
Bind with this user DN or uid.

## Exit Status

The following exit status values are returned:

0  
Successful completion

**non-zero**  
An error occurred.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dsccreg\(1M\)](#)

## dsccreg

Manages the DSCC registry

### Synopsis

```
install-path/bin/dsccreg subcommand [options]
```

### Description

The `dsccreg` command is used to register server instances on the local system with the Directory Service Control Center (DSCC) registry, which may be remote. Use the `dsccreg` command with the subcommands described in this man page.

### Subcommands

The following subcommands are supported:

```
dsccreg add-agent [-d TEXT] [-H LOCAL_HOST] [-G AGENT_PWD_FILE]
[AGENT_PATH]
```

Add DSCC agent instance to the DSCC registry.

```
dsccreg add-server [-B INST_USER_DN] [-G INST_PWD_FILE] [-d TEXT]
[-H LOCAL_HOST] [--agent-port PORT] INST_PATH
```

Add a server instance to the DSCC registry.

```
dsccreg list-agents
```

List agents registered with the DSCC registry.

```
dsccreg list-servers [-a] [--agent][-C]
```

List server instances registered with the DSCC registry.

```
dsccreg remove-agent [-H LOCAL_HOST] [-f,--force] [AGENT_PATH]
```

Remove a DSCC agent instance from the DSCC registry.

```
dsccreg remove-server [-B INST_USER_DN] [-G INST_PWD_FILE] [-H
LOCAL_HOST] INST_PATH
```

Remove a server instance from the DSCC registry.

### Global Options

The following options apply to all commands and subcommands:

-?

--help

Display usage for the command or for the specified subcommand.

-D **user-dn**

--user-dn **user-dn**

Bind using the specified *user-dn*.

By default, the value of the environment variable `LDAP_ADMIN_USER` is used. If `LDAP_ADMIN_USER` is not defined, `cn=admin`, `cn=Administrators`, `cn=dcc` is used.

**-h *hostname***

**--hostname *hostname***

Connect to the DSCC registry on the specified host or IP address.

By default, the value of the environment variable `DSCC_HOST` is used. If `DSCC_HOST` is not defined, `localhost` is used.

For example, when mapping the IPv4 address `192.168.0.99` to IPv6, pass the `-h` option with its argument as `-h ::ffff:192.168.0.99`.

**-i**

**--no-inter**

Do not prompt for confirmation before restarting servers.

**-p *port-number***

**--port *port-number***

Connect to the DSCC registry on the specified port.

By default, the value of the environment variable `DSCC_PORT` is used. If `DSCC_PORT` is not defined, `3998` is used.

**-u *uid***

**--username *uid***

Bind using `cn=uid,cn=Administrators,cn=dcc`.

By default, the value of the environment variable `LDAP_ADMIN_USER` is used. If `LDAP_ADMIN_USER` is not defined, `cn=admin,cn=Administrators,cn=dcc` is used.

**-V**

**--version**

Displays the current version of `dsccreg`. The version is provided in the format *year.monthday.time*. So version number `2007.1204.0035` was built on December 4th, 2007 at 00h35. If the components used by `dsccreg` are not aligned, the version of each individual component is displayed.

**-v**

**--verbose**

Display extra information for debugging purposes.

**-w *file***

**--pwd-file *file***

Bind using the password specified in *file*.

By default, the value of the environment variable `LDAP_ADMIN_PWF` is used. If `LDAP_ADMIN_PWF` is not defined, `dsccreg` prompts for a password.

## Subcommands Options

The following options apply to the subcommands where they are specified:

**-a**

**--all**

Display hidden servers, such as the server used by DSCC to manage meta information about the directory service.

**--agent**

Displays DSCC agent information

**--agent-port *port***  
Specifies *port* as the DSCC agent port to use for communicating with this server instance.

**-d *desc***  
**--description *desc***  
Use the specified text *desc* as the description for the server instance.

**-d *text***  
**--description *text***  
Uses *text* as the description (default : none).

**-B *instance-user-dn***  
**--inst-user-dn *instance-user-dn***  
Use the specified bind DN to bind to the instance specified by *instance-path*.  
By default, the dsccreg command uses cn=Directory Manager.

**-C**  
**--check-access**  
Verify that each registered server instance is accessible from DSCC.

**-f**  
**--force**  
Forces removal of the agent instance from the DSCC registry.

**-G *agent-pwd-file***  
Uses password from *agent\_pwd\_file* to access agent configuration  
By default, the dsccreg command prompts for the password.

**-G *instance-pwd-file***  
**--inst-pwd-file *instance-pwd-file***  
Use the password in the specified file to bind to the instance specified by *instance-path*.  
By default, the dsccreg command prompts for the password.

**-H *hostname***  
**--current-host *hostname***  
Use the specified host name as the local host.  
By default, the dsccreg command uses the local host name returned by the operating system.

**-H *local\_host***  
*local\_host* is the hostname used by the DSCC registry to connect the DSCC agent (default : given by the OS).

## Operands

The following subcommand operands are supported:

### **AGENT\_PATH**

Full path to the existing DSCC agent instance. By default, `install-path/var/dcc/agent`.

### **INST\_PATH**

Full path to the server instance.

## Environment Variables

The following environment variables are supported:

DSCC\_HOST

Bind to the registry on this host.

DSCC\_PORT

Bind to the registry on this port number.

LDAP\_ADMIN\_PWF

Read the bind password from this file.

LDAP\_ADMIN\_USER

Bind with this user DN or uid.

## Exit Status

The following exit status values are returned:

0

Successful completion

**non-zero**

An error occurred.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	11g R1 (11.1.1.7.0)
Stability Level	Evolving

## See Also

[dscagent\(1M\)](#)

## dscctestup

Set up Directory Service Control Center

### Synopsis

```
install-path/bin/dscctestup subcommand [options]
```

### Description

The `dscctestup` command is used to deploy Directory Service Control Center (DSCC) in an application server, and to register local agents of the administration framework. Use the `dscctestup` command with the subcommands described in this man page.

### Subcommands

The following subcommands are supported:

```
dscctestup ads-create [-w file] [-p PORT] [-P PORT]
```

Initialize the DSCC registry, a local Directory Server instance for private use by DSCC to store configuration information.

DSCC requires that this instance reside locally on the host where you run DSCC. Therefore, if you replicate the data in the instance for high availability, set up one DSCC per replica host.

If you do not provide the Directory Manager password for the DSCC registry in the file passed to the `-w` option, the command prompts for the password.

The default port numbers used by the instance are 3998 for LDAP, and 3999 for LDAPS. If those ports are already used, then `dscctestup` randomly chooses some ports. If you want to use specific ports, then use the `-p` and `-P` options.

The default instance path of DSCC registry is `install-path/var/dcc/ads`.

The base DN for the suffix containing configuration information is `cn=dscctest`.

Use the `dscctestup status` subcommand to read actual values for the DSCC registry instance.

```
dscctestup ads-delete
```

Delete the Directory Server instance used by DSCC to store configuration information.

If you delete the DSCC registry, all the server registrations are deleted but the Server instances remain unaffected.

Use the `-i` when not using the command interactively.

```
dscctestup cacao-reg [-t]
```

This subcommand is no longer supported. Use `dscctestup create` to add the DSCC agent to the DSCC registry.

```
dscctestup cacao-unreg
```

This subcommand is no longer supported.

```
dscctestup complete-patch [-t]
```

Performs actions required after applying a patch.

```
dscsetup disable-admin-users
```

Disables the Administrative User feature. The Administrative User feature allows you to designate a user in the directory as a Directory Service Manager.

```
dscsetup enable-admin-users
```

Enable the Administrative User feature. The Administrative User feature allows you to designate a user in the directory as a Directory Service Manager.

```
dscsetup mfwk-reg [-t]
```

This subcommand is no longer supported. Use `dscagent enable-snmp` to enable SNMP monitoring.

```
dscsetup mfwk-unreg
```

This subcommand is no longer supported.

```
dscsetup prepare-patch
```

Perform actions that are required before applying a patch.

This subcommand stops the server instances and the DSCC agents. Once `prepare-patch` is completed, none of the executables from the current installation is running. Thus the installation can be safely patched.

```
dscsetup status
```

Display whether the DSCC registry has been initialized.

```
dscsetup war-file-create [--overwrite] [OUTPUT_WAR_FILE]
```

Generate the WAR file for deploying DSCC in an application server.

```
dscsetup war-file-delete [OUTPUT_WAR_FILE]
```

Delete the WAR file.

## Global Options

The following options apply to all commands and subcommands:

```
-?
```

```
--help
```

Display usage for the command or for the specified subcommand.

```
-i
```

```
--no-inter
```

Do not prompt for confirmation before performing the operation.

```
-V
```

```
--version
```

Displays the current version of `dscsetup`. The version is provided in the format *year.monthday.time*. So version number 2009.0601.0035 was built on June 1st, 2009 at 00h35. If the components used by `dscsetup` are not aligned, the version of each individual component is displayed.

```
-v
```

```
--verbose
```

Display extra information for debugging purposes.

## Subcommands Options

The following options apply to the subcommands where they are specified:

`--overwrite`  
Overwrites the existing WAR file.

`-p PORT`  
Uses *PORT* for the LDAP port (Default: 3998 or random)

`-P PORT`  
Uses *PORT* for the LDAPS port (Default: 3999 or random).

`-t`  
`--norestart`  
Do not start the Common Agent Container after performing the operation.

`-w file`  
`--pwd-file file`  
Use the Directory Service Manager password specified in *file*.  
By default, `dscsetup` prompts for a password.

## Operands

The following operands are supported:

***OUTPUT\_WAR\_FILE***  
Name of the WAR file.

## Exit Status

The following exit status values are returned:

0  
Successful completion

**non-zero**  
An error occurred.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## See Also

[dscagent\(1M\)](#)

## dsconf

Manages Directory Server configuration

### SYNOPSIS

```
install-path/bin/dsconf
subcommand [global-options] [subcommand-options]
[subcommand-operands]
```

### Description

The `dsconf` command manages Directory Server configuration. It enables you to modify the configuration entries in `cn=config`.

The server must be running in order for you to run `dsconf`.

### Subcommands

The following subcommands are supported:

```
dsconf accord-repl-agmt [-h host] [-p port] [-I USER_DN] [-W FILE]
SUFFIX_DN HOST:PORT [HOST:PORT ...]
```

Ensures the authentication properties of the destination suffix are in accord with those of the replication agreement.

```
dsconf analyze-index-filters [-h host] [-p port] SUFFIX_DN
Analyzes index filters and displays their statistics.
```

```
dsconf backup [-h host] [-p port] [-a] [-f FLAG]... ARCHIVE_DIR
Backs up Directory Server data (configuration data excluded).
```

```
dsconf change-repl-dest [-h host] [-p port] [-A NEW_PROTOCOL] [-J]
SUFFIX_DN HOST:PORT NEW_HOST:NEW_PORT
```

Changes the remote replica pointed to by an existing replication agreement. The suffix DN and configuration of the existing agreement remain the same.

```
dsconf create-encrypted-attr [-h host] [-p port] [--desc DESC]
SUFFIX_DN ATTR_NAME [ATTR_NAME ...] ENCRYPTION_ALGO
```

Declares that the values for an attribute are encrypted.

```
dsconf create-index [-h host] [-p port] SUFFIX_DN ATTR_NAME [ATTR_
NAME ...]
```

Declares that an attribute is indexed. The default index types for the attribute are equality and presence.

```
dsconf create-plugin [-h host] [-p port] -H LIB_PATH -F INIT_FUNCT
-Y TYPE [-G ARG]... PLUGIN_NAME
```

Declares a new client plugin. The plugin state is disabled.

```
dsconf create-repl-agmt [-h host] [-p port] [-A PROTOCOL] [-J]
SUFFIX_DN HOST:PORT [HOST:PORT ...]
```

Creates a replication agreement for existing suffix.

```
dsconf create-repl-priority [-h host] [-p port] SUFFIX_DN PRIORITY_
```

*NAME PROP:VAL [PROP:VAL ...]*

Creates a prioritized replication rule on a master.

*dsconf create-suffix [-h host] [-p port] [-B NAME] [-L FILE] [-N SUFFIX\_DN [SUFFIX\_DN ...]]*

Creates a suffix.

*dsconf delete-encrypted-attr [-h host] [-p port] SUFFIX\_DN ATTR\_NAME [ATTR\_NAME ...]*

Declares that the values for an attribute are no longer encrypted.

*dsconf delete-index [-h host] [-p port] SUFFIX\_DN ATTR\_NAME [ATTR\_NAME ...]*

Declares that an attribute is no longer indexed.

*dsconf delete-plugin [-h host] [-p port] PLUGIN\_NAME [PLUGIN\_NAME ...]*

Declares that a plugin can not be used by the server any more.

*dsconf delete-repl-agmt [-h host] [-p port] SUFFIX\_DN HOST:PORT [HOST:PORT ...]*

Deletes a replication agreement.

*dsconf delete-repl-priority [-h host] [-p port] SUFFIX\_DN PRIORITY\_NAME [PRIORITY\_NAME ...]*

Deletes a prioritized replication rule.

*dsconf delete-suffix [-h host] [-p port] SUFFIX\_DN [SUFFIX\_DN ...]*

Deletes suffix configuration and data.

*dsconf demote-repl [-h host] [-p port] SUFFIX\_DN [SUFFIX\_DN ...]*

Demotes the role of an existing replicated suffix. A master is demoted to a hub, a hub is demoted to a consumer. To demote a master to a consumer, run the command twice.

*dsconf disable-index-filter-analyzer [-h host] [-p port] SUFFIX\_DN*

Disables the index filter analyzer.

*dsconf disable-plugin [-h host] [-p port] PLUGIN\_NAME [PLUGIN\_NAME ...]*

Disables a plugin.

*dsconf disable-repl [-h host] [-p port] SUFFIX\_DN [SUFFIX\_DN ...]*

Disables replication for a replicated suffix.

*dsconf disable-repl-agmt [-h host] [-p port] SUFFIX\_DN HOST:PORT [HOST:PORT ...]*

Disables replication with another Directory Server.

*dsconf enable-plugin [-h host] [-p port] PLUGIN\_NAME [PLUGIN\_NAME ...]*

Enables a plugin.

*dsconf enable-repl [-h host] [-p port] [-d REPL\_ID] ROLE SUFFIX\_DN [SUFFIX\_DN ...]*

Enables replication by assigning a role to an existing suffix.

*dsconf enable-index-filter-analyzer [-h host] [-p port]*

```
 [--max-entries INT] SUFFIX_DN
```

Sets the `index-filter-analyzer-enabled` property on to enable you to analyze indexes. You can also set the `index-filter-analyzer-max-entries` property by specifying a value for `--max-entries`.

```
 dsconf enable-repl-agmt [-h host] [-p port] SUFFIX_DN HOST:PORT
 [HOST:PORT ...]
```

Enables replication with another Directory Server.

```
 dsconf export [-h host] [-p port] [-aQ] [-f FLAG]... [[-s DN]...
 |[-x DN]...] [-y [-C FILE]] SUFFIX_DN [SUFFIX_DN...] LDIF_FILE
```

**OR**

```
 dsconf export [-h host] [-p port] [-aQ] [-f FLAG]... [-f FLAG=VAL]
 [[-s DN]... |[-x DN]...] [-y [-C FILE]] SUFFIX_DN [SUFFIX_DN...]
 GZ_LDIF_FILE
```

Exports suffix data to LDIF format as a compressed or uncompressed exported file.

```
 dsconf get-index-prop [-h host] [-p port] [-T] SUFFIX_DN ATTR_NAME
 [PROP ...]
```

Displays the value of an index configuration property.

```
 dsconf get-log-prop [-h host] [-p port] [-T] [-Z UNIT] LOG_TYPE
 [PROP ...]
```

Displays server log property values.

```
 dsconf get-plugin-prop [-h host] [-p port] [-T] PLUGIN_NAME [PROP
 ...]
```

Displays plugin property values.

```
 dsconf get-repl-agmt-prop [-h host] [-p port] [-T] SUFFIX_DN
 HOST:PORT [PROP ...]
```

Displays replication agreement property values.

```
 dsconf get-server-prop [-h host] [-p port] [-T] [-M UNIT] [-Z UNIT]
 [PROP ...]
```

Displays server property values.

```
 dsconf get-suffix-prop [-h host] [-p port] [-T] [-M UNIT] [-Z UNIT]
 SUFFIX_DN [PROP ...]
```

Displays suffix property values.

```
 dsconf help-properties [-r]
```

Lists properties exposed by subcommands.

Following is an explanation of the keywords that are used in the `dsconf help-properties` output:

ETA	Encrypted Attribute
IDX	Index
LOG	Log
PLG	Plugin
RPR	Replication Priority Rules
RAG	Replication Agreement
SER	Server
SUF	Suffix

```
dsconf import [-h host] [-p port] [-aK] [-f FLAG=VAL]... [-x DN]...
LDIF_FILE [LDIF_FILE...] SUFFIX_DN
```

**OR**

```
dsconf import [-h host] [-p port] [-aK] [-f FLAG=VAL]... [-xDN]...
GZ_LDIF_FILE [GZ_LDIF_FILE...] SUFFIX_DN
```

Populates an existing suffix with LDIF data from a compressed or uncompressed LDIF file.

```
dsconf info [-h host] [-p port] [-c] [-D user-DN] [-e] [-i] [-j]
[-w file]
```

Displays information about server configuration such as port number, suffix name, server mode and task states.

```
dsconf init-repl-dest [-h host] [-p port] [-a] SUFFIX_DN HOST:PORT
[HOST:PORT ...]
```

Launches a total update of the remote replica from a local suffix.

```
dsconf list-encrypted-attrs [-h host] [-p port] [-E] [-v] [SUFFIX_
DN ...]
```

Lists encrypted attributes. When used with `-v`, this command displays additional information related to encrypted attributes.

```
dsconf list-indexes [-h host] [-p port] [-E] [-v] [SUFFIX_DN ...]
```

Lists indexed attribute configuration. When used with `-v`, this command displays additional information related to indexes.

```
dsconf list-plugins [-h host] [-p port] [-E] [-v]
```

Lists plugins. When used with `-v`, this command displays additional information related to plugins.

```
dsconf list-repl-agmts [-h host] [-p port] [-E] [-v] [SUFFIX_DN
...]
```

Lists replication agreements. When used with `-v`, this command displays additional information related to replication agreements.

```
dsconf list-repl-priorities [-h host] [-p port] [-E] [-v] [SUFFIX_
DN ...]
```

Lists prioritized replication rules. When used with `-v`, this command displays additional information related to prioritized replication rules.

```
dsconf list-suffixes [-h host] [-p port] [-E] [-v]
```

Lists suffixes. When used with `-v`, this command displays additional information related to suffixes. This includes the number of entries, the suffix role and the number of replication agreements, replication priority rules, indexes and encrypted attributes.

```
dsconf promote-repl [-h host] [-p port] [-d REPL_ID] SUFFIX_DN
[SUFFIX_DN ...]
```

Promotes the role of an existing replicated suffix. A consumer is promoted to a hub, a hub is promoted to a master. To promote a consumer to a master, run the command twice.

```
dsconf pwd-compat [-h host] [-p port] [-a] NEW_MODE
```

Changes Directory Server password compatibility state.

```
dsconf reindex [-h host] [-p port] [-a] [-t ATTR] ... SUFFIX_DN
[SUFFIX_DN ...]
```

Rebuilds index(es) of an existing suffix.

`dsconf restore [-h host] [-p port] [-a] [-f FLAG] ARCHIVE_DIR`  
Restores Directory Server data from backup archive.

`dsconf rotate-log-now [-h host] [-p port] [-a] LOG_TYPE`  
Closes and renames current log and creates fresh log.

`dsconf rewrite [-h host] [-p port] [-a] [-f FLAG=VAL]... SUFFIX_DN  
[SUFFIX_DN...]`  
Rewrites all entries according to the current database format, and depending upon the flag.

`dsconf set-index-prop [-h host] [-p port] SUFFIX_DN ATTR_NAME  
PROP:VAL [PROP:VAL ...]`  
Sets the index property value.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

`dsconf set-log-prop [-h host] [-p port] LOG_TYPE PROP:VAL [PROP:VAL  
...]`  
Sets server log property value.

The specified target directory for log file must exist on all the platforms other than Windows. On Windows, if the target directory does not exist, it is created automatically.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

`dsconf set-plugin-prop [-h host] [-p port] PLUGIN_NAME PROP:VAL  
[PROP:VAL ...]`  
Sets plugin property value.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

`dsconf set-repl-agmt-prop [-h host] [-p port] SUFFIX_DN HOST:PORT  
PROP:VAL [PROP:VAL ...]`  
Sets replication agreement property value.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

`dsconf set-server-prop [-h host] [-p port] PROP:VAL [PROP:VAL ...]`  
Sets server property value.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

`dsconf set-suffix-prop [-h host] [-p port] SUFFIX_DN PROP:VAL  
[PROP:VAL ...]`  
Sets suffix property value.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

`dsconf show-repl-agmt-status [-h host] [-p port] [-I USER_DN] [-W  
FILE] SUFFIX_DN HOST:PORT`

Displays a comparison of a source and destination suffix configuration and the status of the replication agreement. When used with *v*, this command displays additional

replication agreement information such as pending changes and delayed maximum duration.

```
dsconf show-task-status [-h host] [-p port]
```

Displays status of current directory server tasks. When used with *v*, this command displays additional information related to the task type.

```
dsconf update-repl-dest-now [-h host] [-p port] SUFFIX_DN HOST:PORT  
[HOST:PORT ...]
```

Restarts replication updates after the destination server has been down by forcing updates to the remote replica from the local suffix.

## Global Options

The following options are global, and are applicable to all commands and subcommands. The global options must follow their respective commands or subcommands to execute successfully.

-?

--help

Displays help information for a command or subcommand.

-c

--accept-cert

Does not ask for confirmation before accepting non-trusted server certificates.

-D ***user-DN***

--user-dn ***user-DN***

Binds as *user-DN*. dsconf searches for a *user-DN* value in the following order: First a *USER\_DN* specified in the command line, then a *user-DN* set by using the environment variable \$LDAP\_ADMIN\_USER. If none of these are found, the default is to bind as the user cn=Directory Manager.

-e

--unsecured

Connects over LDAP with no secure connection. To connect over a clear connection by default, set the DIRSERV\_UNSECURED environment variable.

-h ***host***

--hostname ***host***

Connects to the directory on *host*. dsconf contacts the LDAP server on the specified host, which can be a host name or an IP address. dsconf searches for a *host* value in the following order: First a *host* specified on the command line, then a *host* set by using the environment variable \$DIRSERV\_HOST. If none of these are found, the default is to use the local host.

For example, when mapping the IPv4 address 192.168.0.99 to IPv6, specify the HOST:PORT as follows: ::ffff:192.168.0.99.

-i

--no-inter

Does not prompt for confirmation before performing the operation.

-j

--reject-cert

Does not ask for confirmation before rejecting non-trusted server certificates (for current session only).

**-p port**

**--port port**

Connects to directory on *port*. *dsconf* searches for a *port* value in the following order: First a *port* specified in the command line, then a *port* set by using the environment variable `$DIRSERV_PORT`. If none of these are found, the default is to use port 389.

This option is mutually exclusive with `-P,--secure-port`.

**-P port**

**--secure-port port**

Connects over SSL to the directory on *port*. *dsconf* searches for a *port* value in the following order:

- A *port* specified in the command line
- A *port* set by using the `$DIR_SERV_PORT` environment variable

If none of these are found, the default is to use port 636.

This option is mutually exclusive with `-p,--port`.

**-v**

**--verbose**

Displays extra information.

**-V --version**

Displays the current version of *dsconf*. The version is provided in the format *year.monthday.time*. So version number 2007.1204.0035 was built on December 4th, 2007 at 00h35. If the components used by *dsconf* are not aligned, the version of each individual component is displayed.

**-w FILE**

**--pwd-file FILE**

Binds using an LDAP password is read from *FILE*. *dsconf* searches for a password *FILE* value in the following order: A password or password file specified in the command line. A password file set by using the environment variable `$LDAP_ADMIN_PWF`. If none of these are found, the default is to prompt for the password.

**-y**

**--decrypt-attr**

Decrypts encrypted attributes. The `--decrypt-attr` option is a boolean and is optional.

## Subcommands Options

The following options are applicable to the subcommands where they are specified.

**-A PROTOCOL**

**--auth-protocol PROTOCOL**

Sets authentication protocol for replication agreements to *PROTOCOL*. For the `create-repl-dest` subcommand, the default value is `clear`. Other possible values are `ssl-simple` and `ssl-client`. For the `change-repl-dest` subcommand, the default value is the same as that of the `HOST:PORT` to which you are changing.

**-a**

**--async**

Launches a task and returns the command line accessible immediately.

**-B NAME**

**--db-name NAME**

Specifies a database name.

**-C FILE**

**--cert-pwd-file FILE**

Reads certificate database password from FILE. The default is to prompt for password.

**-d REPL\_ID**

**--repl-id REPL\_ID**

Specifies a replication ID for a master. It is only used when *ROLE* = master.

**--desc DESC**

Specifies a description *DESC*.

**-E**

**--record**

Modifies the display output to show one property value per line.

**-F INIT\_FUNC**

**--init-func INIT\_FUNC**

Sets initialization function for a plugin to *INIT\_FUNC*.

**-f FLAG or -f FLAG=VAL**

**--flags FLAG or --flags FLAG=VAL**

Customizes specific subcommand.

Import flags:

**chunk-size=INTEGER**

Sets the merge chunk size. Overrides the detection of when to start a new pass during import.

**incremental-output**

Specifies whether an output file will be generated for later use in importing to large replicated suffixes. Default is *yes*. Possible values are *yes* and *no*. This flag can only be used when the *-K* option is used. If this flag is not used, an output file will automatically be generated.

**incremental-output-file=PATH**

Sets the path of the generated output file for an incremental (appended) import. The output file is used for updating a replication topology. It is an LDIF file containing the difference between the replicated suffix and the LDIF file, and replication information.

Export flags:

**compression-level**

Compression level to use when a *GZ\_LDIF\_FILE* is given as operand. Default level is 3, level range is from 1 to 9.

**multiple-output-file**

Exports each suffix to a separate file.

**use-main-db-file**

Exports the main database file only.

**not-export-unique-id**

Does not export unique id values.

**output-not-folded**

Does not wrap long lines.

**not-print-entry-ids**

Does not export entry IDs.

## Backup flags:

`verify-db`

Check integrity of the backed up database.

`no-recovery`

Skip recovery of the backed up database.

## Restore flags:

`move-archive`

Performs restore by moving files in place of copying them.

## Rewrite flags:

`purge-csn`

Purge the Change Sequence Number (CSN). The `purge-csn` flag is set to `off` by default. Setting `purge-csn` to `on` prevents old CSN data from being kept by the operation. This reduces the size of entries by removing traces of previous updates.

`convert-pwp-opattr-to-DS6`

Converts DS5 mode password policy operational attributes to run in D6-mode.

The `convert-pwp-opattr-to-DS6` flag is set to `off` by default. When a server is `DS6-migration-mode` enabled, setting `convert-pwp-opattr-to-DS6` to `on`, permits DS5 mode password policy operational attributes to be migrated using their ID (Internet Draft) and to run in DS6-mode. `DS6-migration-mode` is the only mode in which you can migrate operational attributes safely. When the migration has been successfully performed, run the server in `DS6-mode` when you are ready.

Note that the `dsconf rewrite -f convert-pwp-opattr-to-DS6=on` subcommand must be run on all servers in the topology that are in `DS6-migration-mode` in order to migrate their DS5 mode password policy operational attributes.

**-G ARG**

`--arguments ARG`

Sets plugin argument property to *ARG*.

**-H LIB\_PATH**

`--lib-path LIB_PATH`

Sets plugin library path to *LIB\_PATH*.

**-I USER\_DN**

`--dest-bind-dn USER_DN`

Binds as *USER\_DN* on destination suffix (Default: same as the DN used for source suffix)

-J

--no-accord

For use with the `create-repl-agmt` and `change-repl-dest` subcommands. When the `--no-accord` option is used with either `create-repl-agmt` and `change-repl-dest` subcommands, the `accord-repl-agmt` subcommand is not performed.

When creating a new replication agreement or when changing the destination server of a replication agreement, `dsconf` tries to run the `accord-repl-agmt` operation to ensure the authentication properties of the destination suffix are in accord with those of replication agreement. If the destination server is unavailable or takes time to respond, the time to operate the command would be longer than necessary unless the `--no-accord` subcommand option is used.

-K

--incremental

Specifies that the contents of the imported LDIF file are appended to the existing LDAP entries. If this option is not specified, the contents of the imported file replace the existing entries.

-L **FILE**

--db-path **FILE**

Specifies database directory and path.

-M **UNIT**

--unit-time **UNIT**

Displays time in *UNIT*, where *UNIT* is one of: w, d, h, m, s (week, day, hour, minute, second).

--max-entries **INT**

Specifies the maximum number of entries for `index-filter-analyzer-max-entries`.

-N

--no-top-entry

Does not create a top entry for the suffix. By default, a top-level entry is created when a new suffix is created (on the condition that the suffix starts with `dc=`, `c=`, `o=` or `ou=`). This option changes the default behavior.

-Q

--no-repl

Does not export additional data needed for replication.

-r

--attr-map

Displays help properties and their corresponding attributes in `cn=config`.

-s **DN**

--include **DN**

Exports all data under specified DN.

-T

--tab

Displays information in a table format.

**-t ATTR**  
**--attr ATTR**  
 Reindexes the attribute *ATTR* (Default: All attributes).

**-W FILE**  
**--dest-pwd-file FILE**  
 Binds on a destination suffix using the password read from *FILE*. The default is the same *FILE* used for the source suffix.

**-x DN**  
**--exclude DN**  
 Does not import or export data contained under the specified DN.

**-Y TYPE**  
**--type TYPE**  
 Sets plugin type to *TYPE*, where *TYPE* is one of: database, extendedop, preoperation, postoperation, matchingrule, syntax, internalpreoperation, internalpostoperation, object, pwdstoragescheme, revertpwdstoragescheme, ldbmentryfetchstore, beprecommit, archive2ldb.

**-z UNIT**  
**--unit-size UNIT**  
 Displays memory size data in *UNIT*, where *UNIT* is one of: G, M, k, b (Gigabyte, Megabyte, kilobyte, byte).

## Operands

The following operands are supported:

### **ARCHIVE\_DIR**

Directory Server instance backup archive directory.

### **ATTR\_NAME**

Attribute name.

### **ENCRYPTION\_ALGO**

Algorithm to use for encryption. Possible values are: *des*, *des3*, *rc2*, *rc4*, *aes128*, *aes256*, *camellia128*, and *camellia256*. These values signify respectively DES block cipher, Triple DES block cipher, RC2 block cipher, RC4 stream cipher, AES 128-bit block cipher, AES 256-bit block cipher, CAMELLIA 128-bit block cipher, and CAMELLIA 256-bit block cipher.

### **GZIP\_LDIF\_FILE**

Path and filename for file in *gzip* compressed LDIF format.

### **HOST:PORT**

Destination replicated suffix, defined by *HOST* and destination *PORT*.

### **LDIF\_FILE**

Path and filename for file in LDIF format.

### **LOG\_TYPE**

Type of log, where *LOG\_TYPE* is one of: *access*, *error*, *audit*.

### **NEW\_MODE**

Desired mode for password compatibility policy. The default mode is *DS5-compatible-mode*. You can change it to *to-DS6-migration-mode* and then to *to-DS6-mode*.

**PLUGIN\_NAME**

Plugin name. The plugin name is defined when the plugin is created.

**PRIORITY\_NAME**

Name used to define or identify a prioritized replication rule.

**PROP**

Property name. For a list of PROP names and default values, use the command `dsconf help-properties -v`.

**PROP:VAL**

Property and corresponding value. For a list of PROP names and default values, use the command `dsconf help-properties -v`.

For multi-valued properties, use *PROP+:VAL* to add a value, and *PROP-:VAL* to remove a value.

Multi-valued properties are identified by the *M* keyword. For a list of multi-valued properties, use the command `dsconf help-properties | grep " M "`

Allowed values that are too wide for the help-properties output are listed below:

LOG level (Access): none | acc-internal | default | acc-default\_plus\_referrals | acc-timing | acc-control-oids. For definitions of log levels, see the man page `log(5dsconf)`.

LOG level (Error): default | err-function-calls | err-search-args | err-connection | err-packets | err-search-filter | err-config-file | err-acl | err-ldbm | err-entry-parsing | err-housekeeping | err-replication | err-entry-cache | err-plugins | err-dsml | err-dsml-advanced. For definitions of log levels, see the man page `log(5dsconf)`.

PLG type and depends-on-type: database | extendedop | preoperation | postoperation | matchingrule | syntax | internalpreoperation | internalpostoperation | object | pwdstoragescheme | reverpwdstoragescheme | ldbmentryfetchstore | beprecommit | archive2ldbm

RAG transport-compression: no-compression | default-compression | best-speed | best-compression

SER dsml-client-auth-mode: client-cert-first | http-basic-only | client-cert-only

**ROLE**

Role of the replicated suffix , where *ROLE* is one of: master, hub, consumer.

**SUFFIX\_DN**

Suffix DN (Distinguished Name)

**Syntax Values**

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as 1w, 7d, 168h, 10080m, or 604800s. You can also specify one week as 1w0d0h0m0s.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## EXIT STATUS

The following exit status values are returned:

0  
Successful completion.

**non-zero**  
An error occurred.

## Examples

The following examples show how the dsconf command is used.

### Example 1 Create a Suffix

```
$ dsconf create-suffix -h host -p port
dc=example,dc=com
```

In this example, non-default ports are specified.

Check to see if the suffix has been created.

```
$ dsconf list-suffixes -h host -p port -v
```

### Example 2 Import LDIF Data into the Suffix

```
$ dsconf import -h host -p port
/opt/SUNWdsee7/resources/ldif/example.ldif dc=example,dc=com
```

### Example 3 Index an Attribute

In this example, the preferredLanguage attribute is going to be indexed.

1. Create an index entry for the attribute. By default, the index matching types are equity and presence.

```
$ dsconf create-index -h host -p port
dc=example,dc=com preferredLanguage
```

2. Check that the index entry has been created

```
$ dsconf get-index-prop -h host -p port
dc=example,dc=com preferredLanguage
```

3. Generate the index for the attribute.

```
$ dsconf reindex -h host -p port
-t preferredLanguage dc=example,dc=com
```

### Example 4 Back Up the Directory Server Data

```
$ dsconf backup -h host -p port
/tmp/backupArchiveDir
```

For complete backup procedures, see the *Directory Server Enterprise Edition Administration Guide*.

### Example 5 Monitor and Change Cache Size for a Suffix

1. Search for the string cache within the dsconf help properties:

```
$ dsconf help-properties | grep cache
```

2. Determine which property is most applicable and request more information. In the results of the preceding step, cache-mem-size seems to correspond. For additional information, use the verbose option:

```
$ dsconf help-properties -v | grep entry-cache-size
SUF entry-cache-size rw MEMORY_SIZE (Ex: 3G,2m,200k,10000b)
nsslapd-cachememsize
Cache size in term of memory space: (Default: 10M)
```

Use the following information to interpret the results above:

SUF

This property applies to a suffix.

entry-cache-size

The name of the property

rw

You have read and write access to the property when using `get-suffix-prop` and `set-suffix-prop`.

MEMORY\_SIZE

Use memory size values as described in this man page.

nsslapd-cachememsize

The attribute under `cn=config` to which this property applies.

(Default: 10M)

The default value of this property

**3. Determine the current value of entry-cache-size:**

```
$ dsconf get-suffix-prop -h host -p port
dc=example,dc=com entry-cache-size
entry-cache-size : 10M
```

**4. Change the value of entry-cache-size to 12M:**

```
$ dsconf set-suffix-prop -h host -p port
dc=example,dc=com entry-cache-size:12M
```

**5. Check that the value has been changed:**

```
$ dsconf get-suffix-prop -h host -p port
dc=example,dc=com entry-cache-size
entry-cache-size : 12M
```

**Example 6 Export to LDIF While Using Filters**

```
$ dsconf export -h host -p port
-f not-print-entry-ids -s ou=people,dc=example,dc=com
-s ou=contractors,dc=example,dc=com dc=example,dc=com
instance-path/ldif/export.ldif
```

This example shows a command that:

- Uses the flag `not-print-entry-ids` to request that entry IDs are not exported.
- Exports data from two suffixes `ou=people, dc=example, dc=com` and `ou=contractors, dc=example, dc=com` into one LDIF file `instance-path/ldif/export.ldif`.

**Example 7 Rotate the Access Log and Modify the Rotation Delay for the Access Log**

If you have a log which is getting very large, you can rotate the log. Rotation backs up the existing log file and creates a fresh log file. In this example, the access log is rotated.

1. Rotate the access log by using the command:

```
$ dsconf rotate-log-now -h host -p port access
```

2. You can now modify the delay between log rotations for the access log.

Find the property which sets maximum log size:

```
$ dsconf help-properties -v | grep LOG
```

The output from the previous command shows that the required property is `rotation-interval`.

3. To see the default setting for `rotation-interval`:

```
$ dsconf get-log-prop -h host -p port
access rotation-interval
```

The default is one day 1d.

4. To increase the rotation delay to two days, use the command:

```
$ dsconf set-log-prop -h host -p port
access rotation-interval:2d
```

### Example 8 Configure Replication in a Two-Master Topology

This procedure configures replication on a topology with two servers, and both are masters. Replication is configured first on one master, then on the second master. Master 1 is located on `server1.example:1389`. Master 2 is located on `server2.example:2389`.

1. On server 1: Create a suffix

```
$ dsconf create-suffix -h server1.example -p 1389
dc=example,dc=com
```

2. On Server 1: Populate the suffix with LDIF data

```
$ dsconf import -a -h server1.example -p 1389
/opt/SUNWdsee7/resources/ldif/Example.ldif dc=example,dc=com
```

If the import takes a long time, you can obtain status on the import operation using:

```
$ dsconf info -h server1.example -p 1389
```

or

```
$ dsconf show-task-status -h server1.example -p 1389 -v
```

Alternatively, you can view the status of the task while it is running by omitting the `-a` option in the command.

3. On Server 1: Enable replication on Master 1. This step assigns a replication role and ID to an existing suffix. It also sets the replication manager bind DN to the default replication manager DN.

```
$ dsconf enable-repl -h server1.example -p 1389
-d 1 master dc=example,dc=com
```

4. On server 2: Create a suffix

```
$ dsconf create-suffix -h server2.example -p 2389 dc=example,dc=com
```

5. On Server 2: Enable replication on Master 2. This step assigns a replication role and ID to an existing suffix. It also sets the replication manager bind DN to the default replication manager DN.

```
$ dsconf enable-repl -h server2.example -p 2389
-d 2 master dc=example,dc=com
```

6. On Server 1: Create a replication agreement from Master 1 to Master 2.

```
$ dsconf create-repl-agmt -h server1.example -p 1389
dc=example,dc=com server2.example:2389
```

7. On Server 2: Create a replication agreement from Master 2 to Master 1

```
$ dsconf create-repl-agmt -h server2.example -p 2389
dc=example,dc=com server1.example:1389
```

8. On Server 1: Check that the replication agreement status is OK.

```
$ dsconf show-repl-agmt-status -h server1.example -p 1389
dc=example,dc=com server2.example:2389
```

If the status is not OK, then accord the replication agreement.

```
$ dsconf accord-repl-agmt -h server1.example -p 1389
dc=example,dc=com server2.example:2389
```

9. On Server 1: From Master 1, initialize replication on Master 2. This step initializes Master 2 with the data contained in the suffix on Master 1 and starts replication.

```
$ dsconf init-repl-dest -h server1.example -p 1389
dc=example,dc=com server2.example:2389
```

The replication agreements in both directions are now active and replication is running.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dsadm\(1M\)](#)

## dsmig

Migrates a Directory Server Instance

### Synopsis

```
install-path/bin/dsmig  
subcommand [options] [operands]
```

### Description

The `dsmig` command is the migration command for a single Directory Server instance. Use the `dsmig` command with any of the subcommands described in this man page.

`dsmig` migrates a Directory Server 5.1 instance to a Directory Server 11.1.1.5.0 instance.

`dsmig` must be run from the local machine on which the new instance will be located. If the new instance exists, migration subcommands are carried out on that instance. If the new instance does not exist, `dsmig` creates the new instance with the parameters specified in the global options.

### Subcommands

The following subcommands are supported.

```
dsmig info
```

Displays information on the status of each migration step.

The format of the subcommand is:

```
dsmig info NEW_INSTANCE_PATH
```

```
dsmig migrate-all
```

Migrates the old instance to the new instance in a single step. This subcommand essentially combines the functionality of all the other subcommands.

The format of the subcommand is:

```
dsmig migrate-all [-R] [-N] [-c] [-j] [-e | -Z]  
[-D USER_DN] [-w PWD_FILE] [-v] OLD_INSTANCE_PATH  
NEW_INSTANCE_PATH
```

```
dsmig migrate-config
```

Migrates the configuration from the old instance to the new instance.

The format of the subcommand is:

```
dsmig migrate-config [-R] [-N] [-c] [-j] [-e | -Z]  
[-D USER_DN] [-w PWD_FILE] [-v] OLD_INSTANCE_PATH  
NEW_INSTANCE_PATH
```

```
dsmig migrate-data
```

Migrates the data from the old instance to the new instance. Migrating the change logs of the old instance is optional. Migration of the NetscapeRoot database must be specified as this database is not migrated by default.

The format of the subcommand is:

```
dsmig migrate-data [-R] [-N] [-v] OLD_INSTANCE_PATH
NEW_INSTANCE_PATH
```

```
dsmig migrate-schema
```

Migrates the schema from the old instance to the new instance.

The format of the subcommand is:

```
dsmig migrate-schema [-v] OLD_INSTANCE_PATH NEW_INSTANCE_PATH
```

```
dsmig migrate-security
```

Migrates the security files from the old instance to the new instance.

The format of the subcommand is:

```
dsmig migrate-security [-v] OLD_INSTANCE_PATH NEW_INSTANCE_PATH
```

## Global Options

The following options are global, and are applicable to all commands and subcommands.

```
-?
```

```
--help
```

Displays help information for a command or subcommand.

```
-i
```

```
--no-inter
```

Does not request confirmation before executing the command.

```
-p PORT
```

```
--port PORT
```

The port used for LDAP traffic. The default LDAP port is 389 or 1389.

```
-P SSL_PORT
```

```
--secure-port SSL_PORT
```

The port used for secure LDAP traffic. The default secure LDAP port is 636 or 1636.

## Subcommands Options

The following options are applicable to the subcommands where they are specified.

```
-c
```

```
--accept-cert
```

Specifies that confirmation should not be requested before accepting non-trusted server certificates.

```
-D USER_DN
```

```
--user-dn USER_DN
```

Defines the Directory Manager DN. The default is cn=Directory Manager.

`-e`  
`--unsecured`  
Specifies an unsecured connection over LDAP. If this option is not used, a secure LDAP connection using StartTLS is made by default.

`-j`  
`--reject-cert`  
Specifies that confirmation should not be requested before rejecting non-trusted server certificates (for this session only.)

`-N`  
`--netscapeRoot`  
Specifies that data for the "o=netscapeRoot" suffix must be migrated. If this option is used with the `migrate-config` subcommand, it refers to the suffix configuration data. If this option is used with the `migrate-data` subcommand, it refers to the netscapeRoot database. Using the option with the `migrate-all` subcommand means that neither the configuration data nor the database is migrated.

`-R`  
`--replication`  
Specifies that replication data should be migrated. If this option is used with the `migrate-config` subcommand, it refers to replication configuration data. If this option is used with the `migrate-data` subcommand, it refers to replication changelogs. Using the option with the `migrate-all` subcommand means that both replication configuration data and changelogs are migrated.

`-v`  
`--verbose`  
Specifies that additional messages are displayed.

`-w PWD_FILE`  
`--pwd-file PWD_FILE`  
The file from which the Directory Manager password should be read. If this option is not specified, the command prompts for the password.

`-Z`  
`--secured`  
Specifies an SSL connection over LDAP.

## Subcommand Operands

The following operands are applicable to the subcommands where they are specified.

`-OLD_INSTANCE_PATH`  
Specifies the path to the 5.x instance.

`-NEW_INSTANCE_PATH`  
Specifies the path to the 7.x instance.

## Exit Status

The following exit status values are returned:

0  
Successful completion.

**non-zero**  
An error occurred.

## Examples

The following examples show how the `dsmig` command is used.

### Example 1 Migrating the schema

```
$ dsmig migrate-schema -p 6389 -P 6636
  /local/ds52pX/slaped-old_52_instance /local/new_ds_instance/
```

This command migrates the schema from the old Directory Server instance to the new instance.

In this example, the LDAP port is specified as 6389, and the secure port is specified as 6636. If you do not specify port numbers, the default port numbers 389 and 636 (for root user) or 1389 and 1636 (for not-root user) are used. If you do not specify port numbers and the default port numbers are already being used, the `dsmig` command aborts.

### Example 2 Migrating the configuration

```
$ dsmig migrate-config -N /local/ds52pX/slaped-old_52_instance
  /local/new_ds_instance/
```

This command migrates the configuration from the old Directory Server instance to the new instance.

In this example, configuration data for the "o=netscapeRoot" suffix and replication configuration data are migrated.

### Example 3 Migrating the data

```
$ dsmig migrate-data -R -N /local/ds52pX/slaped-old_52_instance
  /local/new_ds_instance/
```

This command migrates the data from the old Directory Server instance to the new instance.

In this example, the replication change logs are not migrated. The NetscapeRoot database is migrated.

### Example 4 Migrating everything in a single step

```
$ dsmig migrate-all -R -N /local/ds52pX/slaped-old_52_instance
  /local/new_ds_instance/
```

In this example, replication configuration data is not migrated. Data for the "o=netscapeRoot" suffix is migrated.

### Example 5 Obtaining migration status information

```
$ dsmig info /local/new_ds_instance/
```

```
Old instance path   : /local/ds52pX/slaped-old_52_instance
New instance path   : /local/new_ds_instance
```

```
Schema Migration    : Completed
Security Migration  : Not completed
Config Migration    : Completed except NetscapeRoot and Replication configuration
Data Migration      : Not completed
```

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#)

---

## dsrepair

repair replicated directory entries

### Synopsis

```
install-path/bin/support_tools/dsrepair  
subcommand [options] arguments
```

### Description

The `dsrepair` command makes it possible to repair entries that prevent replication from preceeding normally. You must enable the replication repair plug-in to use the `dsrepair` command.

Use the `dsrepair` command only under the supervision of qualified support personnel.

The `dsrepair` command functions only in non-secure mode, with simple authentication.

The `dsrepair` command is not available on Windows systems, though it can be run against a Directory Server instance on a Windows system.

### Subcommands

The following subcommands are supported:

```
dsrepair add-entry [options] suffix entry.ldif
```

Adds the entry specified in the *entry.ldif* file to the specified *suffix*.

If an entry or tombstone entry having the same DN or `nsUniqueID` already exists, or if the parent entry does not exist, `add-entry` fails.

```
dsrepair begin-repair-mode [options] suffix
```

Puts the specified *suffix* in repair mode such that the only modify operations allowed are those performed using the `dsrepair` command.

Read operations continue normally while the *suffix* is in repair mode.

```
dsrepair delete-entry [options] suffix entry.ldif
```

Deletes the entry specified in the *entry.ldif* file from the specified *suffix*, and any tombstone associated with the entry.

If no entry or tombstone entry having the same DN or `nsUniqueID` already exists, or the specified entry has child entries, `delete-entry` fails.

```
dsrepair end-repair-mode [options] suffix
```

Returns the specified *suffix* from repair mode to its normal replication mode.

```
dsrepair replace-entry [options] suffix entry.ldif
```

Replaces an entry in the directory with the content specified in the *entry.ldif* file.

If no entry having the DN or `nsUniqueID` exists, or the entries returned for based on the DN and `nsUniqueID` are different, `replace-entry` fails.

dsrepair update-ruv [*options*] *suffix csn*  
Replaces the maximum change sequence number (CSN) in a replication update vector (RUV) element with the specified *csn* string.

## Options

The following options are supported:

**-D *bindDN***

**--bind-dn *bindDN***

Use the specified bind DN to authenticate to the directory server.

The default is `cn=Directory Manager`.

**-h *host***

**--hostname *host***

Contact the LDAP server on the specified host, which may be a host name or an IP address.

For example, when mapping the IPv4 address `192.168.0.99` to IPv6, pass the `-h` option with its argument as `-h ::ffff:192.168.0.99`.

The default is `localhost`.

**-p *port***

**--port *port***

Contact the LDAP server on the specified port.

The default is `389`.

**-w *file***

**--pwd-file *file***

Use the bind password in the specified *file*.

If this option is not specified, the `dsrepair` command prompts for the password.

## Exit Status

The following exit values are returned:

0

Successful completion.

**non-zero**

An error occurred.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

---

## dsutil

manage the administration of users or roles

### Synopsis

```
install-path/bin/dsutil  
subcommand [options] [operands]
```

### Description

The `dsutil` command activates or inactivates a user or a role. This command also allows to check the status of a user or of a role. Use the `dsutil` command with any of the subcommands described in this man page.

### Subcommands

The following subcommands are supported.

```
dsutil account-activate  
Activates a single user or users members of a role.
```

The format of the subcommand is:

```
dsutil account-activate DN
```

```
dsutil account-inactivate  
Inactivates a single user or users members of a role.
```

The format of the subcommand is:

```
dsutil account-inactivate DN
```

```
dsutil account-status  
Indicates whether a user or role is activated.
```

The format of the subcommand is:

```
dsutil account-status DN
```

### Global Options

The following options are global, and are applicable to all commands and subcommands.

```
-c  
--accept-cert  
Does not ask for confirmation before accepting non-trusted server certificates.
```

```
-?  
--help  
Displays this message or subcommand help message.
```

**-h HOST**  
**--hostname HOST**  
Connects to Directory Server on *HOST* (Default: \$DIRSERV\_HOST or localhost).

**-i**  
**--no-inter**  
Does not ask for confirmation.

**-p PORT**  
**--port PORT**  
Connects to Directory Server on *PORT* (Default: \$DIRSERV\_PORT or 389) .

**-w FILE**  
**--pwd-file FILE**  
Binds with password read from *FILE* (Default: \$LDAP\_ADMIN\_PWF or prompts for password)

**-j**  
**--reject-cert**  
Does not ask for confirmation before rejecting non-trusted server certificates (for this session only).

**-P PORT**  
**--secure-port PORT**  
Connects to Directory Server on secure port *PORT* for secure LDAP traffic. The default secure LDAP port is 636 or 1636.

**-e**  
**--unsecured**  
Connects over LDAP with no secure connection (Enabled if \$DIRSERV\_UNSECURED is set).

**-D USER\_DN**  
**--user-dn USER\_DN**  
Binds as *USER\_DN* (Default: \$LDAP\_ADMIN\_USER or cn=Directory Manager).

**-v**  
**--verbose**  
Displays extra information.

**-V**  
**--version**  
Displays dsutil version.

## Subcommand Operands

The following operands are applicable to the subcommands where they are specified.

**DN**  
DN of the user or role to be activated.

## Exit Status

The following exit status values are returned:

0  
Success

1	Syntax error
4	Operand does not exist
6	Operand invalid state Applicable only to <code>account-inactivate</code> and <code>account-activate</code> commands.
102	Activated Applicable only to the <code>account-status</code> command
103	Inactivated Applicable only to the <code>account-status</code> command
104	Inactivated through role Applicable only to the <code>account-status</code> command.
125	Internal error

## Examples

The following examples show how the `dsutil` command is used.

### Example 1 Inactivate a user

```
$ dsutil account-inactivate -p 1389 -w pwd-file \  
uid=bjensen,ou=People,dc=example,dc=com
```

This command inactivates the user whose DN is `uid=bjensen,ou=People,dc=example,dc=com`.

In this example, the LDAP port is specified as 1389. If you do not specify the port number, the default port number 389 is used.

### Example 2 Check the status of a user

```
$ dsutil account-status -p 1389 -w pwd-file \  
uid=bjensen,ou=People,dc=example,dc=com
```

This command checks whether the user whose DN is `uid=bjensen,ou=People,dc=example,dc=com` is active or inactive.

In this example, the LDAP port is specified as 1389. If you do not specify the port number, the default port number 389 is used.

### Example 3 Activate a user

```
$ dsutil account-activate -p 1389 -w pwd-file \  
uid=bjensen,ou=People,dc=example,dc=com
```

This command activates the user whose DN is `uid=bjensen,ou=People,dc=example,dc=com`.

In this example, the LDAP port is specified as 1389. If you do not specify the port number, the default port number 389 is used.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dsconf\(1M\)](#)

---

## idsktune

generate system tuning recommendations for running Directory Server Enterprise Edition server software

### Synopsis

```
./idsktune [-q] [-D] [-v] [-c] [-i install-path]
```

### Description

The `idsktune` command checks patch levels and kernel parameter settings for the system on which Directory Server or directory client applications run, making tuning recommendations as it performs the checks.

---

---

**Caution:** Information given by `idsktune` may not apply to the current version or platform upon which it is run.

---

---

Run the command as super user to obtain the widest range of tuning recommendations.

The `idsktune` command is delivered only with the zip distribution software.

The `idsktune` command suggests changes you make to the system, but does not itself make any changes. You must fix at least all `ERROR` conditions identified by the `idsktune` command.

The `idsktune` command reports as missing *all* patches recommended at the time of release and not installed on the system, even patches for packages not installed on the system.

### Options

The `idsktune` command supports the following options.

`-c`

Display tuning recommendations only for directory client applications.

Default is to display recommendations for both directory client applications and for Directory Server.

`-D`

Run in debug mode, displaying messages to showing commands the `idsktune` command runs internally, preceded by `DEBUG`.

`-i install-path`

Check the specified installation directory to ensure enough space is available.

`-q`

Run in quiet mode, reporting only information about key system prerequisites and essential settings.

`-v`

Display the version information about the build and exit.

## Extended Description

The `idsktune` command verifies and reports on the following settings depending on the underlying system.

### Operating system and kernel versions

- Solaris and Red Hat version numbers
- Solaris kernel build date
- Solaris, and HP-UX patches

### Memory and disk space

- Physical memory size
- Swap space or swap partition size
- Memory resource limits
- File descriptor resource limits

### Scheduler settings

- Maximum threads per process for HP-UX
- Maximum files for HP-UX

### TCP settings

Many of the following are system-specific TCP tuning settings.

- Listen backlog queue size
- `tcbhashsize`, `tcbhashnum` and `tcp_msl`
- `sominconn` and `somaxconn`
- `ipport_userreserved_min`
- `tcp_close_wait_interval` and `tcp_time_wait_interval`
- `tcp_keepalive_interval`
- `tcp_max_listen`
- `tcp_conn_request_max`
- `tcp_conn_req_max_q` and `tcp_conn_req_max_q0`
- `tcp_rexmit_interval_initial`
- `net.inet.ip.portrange.hifirst` and `tcp_smallest_anon_port`
- `tcp_slow_start_initial`
- `net.inet.tcp.delayed_ack` and `tcp_deferred_ack_interval`
- `link_speed` on `/dev/hme`

Tuning system settings, especially network stack settings, involves considering potentially not just directory applications and Directory Server, but also other applications running on the system and in the environment. In general, however, implementing the recommendations optimizes directory performance whether the system is dedicated to Directory Server or shared with other applications.

## Exit Status

The `idsktune` command exits with status 0 if it completes successfully and no ERRORS are found. Otherwise, it exists with non-zero status.

---

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	Zip distribution only
Stability Level	Evolving

## replcheck

diagnose and repair some replication failures

### Synopsis

```
install-path/bin/support_tools/replcheck  
subcommand options
```

### Description

The `replcheck` command allows you to diagnose and repair a replication halt. Use the `replcheck` command with one of the options described in this man page.

Use the `replcheck` command only under the supervision of qualified support personnel.

### Subcommands

The following subcommands are supported:

```
replcheck diagnose [-D DN] [-w PW_FILE] [-L LOG_DIR] [-v] TOPOLOGY_FILE
```

Diagnoses the cause of the replication breakage and summarizes the proposed repair actions.

```
replcheck fix [-D DN] [-w PW_FILE] [-L LOG_DIR] [-v] TOPOLOGY_FILE
```

Fixes the replication breakage.

### Global Options

The following options are global, and are applicable to all commands and subcommands.

`--?`

`--help`

Displays help information for a command or subcommand.

`-V--version`

Displays the current version of `replcheck`. The version is provided in the format *year.monthday.time*. So version number 2007.1204.0035 was built on December 4th, 2007 at 00h35. If the components used by `replcheck` are not aligned, the version of each individual component is displayed.

### Subcommands Options

The following options are applicable to the subcommands where they are specified.

`-D bindDN`

`--bind-dn bindDN`

Use the specified bind DN to authenticate to the directory server.

The default is `cn=Directory Manager`.

**-L *dir-path***

**--log-dir *dir-path***

Creates a `replcheck.log` log file in this directory.

If this option is not specified, the `replcheck.log` log file will be created in the home directory.

**-v**

**--verbose**

Displays additional information.

**-w *password-file***

**--pwd-file *file***

Use the bind password in the specified *password-file*.

If this option is not specified, the `replcheck` command prompts for the password.

## Operands

The following operands are supported:

### **TOPOLOGY\_FILE**

Specifies the path to the file that describes the replication topology.

This file contains one record for each line in the following format:

*hostname:port:suffix\_dn[:label]*. The optional *label* field provides a name that appears in any messages that are displayed or logged. If you do not specify a *label*, the *hostname:port* are used instead.

For example, the following topology file describes a replication topology consisting of two hosts:

```
host1:389:dc=example,dc=com:Paris
host2:489:dc=example,dc=com:New York
```

---



---

**Note:** The `replcheck` command must access the servers in the topology using their non-secure ports. The topology file can not specify an SSL port.

---



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## Extended Description

I

The `replcheck` command diagnoses and repairs a replication halt. The `replcheck diagnose` subcommand compares the RUVs for each of the servers in your replication topology to determine if the masters are synchronized. If the search results show that all of the consumer replica in-memory RUVs are evolving on time or not evolving but equal to those on the supplier replicas, the tool will conclude that a replication halt is not occurring.

However, if the command determines that the consumer RUVs do not change at all over time, then the `replcheck diagnose` subcommand displays the repair operation it would do and exits without making the repair. Then, you can launch the `replcheck fix` subcommand to repair the replication halt. For example, the command determines that replication is blocked on the entry associated with CSN 24 if a supplier has a CSN of 40, while the consumer has a CSN of 23 that does not evolve at all over time.

The `replcheck` command can repair two types of replication halt:

- The entry at which replication is halted, in our previous example CSN 24, exists on the supplier but not on the consumer. The `replcheck` command takes the entry from the instance that is at least more up-to-date than the consumer and then pushes it to the consumer.
- The entry at which replication is halted, CSN 24, is unknown to supplier A. This can occur if a server is reinitialized or a replication agreement is deleted, resulting in a consumer becoming out of date and breaking replication. The `replcheck` command looks at other servers in the topology to see if the CSN is recognized. If it finds the CSN on a new supplier, such as supplier B, it creates a replication agreement with supplier B and lets replication send the entry, CSN 24, to the consumer.

## Exit Status

The following exit status values are returned:

0  
Successful completion.

**non-zero**  
An error occurred.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

---

---

## Directory Server Configuration

This section describes Directory Server configuration properties. You set these properties with the `dsconf` command.

## Intro\_3DScnf

introduction to Directory Server configuration properties

### Description

This section describes Directory Server configuration properties. You set these properties with the `dsconf` command.

This section also describes legacy Directory Server configuration attributes. You set the attributes by using the `ldapmodify` command on entries under `cn=config`.

### LIST OF CONFIGURATION ELEMENTS

This reference manual section includes the following pages. Many Directory Server properties exist. The properties that do not appear here are however also covered in the following pages.

**[all-ids-threshold\(5DSCNF\)](#)**

Maximum number of values per index key in an index list

**[controls\(5DSCNF\)](#)**

LDAP controls handled by Directory Server

**[desc\(5DSCNF\)](#)**

Optional description of configuration element

**[ds-hdsml-clientauthmethod\(5DSCNF\)](#)**

DSML SSL client authentication

**[ds-hdsml-dsmlschemalocation\(5DSCNF\)](#)**

DSMLv2 schema location

**[ds-hdsml-iobuffersize\(5DSCNF\)](#)**

buffer size for DSML requests

**[ds-hdsml-poolmaxsize\(5DSCNF\)](#)**

maximum number of DSML parsers

**[ds-hdsml-poolsize\(5DSCNF\)](#)**

default number of DSML parsers

**[ds-hdsml-port\(5DSCNF\)](#)**

DSML port number

**[ds-hdsml-requestmaxsize\(5DSCNF\)](#)**

maximum DSML request size

**[ds-hdsml-responsemsgsize\(5DSCNF\)](#)**

maximum size of DSML response

**[ds-hdsml-rooturl\(5DSCNF\)](#)**

root URL for DSML

**[ds-hdsml-secureport\(5DSCNF\)](#)**

DSML SSL port number

**ds-hdsm1-soapschemalocation(5DSCONF)**

SOAP schema location for DSML

**ds-maxheaphigh(5DSCONF)**

Specify soft and hard thresholds for heap memory use

**ds-maxheaplow(5DSCONF)**

Specify soft and hard thresholds for heap memory use

**ds5AgreementEnable(5DSCONF)**

Whether replication is enabled

**ds5BeginReplicaAcceptUpdates(5DSCONF)**

Accept, rather than refer, update operations

**ds5LastInitTimeStamp(5DSCONF)**

Time stamp for last initialization

**ds5ReferralDelayAfterInit(5DSCONF)**

Accept update operations after the specified delay

**ds5ReplicaAutomaticInit(5DSCONF)**

Automatically initialize dedicated consumer

**ds5ReplicaConsumerTimeout(5DSCONF)**

Timeout for replication operations

**ds5ReplicaTransportCompressionLevel(5DSCONF)**

Compression used for replication

**ds5ReplicaTransportConcurrencyLevel(5DSCONF)**

Throttle replication concurrency

**ds5ReplicaTransportGroupSize(5DSCONF)**

Grouping size for replication updates

**ds5ReplicaTransportGrpPktSize(5DSCONF)**

Effective group packet size

**ds5ReplicaTransportWindowSize(5DSCONF)**

Window size for replication updates

**ds6ruv(5DSCONF)**

Replication update vector, version 6

**dsChangeLogMaxAge(5DSCONF)**

Maximum age of change log entries

**dsChangeLogMaxentries(5DSCONF)**

Maximum number of change log records

**dsFilterSPConfigchecksum(5DSCONF)**

Checksum for partial replication

**dsReplFractionalExclude(5DSCONF)**

Attribute types to exclude from replication

**dsReplFractionalInclude(5DSCONF)**

Attribute types to include in replication

**enabled(5DSCONF)**

Whether the configuration element is operational

**encryption(5DSCONF)**

DS attribute encryption (ETA) properties

**extended-operations(5DSCONF)**

LDAP extended operations handled by Directory Server

**heapmaxhighhits(5DSCONF)**

Counts the number of times ds-maxheaphigh or ds-maxheaplow has been exceeded

**heapmaxlowhits(5DSCONF)**

Counts the number of times ds-maxheaphigh or ds-maxheaplow has been exceeded

**index(5DSCONF)**

DS attribute indexing (IDX) properties

**log(5DSCONF)**

DS logging configuration (LOG) properties

**moddn-enabled(5DSCONF)**

Whether the server accepts mod DN operations

**nsAbandonedSearchCheckInterval(5DSCONF)**

interval between checks for abandoned chaining operations

**nsActiveChainingComponents(5DSCONF)**

components using chaining

**nsBindConnectionsLimit(5DSCONF)**

maximum TCP connections for chaining

**nsBindRetryLimit(5DSCONF)**

maximum bind attempts for chaining suffix

**nsBindTimeout(5DSCONF)**

timeout for chaining binds

**nsCheckLocalACI**

evaluate access control on chained suffix

**nsConcurrentBindLimit(5DSCONF)**

maximum concurrent binds on TCP connection for chaining

**nsConcurrentOperationsLimit(5DSCONF)**

maximum concurrent operations for chaining

**nsConnectionLife(5DSCONF)**

connection lifetime for chaining

**nsds50ruv(5DSCONF)**

Replication update vector, version 5

**nsds5BeginReplicaRefresh(5DSCONF)**  
Force initialization of the consumer

**nsDS5Flags(5DSCONF)**  
Change logging and referral flags

**nsDS5ReplicaAutoReferral(5DSCONF)**  
Reserved for internal use

**nsDS5ReplicaBindDN(5DSCONF)**  
Bind DN for replication operations

**nsDS5ReplicaBindMethod(5DSCONF)**  
Bind protocol used for replication

**nsDS5ReplicaChangeCount(5DSCONF)**  
Number of entries in the change log

**nsds5replicaChangesSentSinceStartup(5DSCONF)**  
Number of updates since startup

**nsDS5ReplicaCredentials(5DSCONF)**  
Credentials for replication operations

**nsDS5ReplicaHost(5DSCONF)**  
Host name of consumer

**nsDS5ReplicaId(5DSCONF)**  
Replica identification number

**nsds5replicaLastInitEnd(5DSCONF)**  
Time of last initialization

**nsds5replicaLastInitStart(5DSCONF)**  
Time of last initialization

**nsds5replicaLastInitStatus(5DSCONF)**  
Replica initialization status

**nsds5replicaLastUpdateEnd(5DSCONF)**  
Time of last update

**nsds5replicaLastUpdateStart(5DSCONF)**  
Time of last update

**nsds5replicaLastUpdateStatus(5DSCONF)**  
Replica update status

**nsDS5ReplicaName(5DSCONF)**  
Unique replica identifier

**nsDS5ReplicaPort(5DSCONF)**  
Port number on which consumer listens

**nsDS5ReplicaPurgeDelay(5DSCONF)**  
Maximum time to keep tombstones

**nsDS5ReplicaReferral(5DSCONF)**

Referrals for a replica

**nsDS5ReplicaRoot(5DSCONF)**

Base DN for replication

**nsDS5ReplicatedAttributeList(5DSCONF)**

Attributes not to replicate

**nsds5ReplicaTimeout(5DSCONF)**

Timeout for replication operations

**nsDS5ReplicaTombstonePurgeInterval(5DSCONF)**

Time interval between tombstone purge operations

**nsDS5ReplicaTransportInfo(5DSCONF)**

Transport used for replication

**nsDS5ReplicaType(5DSCONF)**

Role of the replica

**nsds5replicaUpdateInProgress(5DSCONF)**

Indicate whether or not a replication schedule update is in progress

**nsDS5ReplicaUpdateSchedule(5DSCONF)**

When replication is scheduled

**nsDS5Task(5DSCONF)**

Internal replication tasks

**nsFarmServerURL(5DSCONF)**

LDAP URL for chaining farm server

**nshoplimit(5DSCONF)**

maximum hops for chaining

**nsIndexType(5DSCONF)**

type of index

**nsLookthroughLimit\_5dsconf(5DSCONF)**

maximum number of entries checked during search

**nsMatchingRule(5DSCONF)**

collation order OID for international index

**nsMaxResponseDelay(5DSCONF)**

maximum delay for chained response

**nsMaxTestResponseDelay(5DSCONF)**

maximum delay to test chaining response

**nsMultiplexorBindDN(5DSCONF)**

bind DN for chaining multiplexor

**nsMultiplexorCredentials(5DSCONF)**

bind password for chaining multiplexor

**nsOperationConnectionsLimit(5DSCONF)**

maximum number of LDAP connections for chaining

**nsProxiedAuthorization(5DSCONF)**

disable proxy authorization for chaining

**nsReferralOnScopedSearch(5DSCONF)**

referrals for chained searches

**nsslapd-accesscontrol(5DSCONF)**

Turn access control on and off

**nsslapd-accesslog(5DSCONF)**

Specify the path and filename of the access | audit | error log

**nsslapd-accesslog-list(5DSCONF)**

Provide a list of log files used in access, audit, or error log rotation.

**nsslapd-accesslog-logbuffering(5DSCONF)**

Determines whether the server writes access log entries directly to disk

**nsslapd-accesslog-logexpirationtime(5DSCONF)**

Specify the maximum age that an access, audit, or error log file is allowed to reach before it is deleted

**nsslapd-accesslog-logexpirationtimeunit(5DSCONF)**

Determines the unit of the log expiration time

**nsslapd-accesslog-logging-enabled(5DSCONF)**

Enable or disable access, audit, or error logging

**nsslapd-accesslog-logmaxdiskspace(5DSCONF)**

Specify the maximum amount of disk space in megabytes that the access, audit or error logs are allowed to consume

**nsslapd-accesslog-logminfreediskspace(5DSCONF)**

Specify the minimum amount of free disk space in megabytes that is allowed before an access, audit, or error log is deleted

**nsslapd-accesslog-logrotationtime(5DSCONF)**

Specify the time interval, the time of the day, and the minimum file size for rotation of the access log, audit log, or error log

**nsslapd-accesslog-logrotationtimeunit(5DSCONF)**

Specify the unit for the time-interval part of the nsslapd-access | audit | errorlog-logrotationtime attribute

**nsslapd-accesslog-maxlogsize(5DSCONF)**

Specify the maximum size of the access, audit, or error log in megabytes

**nsslapd-accesslog-maxlogsperdir(5DSCONF)**

Specify the total number of access, audit, or error logs that can be contained in the access, audit, or error logs directory

**nsslapd-accesslog-permissions(5DSCONF)**

Specify the permissions for the log files

**nsslapd-allidsthreshold(5DSCNF)**

Maximum number of values per index key in an index list

**nsslapd-attribute-name-exceptions(5DSCNF)**

allow non-standard characters in attribute names

**nsslapd-backend(5DSCNF)**

suffix used to process requests

**nsslapd-berbufsize(5DSCNF)**

initial BER buffer size

**nsslapd-cachememsize(5DSCNF)**

cache memory size

**nsslapd-cachesize(5DSCNF)**

cache size

**nsslapd-certmap-basedn(5DSCNF)**

certificate map search base

**nsslapd-changelogdir(5DSCNF)**

changelog path

**nsslapd-changelogmaxage(5DSCNF)**

maximum changelog age

**nsslapd-changelogmaxentries(5DSCNF)**

maximum number of changelog records

**nsslapd-config(5DSCNF)**

DN of the server configuration

**nsslapd-db-checkpoint-interval(5DSCNF)**

database checkpoint interval

**nsslapd-db-circular-logging(5DSCNF)**

circulate through transaction logs

**nsslapd-db-durable-transactions(5DSCNF)**

when to write transactions to disk

**nsslapd-db-home-directory(5DSCNF)**

database file location

**nsslapd-db-idl-divisor(5DSCNF)**

number of blocks per database page

**nsslapd-db-locks(5DSCNF)**

number of database locks used

**nsslapd-db-logbuf-size(5DSCNF)**

database log buffer size

**nsslapd-db-logdirectory(5DSCNF)**

database transaction log directory

**nsslapd-db-logfile-size(5DSCONF)**

maximum size of single database log file

**nsslapd-db-page-size(5DSCONF)**

size of database pages in bytes

**nsslapd-db-transaction-batch-val(5DSCONF)**

number of database transactions to batch before commit

**nsslapd-db-tx-max(5DSCONF)**

maximum concurrent database transactions

**nsslapd-dbcachesize(5DSCONF)**

database cache size

**nsslapd-dbncache(5DSCONF)**

split database cache

**nsslapd-directory(5DSCONF)**

absolute path to database instance

**nsslapd-disk-full-threshold(5DSCONF)**

full disk threshold to limit database updates

**nsslapd-disk-low-threshold(5DSCONF)**

low disk threshold to limit database updates

**nsslapd-distribution-funct(5DSCONF)**

distribution plug-in function

**nsslapd-distribution-plugin(5DSCONF)**

distribution plug-in library

**nsslapd-dn-cachememsize(5DSCONF)**

DN cache memory size

**nsslapd-dn-cachesize(5DSCONF)**

DN cache size

**nsslapd-ds4-compatible-schema(5DSCONF)**

allow 4.x style schema definitions

**nsslapd-enquote-sup-oc(5DSCONF)**

enable superior object class enquoting

**nsslapd-exclude-from-export(5DSCONF)**

attributes excluded during database export

**nsslapd-groupevalnestlevel(5DSCONF)**

level of access control nesting for group evaluations

**nsslapd-groupevalsizelimit(5DSCONF)**

Maximum number of members in the static group used for ACI evaluation.

**nsslapd-idletimeout(5DSCONF)**

idle timeout

**nsslapd-import-cachesize(5DSCNF)**

database cache size for import

**nsslapd-infolog-area(5DSCNF)**

Specify the component for which logging information should be provided.

**nsslapd-infolog-level(5DSCNF)**

Specify the level of logging information that should be returned for the server component defined by the nsslapd-infolog-area attribute

**nsslapd-instancedir(5DSCNF)**

instance path

**nsslapd-ioblocktimeout(5DSCNF)**

IO block time out

**nsslapd-lastmod(5DSCNF)**

track modification time

**nsslapd-listenBacklog(5DSCNF)**

maximum number of pending connections

**nsslapd-listenhost(5DSCNF)**

listen to IP address

**nsslapd-localhost(5DSCNF)**

local host system name

**nsslapd-localuser(5DSCNF)**

local user name

**nsslapd-maxbersize(5DSCNF)**

maximum message size

**nsslapd-maxconnections(5DSCNF)**

maximum number of connections

**nsslapd-maxdescriptors(5DSCNF)**

maximum file descriptors

**nsslapd-maxpsearch(5DSCNF)**

maximum number of persistent searches

**nsslapd-maxthreadsperconn(5DSCNF)**

maximum threads per connection

**nsslapd-mode(5DSCNF)**

database index file permissions

**nsslapd-nagle(5DSCNF)**

delay sending responses

**nsslapd-plugin(5DSCNF)**

plug-in legacy configuration

**nsslapd-port(5DSCNF)**

LDAP port number

---

**nsslapd-privatenamespaces(5DSCONF)**  
private naming contexts

**nsslapd-pwdgeneratorpwdlen(5DSCONF)**  
Generated password length

**nsslapd-readonly(5DSCONF)**  
read only mode

**nsslapd-referral(5DSCONF)**  
referral

**nsslapd-referralmode(5DSCONF)**  
referral mode

**nsslapd-require-index(5DSCONF)**  
allow only indexed searches

**nsslapd-reservedescriptors(5DSCONF)**  
reserve file descriptors

**nsslapd-rootdn(5DSCONF)**  
Directory Manager DN

**nsslapd-rootpw(5DSCONF)**  
Directory Manager password

**nsslapd-rootpwstoragescheme(5DSCONF)**  
root password storage scheme

**nsslapd-schema-repl-useronly(5DSCONF)**  
replicate only user-defined schema elements

**nsslapd-schemacheck(5DSCONF)**  
schema checking

**nsslapd-search-tune(5DSCONF)**  
Skip check for modifications during search before returning entries

**nsslapd-securelistenhost(5DSCONF)**  
listen to IP address for secure connections

**nsslapd-securePort(5DSCONF)**  
encrypted LDAP port number

**nsslapd-security(5DSCONF)**  
security

**nsslapd-sizelimit(5DSCONF)**  
size limit

**nsslapd-state(5DSCONF)**  
how a suffix handles operations

**nsslapd-suffix(5DSCONF)**  
chained suffix identifier

- nsslapd-threadnumber(5DSCNF)**  
thread number
- nsslapd-timelimit(5DSCNF)**  
time limit
- nsslapd-versionstring(5DSCNF)**  
version string
- nsSSL2(5DSCNF)**  
SSL v2 support
- nsSSL3(5DSCNF)**  
SSL v3 support
- nsSSL3ciphers(5DSCNF)**  
SSL encryption ciphers
- nsSSLClientAuth(5DSCNF)**  
use SSL client authentication
- nsSSLServerAuth(5DSCNF)**  
use SSL server authentication
- nsSSLSessionTimeout(5DSCNF)**  
SSL session time out
- nsState(5DSCNF)**  
Clock state for replication
- nsSystemIndex(5DSCNF)**  
identify index as system index
- nsTransmittedControls(5DSCNF)**  
chained LDAP controls
- plugin(5DSCNF)**  
DS plug-in configuration (PLG) properties
- polling-thread-count(5DSCNF)**  
Number of threads that are polling connections
- referral-url(5DSCNF)**  
Whether the server accepts mod DN operations
- repl-agmt(5DSCNF)**  
DS replication agreement configuration (RAG) properties
- repl-priority(5DSCNF)**  
DS prioritized replication configuration (RPR) properties
- replication(5DSCNF)**  
replication configuration
- replPriorityAttribute(5DSCNF)**  
Attribute to replicate with high priority

**replPriorityBaseDN(5DSCONF)**

Replicate changes under this base with high priority

**replPriorityBindDN(5DSCONF)**

Replicate changes performed by this user with high priority

**replPriorityType(5DSCONF)**

Operation type to replicate with high priority

**server(5DSCONF)**

DS server instance configuration (SER) properties

**suffix(5DSCONF)**

DS suffix configuration (SUF) properties

**useAuthzIdForAuditAttrs(5DSCONF)**

record proxied authorization information

---

## algorithm

DS attribute encryption (ETA) properties

### Description

Directory Server allows you to encrypt individual attributes to protect sensitive information stored in the directory. The encryption does not prevent client applications from reading the attributes. Instead it works at the database index file level to prevent users with access to read database index files from being able to search through the indexes for sensitive information.

For example, before attribute encryption is configured for `uid` attributes, a user with read access to database index files could easily find out that `bjensen` is a `uid` attribute value:

```
$ strings example_uid.db3 | grep bjensen
=bjensen
$
```

Once `uid` attributes are encrypted, the job is not so easy:

```
$ strings example_uid.db3 | grep bjensen
$
```

Notice however that encrypted RDN values are not fully hidden. Instead they appear in clear in the DN index:

```
$ strings example_entrydn.db3 | grep bjensen
=uid=bjensen,ou=people,dc=example,dc=com
=uid=bjensen,ou=people,dc=example,dc=com
$
```

### PROPERTY: algorithm

Characteristic	Value
Syntax	<code>des des3 rc2 rc4 aes128 aes256 camellia128 camellia256</code>
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

Directory Server uses a cipher to encrypt a specified attribute in a given suffix. This property specifies the cipher used.

The following property values are supported:

```
des
DES block cipher
```

des3  
Triple-DES block cipher

rc2  
RC2 block cipher

rc4  
RC4 stream cipher

aes128  
AES 128-bit block cipher

aes256  
AES 256-bit block cipher

camellia128  
CAMELLIA 128-bit block cipher

camellia256  
CAMELLIA 256-bit block cipher

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

### ATTR\_NAME

A valid attribute type name such as `cn` or `objectClass`.

### BOOLEAN

`true` or `false`.

### DN

A valid distinguished name such as `ou=People,dc=example,dc=com`.

### DURATION

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

### EMAIL\_ADDRESS

A valid e-mail address.

### HOST\_NAME

An IP address or host name.

### INTEGER

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

---

TIME

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dsconf\(1M\)](#), [desc\(5DSCONF\)](#)

## all-ids-threshold

Maximum number of values per index key in an index list

### Description

Characteristic	Value
Syntax	INTEGER or inherited
Default Value	4000 or inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of values per index key that the server maintains in an index list. It can be set for an entire server instance, for an entire suffix, and for an individual attribute type. You can also set individual thresholds for equality, presence, and substring indexes.

When you do not set specific threshold values, the values at each level are inherited from the more global values. Thus the default suffix threshold value is inherited from the setting for the server instance; the default attribute type value from the setting for the suffix. In addition to inheritance of default settings, this property handles settings as follows.

`inherited`

The threshold value is inherited from the more global setting.

`<2000`

The threshold value is rounded up to 2000.

`>2000`

The setting is used as a guaranteed minimum threshold. Because of internal mechanisms, the real value can be slightly more than the specified value.

After you modify this property for an entire server instance or an entire suffix, import all data from LDIF to reinitialize all indexes.

If you modify this property only for a specific attribute, it is usually most expedient to use the `dsconf reindex` command on the attribute for which you changed the threshold. The `dsconf reindex` command runs a directory task to reindex the attribute while the server instance is online.

The system indexes cannot have the `all-ids-threshold` property modified for a single attribute type, but for the whole index.

### Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

`ATTR_NAME`

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

true or false.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form `hhmm-hhmm 0123456`, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid `cn` (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus `640` specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dsconf\(1M\)](#), [index\(5DSCONF\)](#), [server\(5DSCONF\)](#), [suffix\(5DSCONF\)](#)

## all-ids-threshold-eq

DS attribute indexing (IDX) properties

### Description

Directory Server can index attributes, making them faster to search. The `dsconf` command helps you configure five of the six supported index types:

1. Equality indexes to determine expediently whether an attribute value is equal to a specified value
2. Presence indexes to determine whether a specified attribute has any values
3. Substring indexes to determine whether a specified attribute has values containing a specified string, also used to compare regular expressions to attribute values
4. Approximate indexes, based on metaphone approximation and useful for English language strings only, to determine whether a specified attribute has any values that sound like the specified string
5. International indexes, also called matching rule indexes, to expedite sorting and searching in accordance with the language rules of a particular locale

The `dsconf` command does not help you configure virtual list view, also known as browsing, indexes.

The `dsconf` command does help you assign all IDs threshold values to indexes. As the number of entries and attribute values grows in a directory, the number of attribute values to index also grows, as does therefore the size of the indexes. In some deployments a server can end up maintaining index lists so large that the cost of rebuilding an index when attributes are modified or added outweighs the benefit the index provides for searches. All IDs thresholds limit the growth of large indexes by defining the maximum number of entry identifiers Directory Server maintains in an index list. You can define all IDs thresholds for individual indexes and for some types of indexes.

Some indexes are maintained by the server for its own use. These are called system indexes. In general, do not modify or remove systems indexes; such modifications could have severe repercussions on performance.

See *Directory Server Indexing in Reference for Oracle Directory Server Enterprise Edition* for further details about indexing.

### PROPERTY: all-ids-threshold

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of entry IDs the server maintains in an index list for the specified attribute type. By default its value is inherited from the `all-ids-threshold` setting for the suffix, whose default value in turn is inherited from the `all-ids-threshold` setting for the server, which by default is 4000. In addition to inheritance of default settings, this property handles settings as follows:

`inherited`

The threshold is inherited from the more global setting.

`<2000`

The threshold value is rounded up to 2000.

`>2000`

The setting is used as a guaranteed minimum threshold. Because of internal mechanisms, the real value can be slightly more than the specified value.

After you modify this property, reindex the attribute for which you changed the threshold. For example:

```
$ dsconf set-index-prop dc=example,dc=com uid all-ids-threshold:5000
$ dsconf reindex -t uid dc=example,dc=com
```

```
## example: Indexing attribute: uid
## example: Finished indexing.
```

```
Task completed (slapd exit code: 0).
```

```
$
```

### PROPERTY: `all-ids-threshold-eq`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for equality indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

### PROPERTY: `all-ids-threshold-pres`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for presence indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

**PROPERTY:** `all-ids-threshold-sub`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for substring indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

**PROPERTY:** `approx-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether approximate indexes are maintained for the specified attribute type. You cannot set an all IDs threshold value for approximate indexes.

**PROPERTY:** `desc`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

Use this optional property to provide a short description of the index configuration.

**PROPERTY:** eq-enabled

Characteristic	Value
Syntax	on off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether equality indexes are maintained for the specified attribute type.

**PROPERTY:** matching-rule

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the matching rule indexes maintained for the specified attribute type.

Values for this property must be valid collation order object identifiers (OIDs). See *Directory Server Internationalized Directory in Directory Server Enterprise Edition Reference* for the OIDs corresponding to supported locales.

**PROPERTY:** pres-enabled

Characteristic	Value
Syntax	on off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether presence indexes are maintained for the specified attribute type.

**PROPERTY:** sub-enabled

Characteristic	Value
Syntax	on off
Default Value	off

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether substring indexes are maintained for the specified attribute type.

**PROPERTY:** `system`

Characteristic	Value
Syntax	<code>true false</code>
Default Value	<code>false</code>
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property identifies whether the specified index is a system index, and therefore should be left alone.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike **DURATION** properties, **MEMORY\_SIZE** properties cannot combine multiple specifiers. However, **MEMORY\_SIZE** properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [all-ids-threshold\(5DSCONF\)](#), [desc\(5DSCONF\)](#)

## all-ids-threshold-pres

DS attribute indexing (IDX) properties

### Description

Directory Server can index attributes, making them faster to search. The `dsconf` command helps you configure five of the six supported index types:

1. Equality indexes to determine expediently whether an attribute value is equal to a specified value
2. Presence indexes to determine whether a specified attribute has any values
3. Substring indexes to determine whether a specified attribute has values containing a specified string, also used to compare regular expressions to attribute values
4. Approximate indexes, based on metaphone approximation and useful for English language strings only, to determine whether a specified attribute has any values that sound like the specified string
5. International indexes, also called matching rule indexes, to expedite sorting and searching in accordance with the language rules of a particular locale

The `dsconf` command does not help you configure virtual list view, also known as browsing, indexes.

The `dsconf` command does help you assign all IDs threshold values to indexes. As the number of entries and attribute values grows in a directory, the number of attribute values to index also grows, as does therefore the size of the indexes. In some deployments a server can end up maintaining index lists so large that the cost of rebuilding an index when attributes are modified or added outweighs the benefit the index provides for searches. All IDs thresholds limit the growth of large indexes by defining the maximum number of entry identifiers Directory Server maintains in an index list. You can define all IDs thresholds for individual indexes and for some types of indexes.

Some indexes are maintained by the server for its own use. These are called system indexes. In general, do not modify or remove systems indexes; such modifications could have severe repercussions on performance.

See *Directory Server Indexing in Reference for Oracle Directory Server Enterprise Edition* for further details about indexing.

### PROPERTY: all-ids-threshold

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of entry IDs the server maintains in an index list for the specified attribute type. By default its value is inherited from the `all-ids-threshold` setting for the suffix, whose default value in turn is inherited from the `all-ids-threshold` setting for the server, which by default is 4000. In addition to inheritance of default settings, this property handles settings as follows:

`inherited`

The threshold is inherited from the more global setting.

`<2000`

The threshold value is rounded up to 2000.

`>2000`

The setting is used as a guaranteed minimum threshold. Because of internal mechanisms, the real value can be slightly more than the specified value.

After you modify this property, reindex the attribute for which you changed the threshold. For example:

```
$ dsconf set-index-prop dc=example,dc=com uid all-ids-threshold:5000
$ dsconf reindex -t uid dc=example,dc=com
```

```
## example: Indexing attribute: uid
## example: Finished indexing.
```

```
Task completed (slapd exit code: 0).
$
```

### PROPERTY: `all-ids-threshold-eq`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for equality indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

### PROPERTY: `all-ids-threshold-pres`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for presence indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

**PROPERTY:** `all-ids-threshold-sub`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for substring indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

**PROPERTY:** `approx-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether approximate indexes are maintained for the specified attribute type. You cannot set an all IDs threshold value for approximate indexes.

**PROPERTY:** `desc`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

Use this optional property to provide a short description of the index configuration.

**PROPERTY:** eq-enabled

Characteristic	Value
Syntax	on off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether equality indexes are maintained for the specified attribute type.

**PROPERTY:** matching-rule

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the matching rule indexes maintained for the specified attribute type.

Values for this property must be valid collation order object identifiers (OIDs). See *Directory Server Internationalized Directory in Directory Server Enterprise Edition Reference* for the OIDs corresponding to supported locales.

**PROPERTY:** pres-enabled

Characteristic	Value
Syntax	on off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether presence indexes are maintained for the specified attribute type.

**PROPERTY:** sub-enabled

Characteristic	Value
Syntax	on off
Default Value	off

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether substring indexes are maintained for the specified attribute type.

**PROPERTY:** `system`

Characteristic	Value
Syntax	<code>true false</code>
Default Value	<code>false</code>
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property identifies whether the specified index is a system index, and therefore should be left alone.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike **DURATION** properties, **MEMORY\_SIZE** properties cannot combine multiple specifiers. However, **MEMORY\_SIZE** properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [all-ids-threshold\(5DSCONF\)](#), [desc\(5DSCONF\)](#)

## all-ids-threshold-sub

DS attribute indexing (IDX) properties

### Description

Directory Server can index attributes, making them faster to search. The `dsconf` command helps you configure five of the six supported index types:

1. Equality indexes to determine expediently whether an attribute value is equal to a specified value
2. Presence indexes to determine whether a specified attribute has any values
3. Substring indexes to determine whether a specified attribute has values containing a specified string, also used to compare regular expressions to attribute values
4. Approximate indexes, based on metaphone approximation and useful for English language strings only, to determine whether a specified attribute has any values that sound like the specified string
5. International indexes, also called matching rule indexes, to expedite sorting and searching in accordance with the language rules of a particular locale

The `dsconf` command does not help you configure virtual list view, also known as browsing, indexes.

The `dsconf` command does help you assign all IDs threshold values to indexes. As the number of entries and attribute values grows in a directory, the number of attribute values to index also grows, as does therefore the size of the indexes. In some deployments a server can end up maintaining index lists so large that the cost of rebuilding an index when attributes are modified or added outweighs the benefit the index provides for searches. All IDs thresholds limit the growth of large indexes by defining the maximum number of entry identifiers Directory Server maintains in an index list. You can define all IDs thresholds for individual indexes and for some types of indexes.

Some indexes are maintained by the server for its own use. These are called system indexes. In general, do not modify or remove systems indexes; such modifications could have severe repercussions on performance.

See *Directory Server Indexing in Reference for Oracle Directory Server Enterprise Edition* for further details about indexing.

### PROPERTY: all-ids-threshold

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of entry IDs the server maintains in an index list for the specified attribute type. By default its value is inherited from the `all-ids-threshold` setting for the suffix, whose default value in turn is inherited from the `all-ids-threshold` setting for the server, which by default is 4000. In addition to inheritance of default settings, this property handles settings as follows:

`inherited`

The threshold is inherited from the more global setting.

`<2000`

The threshold value is rounded up to 2000.

`>2000`

The setting is used as a guaranteed minimum threshold. Because of internal mechanisms, the real value can be slightly more than the specified value.

After you modify this property, reindex the attribute for which you changed the threshold. For example:

```
$ dsconf set-index-prop dc=example,dc=com uid all-ids-threshold:5000
$ dsconf reindex -t uid dc=example,dc=com
```

```
## example: Indexing attribute: uid
## example: Finished indexing.
```

```
Task completed (slapd exit code: 0).
$
```

### PROPERTY: `all-ids-threshold-eq`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for equality indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

### PROPERTY: `all-ids-threshold-pres`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for presence indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

**PROPERTY:** `all-ids-threshold-sub`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for substring indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

**PROPERTY:** `approx-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether approximate indexes are maintained for the specified attribute type. You cannot set an all IDs threshold value for approximate indexes.

**PROPERTY:** `desc`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

Use this optional property to provide a short description of the index configuration.

**PROPERTY:** eq-enabled

Characteristic	Value
Syntax	on off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether equality indexes are maintained for the specified attribute type.

**PROPERTY:** matching-rule

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the matching rule indexes maintained for the specified attribute type.

Values for this property must be valid collation order object identifiers (OIDs). See *Directory Server Internationalized Directory in Directory Server Enterprise Edition Reference* for the OIDs corresponding to supported locales.

**PROPERTY:** pres-enabled

Characteristic	Value
Syntax	on off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether presence indexes are maintained for the specified attribute type.

**PROPERTY:** sub-enabled

Characteristic	Value
Syntax	on off
Default Value	off

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether substring indexes are maintained for the specified attribute type.

**PROPERTY:** `system`

Characteristic	Value
Syntax	<code>true false</code>
Default Value	<code>false</code>
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property identifies whether the specified index is a system index, and therefore should be left alone.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

`ATTR_NAME`

A valid attribute type name such as `cn` or `objectClass`.

`BOOLEAN`

`true` or `false`.

`DN`

A valid distinguished name such as `ou=People,dc=example,dc=com`.

`DURATION`

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

`DURATION` properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

`EMAIL_ADDRESS`

A valid e-mail address.

`HOST_NAME`

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [all-ids-threshold\(5DSCONF\)](#), [desc\(5DSCONF\)](#)

## approx-enabled

DS attribute indexing (IDX) properties

### Description

Directory Server can index attributes, making them faster to search. The `dsconf` command helps you configure five of the six supported index types:

1. Equality indexes to determine expediently whether an attribute value is equal to a specified value
2. Presence indexes to determine whether a specified attribute has any values
3. Substring indexes to determine whether a specified attribute has values containing a specified string, also used to compare regular expressions to attribute values
4. Approximate indexes, based on metaphone approximation and useful for English language strings only, to determine whether a specified attribute has any values that sound like the specified string
5. International indexes, also called matching rule indexes, to expedite sorting and searching in accordance with the language rules of a particular locale

The `dsconf` command does not help you configure virtual list view, also known as browsing, indexes.

The `dsconf` command does help you assign all IDs threshold values to indexes. As the number of entries and attribute values grows in a directory, the number of attribute values to index also grows, as does therefore the size of the indexes. In some deployments a server can end up maintaining index lists so large that the cost of rebuilding an index when attributes are modified or added outweighs the benefit the index provides for searches. All IDs thresholds limit the growth of large indexes by defining the maximum number of entry identifiers Directory Server maintains in an index list. You can define all IDs thresholds for individual indexes and for some types of indexes.

Some indexes are maintained by the server for its own use. These are called system indexes. In general, do not modify or remove systems indexes; such modifications could have severe repercussions on performance.

See *Directory Server Indexing in Reference for Oracle Directory Server Enterprise Edition* for further details about indexing.

### PROPERTY: `all-ids-threshold`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of entry IDs the server maintains in an index list for the specified attribute type. By default its value is inherited from the `all-ids-threshold` setting for the suffix, whose default value in turn is inherited from the `all-ids-threshold` setting for the server, which by default is 4000. In addition to inheritance of default settings, this property handles settings as follows:

`inherited`

The threshold is inherited from the more global setting.

`<2000`

The threshold value is rounded up to 2000.

`>2000`

The setting is used as a guaranteed minimum threshold. Because of internal mechanisms, the real value can be slightly more than the specified value.

After you modify this property, reindex the attribute for which you changed the threshold. For example:

```
$ dsconf set-index-prop dc=example,dc=com uid all-ids-threshold:5000
$ dsconf reindex -t uid dc=example,dc=com
```

```
## example: Indexing attribute: uid
## example: Finished indexing.
```

```
Task completed (slapd exit code: 0).
$
```

### PROPERTY: `all-ids-threshold-eq`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for equality indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

### PROPERTY: `all-ids-threshold-pres`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for presence indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

**PROPERTY:** `all-ids-threshold-sub`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for substring indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

**PROPERTY:** `approx-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether approximate indexes are maintained for the specified attribute type. You cannot set an all IDs threshold value for approximate indexes.

**PROPERTY:** `desc`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

Use this optional property to provide a short description of the index configuration.

**PROPERTY:** eq-enabled

Characteristic	Value
Syntax	on off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether equality indexes are maintained for the specified attribute type.

**PROPERTY:** matching-rule

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the matching rule indexes maintained for the specified attribute type.

Values for this property must be valid collation order object identifiers (OIDs). See *Directory Server Internationalized Directory in Directory Server Enterprise Edition Reference* for the OIDs corresponding to supported locales.

**PROPERTY:** pres-enabled

Characteristic	Value
Syntax	on off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether presence indexes are maintained for the specified attribute type.

**PROPERTY:** sub-enabled

Characteristic	Value
Syntax	on off
Default Value	off

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether substring indexes are maintained for the specified attribute type.

**PROPERTY:** `system`

Characteristic	Value
Syntax	<code>true false</code>
Default Value	<code>false</code>
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property identifies whether the specified index is a system index, and therefore should be left alone.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike **DURATION** properties, **MEMORY\_SIZE** properties cannot combine multiple specifiers. However, **MEMORY\_SIZE** properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [all-ids-threshold\(5DSCONF\)](#), [desc\(5DSCONF\)](#)

---

## argument

DS plug-in configuration (PLG) properties

### Description

Directory Server implements some key functionality as plug-ins. Plug-ins take the form of libraries loaded when the server starts, and called at different points in the processing of client application requests. When you create custom plug-ins, you must configure the server to load and use them, then restart Directory Server to load the newly configured plug-ins.

**PROPERTY:** argument

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies arguments passed to the plug-in when it is loaded by Directory Server. Arguments are passed in the order you specify them. Updating the list of arguments replaces all the existing arguments previously specified when the plug-in is loaded again.

**PROPERTY:** depends-on-named

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies names of plug-ins that must be available and loaded before Directory Server loads the current plug-in.

**PROPERTY:** depends-on-type

Characteristic	Value
Syntax	STRING (See the description that follows.)
Default Value	None
Is readable	Yes

Characteristic	Value
Is modifiable	Yes
Is multi-valued	Yes

This property specifies types of plug-ins that must be available and loaded before Directory Server loads the current plug-in. The value must be the value of a plug-in `type` property.

**PROPERTY:** `feature`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in identifier from the `Slapi_PluginDesc` structure.

**PROPERTY:** `init-func`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the name of function called by Directory Server to initialize the plug-in.

**PROPERTY:** `lib-path`

Characteristic	Value
Syntax	PATH
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute file system path to the library containing plug-in.

**PROPERTY:** type

Characteristic	Value
Syntax	STRING (See the description that follows.)
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in type. The following plug-in types are supported.

ldbentryfetchstore

Entry store and fetch plug-in

extendedop

Extended operation plug-in

passwordcheck

Password check plug-in

postoperation

Post-operation plug-in

preoperation

Pre-operation plug-in

internalpostoperation

Internal post-operation plug-in

internalpreoperation

Internal pre-operation plug-in

matchingrule

Matching rule plug-in for extensible match search filters

object

Generic plug-in type, sometimes used to register other plug-ins

passwordcheck

Strong password check plug-in

pwdstoragescheme

Password storage scheme plug-in

**PROPERTY:** vendor

Characteristic	Value
Syntax	STRING
Default Value	Vendor name in plug-in configuration
Is readable	Yes
Is modifiable	Yes

Characteristic	Value
Is multi-valued	No

This property specifies the plug-in vendor from the `Slapi_PluginDesc` structure.

**PROPERTY:** `version`

Characteristic	Value
Syntax	STRING
Default Value	Version string in plug-in configuration
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in version from the `Slapi_PluginDesc` structure.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

**DURATION** properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

TIME

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Stable

## See Also

[dsconf\(1M\)](#), [desc\(5DSCONF\)](#), [enabled\(5DSCONF\)](#)

---

## attr

DS prioritized replication configuration (RPR) properties

### Description

Prioritized replication lets you force a Directory Server supplier to assign higher priority to certain updates replicated on a Directory Server consumer. You prioritize replication operations by creating replication priority rules.

**PROPERTY:** attr

Characteristic	Value
Syntax	ATTR_NAME
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the attribute type to which the replication priority rule applies.

**PROPERTY:** base-dn

Characteristic	Value
Syntax	DN
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN under which the replication priority rule applies. For example, if you set `base-dn:ou=administrators,dc=example,dc=com`, then changes to `uid=myAdmin,ou=administrators,dc=example,dc=com` might be replicated with high priority, but changes to `uid=bjensen,ou=people,dc=example,dc=com` would not.

**PROPERTY:** bind-dn

Characteristic	Value
Syntax	DN
Default Value	None
Is readable	Yes
Is modifiable	Yes

Characteristic	Value
Is multi-valued	No

This property specifies a bind DN for an account whose updates might be replicated with high priority.

**PROPERTY:** `op-type`

Characteristic	Value
Syntax	add   mod   del
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies a type of operation for which updates might be replicated with high priority.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

TIME

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dsconf\(1M\)](#)

## auth-bind-dn

DS replication agreement configuration (RAG) properties

### Description

A replication agreement governs how a Directory Server supplier updates a Directory Server consumer. Although this configuration element is called an agreement, it concerns the configuration only of the supplier.

#### PROPERTY: `auth-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the bind DN used by the supplier to bind to the consumer in order to perform replication-related updates. This bind DN must be present on the consumer.

#### PROPERTY: `auth-protocol`

Characteristic	Value
Syntax	clear ssl-simple ssl-client
Default Value	clear
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the protocol used by the supplier to bind to the consumer in order to perform replication-related updates. The default is to bind with simple authentication in clear text without securing the connection, as most replications connections are made on an internal network. You may however configure replication to use SSL and simple authentication to protect the connection from malicious snooping, or SSL with client authentication to further protect the connection.

#### PROPERTY: `auth-pwd`

Characteristic	Value
Syntax	STRING
Default Value	None

Characteristic	Value
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the password used by the supplier to bind to the consumer. You provide it using `auth-pwd-file`.

**PROPERTY:** `auth-pwd-file`

Characteristic	Value
Syntax	PATH
Default Value	" "
Is readable	No
Is modifiable	Yes
Is multi-valued	No

This property specifies the file from which the bind password for replication is read to create the replication agreement. The file is read once on replication agreement creation, and the password is stored for future use.

**PROPERTY:** `repl-fractional-exclude-attr`

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the list of attributes not to replicate. This property is mutually exclusive with `repl-fractional-include-attr`.

**PROPERTY:** `repl-fractional-include-attr`

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the list of attributes to replicate. This property is mutually exclusive with `repl-fractional-exclude-attr`.

**PROPERTY:** `repl-schedule`

Characteristic	Value
Syntax	INTERVAL   always
Default Value	always
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the times and days when replication can take place.

**PROPERTY:** `transport-compression`

Characteristic	Value
Syntax	best-compression   best-speed   default-compression   no-compression
Default Value	no-compression
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the level of `libz` compression used on replication updates from the supplier to the consumer. Supported settings are as follows.

`no-compression`  
No compression

`default-compression`  
Default zlib compression (zlib numeric value = -1)

`best-speed`  
Fastest zlib compression (zlib numeric value = 1)

`best-compression`  
Strongest zlib compression (zlib numeric value = 9)

If the bottleneck for replication in your environment is network bandwidth, this property can potentially help you tune the replication protocol for better performance.

**PROPERTY:** `transport-group-size`

Characteristic	Value
Syntax	INTEGER
Default Value	1
Is readable	Yes

Characteristic	Value
Is modifiable	Yes
Is multi-valued	No

This property specifies how many replication messages are grouped on the supplier before being sent to the consumer. Valid range is 1 to 255.

If the bottleneck for replication in your environment is network bandwidth, this property can potentially help you tune the replication protocol for better performance.

**PROPERTY:** `transport-window-size`

Characteristic	Value
Syntax	INTEGER
Default Value	10
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of replication messages sent from the supplier to the consumer before waiting for a response from the consumer to continue. Valid range is 1 to 65535.

If the bottleneck for replication in your environment is network latency or network bandwidth, this property can potentially help you tune the replication protocol for better performance.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [desc\(5DSCONF\)](#), [enabled\(5DSCONF\)](#)

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## auth-protocol

DS replication agreement configuration (RAG) properties

### Description

A replication agreement governs how a Directory Server supplier updates a Directory Server consumer. Although this configuration element is called an agreement, it concerns the configuration only of the supplier.

#### PROPERTY: `auth-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the bind DN used by the supplier to bind to the consumer in order to perform replication-related updates. This bind DN must be present on the consumer.

#### PROPERTY: `auth-protocol`

Characteristic	Value
Syntax	clear ssl-simple ssl-client
Default Value	clear
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the protocol used by the supplier to bind to the consumer in order to perform replication-related updates. The default is to bind with simple authentication in clear text without securing the connection, as most replications connections are made on an internal network. You may however configure replication to use SSL and simple authentication to protect the connection from malicious snooping, or SSL with client authentication to further protect the connection.

#### PROPERTY: `auth-pwd`

Characteristic	Value
Syntax	STRING
Default Value	None

Characteristic	Value
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the password used by the supplier to bind to the consumer. You provide it using `auth-pwd-file`.

**PROPERTY:** `auth-pwd-file`

Characteristic	Value
Syntax	PATH
Default Value	" "
Is readable	No
Is modifiable	Yes
Is multi-valued	No

This property specifies the file from which the bind password for replication is read to create the replication agreement. The file is read once on replication agreement creation, and the password is stored for future use.

**PROPERTY:** `repl-fractional-exclude-attr`

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the list of attributes not to replicate. This property is mutually exclusive with `repl-fractional-include-attr`.

**PROPERTY:** `repl-fractional-include-attr`

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the list of attributes to replicate. This property is mutually exclusive with `repl-fractional-exclude-attr`.

**PROPERTY:** `repl-schedule`

Characteristic	Value
Syntax	INTERVAL   always
Default Value	always
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the times and days when replication can take place.

**PROPERTY:** `transport-compression`

Characteristic	Value
Syntax	best-compression   best-speed   default-compression   no-compression
Default Value	no-compression
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the level of `libz` compression used on replication updates from the supplier to the consumer. Supported settings are as follows.

`no-compression`  
No compression

`default-compression`  
Default zlib compression (zlib numeric value = -1)

`best-speed`  
Fastest zlib compression (zlib numeric value = 1)

`best-compression`  
Strongest zlib compression (zlib numeric value = 9)

If the bottleneck for replication in your environment is network bandwidth, this property can potentially help you tune the replication protocol for better performance.

**PROPERTY:** `transport-group-size`

Characteristic	Value
Syntax	INTEGER
Default Value	1
Is readable	Yes

Characteristic	Value
Is modifiable	Yes
Is multi-valued	No

This property specifies how many replication messages are grouped on the supplier before being sent to the consumer. Valid range is 1 to 255.

If the bottleneck for replication in your environment is network bandwidth, this property can potentially help you tune the replication protocol for better performance.

**PROPERTY:** transport-window-size

Characteristic	Value
Syntax	INTEGER
Default Value	10
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of replication messages sent from the supplier to the consumer before waiting for a response from the consumer to continue. Valid range is 1 to 65535.

If the bottleneck for replication in your environment is network latency or network bandwidth, this property can potentially help you tune the replication protocol for better performance.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and milliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dsconf\(1M\)](#), [desc\(5DSCONF\)](#), [enabled\(5DSCONF\)](#)

## auth-pwd

DS replication agreement configuration (RAG) properties

### Description

A replication agreement governs how a Directory Server supplier updates a Directory Server consumer. Although this configuration element is called an agreement, it concerns the configuration only of the supplier.

#### PROPERTY: auth-bind-dn

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the bind DN used by the supplier to bind to the consumer in order to perform replication-related updates. This bind DN must be present on the consumer.

#### PROPERTY: auth-protocol

Characteristic	Value
Syntax	clear ssl-simple ssl-client
Default Value	clear
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the protocol used by the supplier to bind to the consumer in order to perform replication-related updates. The default is to bind with simple authentication in clear text without securing the connection, as most replications connections are made on an internal network. You may however configure replication to use SSL and simple authentication to protect the connection from malicious snooping, or SSL with client authentication to further protect the connection.

#### PROPERTY: auth-pwd

Characteristic	Value
Syntax	STRING
Default Value	None

Characteristic	Value
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the password used by the supplier to bind to the consumer. You provide it using `auth-pwd-file`.

**PROPERTY:** `auth-pwd-file`

Characteristic	Value
Syntax	PATH
Default Value	" "
Is readable	No
Is modifiable	Yes
Is multi-valued	No

This property specifies the file from which the bind password for replication is read to create the replication agreement. The file is read once on replication agreement creation, and the password is stored for future use.

**PROPERTY:** `repl-fractional-exclude-attr`

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the list of attributes not to replicate. This property is mutually exclusive with `repl-fractional-include-attr`.

**PROPERTY:** `repl-fractional-include-attr`

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the list of attributes to replicate. This property is mutually exclusive with `repl-fractional-exclude-attr`.

**PROPERTY:** `repl-schedule`

Characteristic	Value
Syntax	INTERVAL   always
Default Value	always
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the times and days when replication can take place.

**PROPERTY:** `transport-compression`

Characteristic	Value
Syntax	best-compression   best-speed   default-compression   no-compression
Default Value	no-compression
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the level of `libz` compression used on replication updates from the supplier to the consumer. Supported settings are as follows.

`no-compression`  
No compression

`default-compression`  
Default zlib compression (zlib numeric value = -1)

`best-speed`  
Fastest zlib compression (zlib numeric value = 1)

`best-compression`  
Strongest zlib compression (zlib numeric value = 9)

If the bottleneck for replication in your environment is network bandwidth, this property can potentially help you tune the replication protocol for better performance.

**PROPERTY:** `transport-group-size`

Characteristic	Value
Syntax	INTEGER
Default Value	1
Is readable	Yes

Characteristic	Value
Is modifiable	Yes
Is multi-valued	No

This property specifies how many replication messages are grouped on the supplier before being sent to the consumer. Valid range is 1 to 255.

If the bottleneck for replication in your environment is network bandwidth, this property can potentially help you tune the replication protocol for better performance.

**PROPERTY:** `transport-window-size`

Characteristic	Value
Syntax	INTEGER
Default Value	10
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of replication messages sent from the supplier to the consumer before waiting for a response from the consumer to continue. Valid range is 1 to 65535.

If the bottleneck for replication in your environment is network latency or network bandwidth, this property can potentially help you tune the replication protocol for better performance.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [desc\(5DSCONF\)](#), [enabled\(5DSCONF\)](#)

## auth-pwd-file

DS replication agreement configuration (RAG) properties

### Description

A replication agreement governs how a Directory Server supplier updates a Directory Server consumer. Although this configuration element is called an agreement, it concerns the configuration only of the supplier.

#### PROPERTY: `auth-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the bind DN used by the supplier to bind to the consumer in order to perform replication-related updates. This bind DN must be present on the consumer.

#### PROPERTY: `auth-protocol`

Characteristic	Value
Syntax	clear ssl-simple ssl-client
Default Value	clear
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the protocol used by the supplier to bind to the consumer in order to perform replication-related updates. The default is to bind with simple authentication in clear text without securing the connection, as most replications connections are made on an internal network. You may however configure replication to use SSL and simple authentication to protect the connection from malicious snooping, or SSL with client authentication to further protect the connection.

#### PROPERTY: `auth-pwd`

Characteristic	Value
Syntax	STRING
Default Value	None

Characteristic	Value
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the password used by the supplier to bind to the consumer. You provide it using `auth-pwd-file`.

**PROPERTY:** `auth-pwd-file`

Characteristic	Value
Syntax	PATH
Default Value	" "
Is readable	No
Is modifiable	Yes
Is multi-valued	No

This property specifies the file from which the bind password for replication is read to create the replication agreement. The file is read once on replication agreement creation, and the password is stored for future use.

**PROPERTY:** `repl-fractional-exclude-attr`

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the list of attributes not to replicate. This property is mutually exclusive with `repl-fractional-include-attr`.

**PROPERTY:** `repl-fractional-include-attr`

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the list of attributes to replicate. This property is mutually exclusive with `repl-fractional-exclude-attr`.

**PROPERTY:** `repl-schedule`

Characteristic	Value
Syntax	INTERVAL   always
Default Value	always
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the times and days when replication can take place.

**PROPERTY:** `transport-compression`

Characteristic	Value
Syntax	best-compression   best-speed   default-compression   no-compression
Default Value	no-compression
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the level of `libz` compression used on replication updates from the supplier to the consumer. Supported settings are as follows.

`no-compression`  
No compression

`default-compression`  
Default zlib compression (zlib numeric value = -1)

`best-speed`  
Fastest zlib compression (zlib numeric value = 1)

`best-compression`  
Strongest zlib compression (zlib numeric value = 9)

If the bottleneck for replication in your environment is network bandwidth, this property can potentially help you tune the replication protocol for better performance.

**PROPERTY:** `transport-group-size`

Characteristic	Value
Syntax	INTEGER
Default Value	1
Is readable	Yes

Characteristic	Value
Is modifiable	Yes
Is multi-valued	No

This property specifies how many replication messages are grouped on the supplier before being sent to the consumer. Valid range is 1 to 255.

If the bottleneck for replication in your environment is network bandwidth, this property can potentially help you tune the replication protocol for better performance.

**PROPERTY:** transport-window-size

Characteristic	Value
Syntax	INTEGER
Default Value	10
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of replication messages sent from the supplier to the consumer before waiting for a response from the consumer to continue. Valid range is 1 to 65535.

If the bottleneck for replication in your environment is network latency or network bandwidth, this property can potentially help you tune the replication protocol for better performance.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [desc\(5DSCONF\)](#), [enabled\(5DSCONF\)](#)

---

## base-dn\_5dsconf

DS prioritized replication configuration (RPR) properties

### Description

Prioritized replication lets you force a Directory Server supplier to assign higher priority to certain updates replicated on a Directory Server consumer. You prioritize replication operations by creating replication priority rules.

#### PROPERTY: attr

Characteristic	Value
Syntax	ATTR_NAME
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the attribute type to which the replication priority rule applies.

#### PROPERTY: base-dn

Characteristic	Value
Syntax	DN
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN under which the replication priority rule applies. For example, if you set `base-dn:ou=administrators,dc=example,dc=com`, then changes to `uid=myAdmin,ou=administrators,dc=example,dc=com` might be replicated with high priority, but changes to `uid=bjensen,ou=people,dc=example,dc=com` would not.

#### PROPERTY: bind-dn

Characteristic	Value
Syntax	DN
Default Value	None
Is readable	Yes
Is modifiable	Yes

Characteristic	Value
Is multi-valued	No

This property specifies a bind DN for an account whose updates might be replicated with high priority.

**PROPERTY:** `op-type`

Characteristic	Value
Syntax	add   mod   del
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies a type of operation for which updates might be replicated with high priority.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#)

## bind-dn\_5dsconf

DS prioritized replication configuration (RPR) properties

### Description

Prioritized replication lets you force a Directory Server supplier to assign higher priority to certain updates replicated on a Directory Server consumer. You prioritize replication operations by creating replication priority rules.

**PROPERTY:** `attr`

Characteristic	Value
Syntax	ATTR_NAME
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the attribute type to which the replication priority rule applies.

**PROPERTY:** `base-dn`

Characteristic	Value
Syntax	DN
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN under which the replication priority rule applies. For example, if you set `base-dn:ou=administrators,dc=example,dc=com`, then changes to `uid=myAdmin,ou=administrators,dc=example,dc=com` might be replicated with high priority, but changes to `uid=bjensen,ou=people,dc=example,dc=com` would not.

**PROPERTY:** `bind-dn`

Characteristic	Value
Syntax	DN
Default Value	None
Is readable	Yes
Is modifiable	Yes

Characteristic	Value
Is multi-valued	No

This property specifies a bind DN for an account whose updates might be replicated with high priority.

**PROPERTY:** `op-type`

Characteristic	Value
Syntax	add   mod   del
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies a type of operation for which updates might be replicated with high priority.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#)

## buffering-enabled

DS logging configuration (LOG) properties

### Description

Directory Server writes to three main types of log files you can configure, the *INSTANCE\_PATH/logs/access*, *INSTANCE\_PATH/logs/audit*, and *INSTANCE\_PATH/logs/errors* logs, where *INSTANCE\_PATH* is the full path where the server instance is located, such as */local/dsInst*.

When you specify one of these properties with `dsconf get-log-prop` or `dsconf set-log-prop`, you must specify which type of log configuration, *access*, *audit*, or *error*, you want to examine. For example, to see whether audit logging is enabled for a server instance:

```
$ dsconf get-log-prop audit enabled
enabled : off
$
```

### PROPERTY: buffering-enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, not applicable to audit and errors logs
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether Directory Server writes access log entries directly to disk, or use a buffer, by default.

### PROPERTY: enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, off for audit, on for errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether the specified log type is enabled.

**PROPERTY:** level

Characteristic	Value
Syntax	See the description that follows.
Default Value	default
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property defines which kinds of messages get logged. This property is applicable only to `access` and `errors` logs.

**access log levels**

The following settings are supported:

`acc-internal`

Log access information for internal operations.

`default`

Log client access to entries.

`acc-default_plus_referrals`

As default, but also log access to referrals.

`acc-timing`

Use precise timing for microsecond resolution of elapsed times.

**errors log levels**

The following settings are supported:

`default`

Log startup, shutdown, errors, and warnings.

`err-function-calls`

Log when server enters or exits a function.

`err-search-args`

Log search arguments.

`err-connection`

Connection management.

`err-packets`

Log packets sent and received.

`err-search-filter`

Log search filter information.

`err-config-file`

Log information for changes to the configuration file `dse.ldif`.

`err-acl`

Log access control processing information.

`err-ldbm`  
Log information from the ldbm database plugin.

`err-entry-parsing`  
Log LDIF parsing errors.

`err-housekeeping`  
Log event queue information.

`err-replication`  
Log information about replication operations.

`err-entry-cache`  
Log entry cache information.

`err-plugins`  
Log information from server plug-ins.

`err-dsml`  
Log information from DSML front end.

`err-dsml-advanced`  
Debugging information for DSML.

**PROPERTY:** `max-age`

Characteristic	Value
Syntax	DURATION   unlimited
Default Value	1M (one month)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the age beyond which the specified type of log file is deleted.

**PROPERTY:** `max-disk-space-size`

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	500M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum disk space the specified type of log is allowed to consume. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

**PROPERTY:** `max-file-count`

Characteristic	Value
Syntax	Integer
Default Value	10 for access, 2 for errors, 1 for audit
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of log files, including rotated logs, of the specified type that the server allows to be created in the log file directory. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

When you set this property to 1, the specified log is not rotated.

**PROPERTY:** `max-size`

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	100M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum file size for the specified log. When the limit is reached, the server rotates the log file, unless `max-file-count` is set to 1.

**PROPERTY:** `min-free-disk-space-size`

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	5M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum free space allowed on the disk where the specified log is stored. When the limit is reached, the server deletes the oldest log files until enough space is available.

**PROPERTY:** `path`

Characteristic	Value
Syntax	PATH

Characteristic	Value
Default Value	<i>INSTANCE_PATH/logs/access, INSTANCE_PATH/logs/audit, INSTANCE_PATH/logs/errors</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the full path to the specified log file type.

**PROPERTY:** `perm`

Characteristic	Value
Syntax	<code>OCTAL_MODE</code>
Default Value	<code>600</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the read, write, and execute permissions on the specified log file.

**PROPERTY:** `rotation-interval`

Characteristic	Value
Syntax	<code>DURATION   unlimited</code>
Default Value	<code>1d (one day) for access, 1w (one week) for audit and errors</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the duration between rotations of the specified log file.

**PROPERTY:** `rotation-min-file-size`

Characteristic	Value
Syntax	<code>MEMORY_SIZE   undefined</code>
Default Value	<code>undefined</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum size the specified log file must have before the server rotates it.

**PROPERTY:** rotation-time

Characteristic	Value
Syntax	TIME   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the time of day when the server rotates the specified log file.

**PROPERTY:** verbose-enabled

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether extra informational messages are written to the errors log.

**Syntax Values**

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as cn or objectClass.

**BOOLEAN**

true or false.

**DN**

A valid distinguished name such as ou=People, dc=example, dc=com.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and milliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as 1w, 7d, 168h, 10080m, or 604800s. You can also specify one week as 1w0d0h0m0s.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [enabled\(5DSCONF\)](#)

---

## check-schema-enabled

DS server instance configuration (SER) property check-schema-enabled

### Description

The behavior of a Directory Server instance is configured according to server properties such as `check-schema-enabled`.

Characteristic	Value
Syntax	on   off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies whether the server checks that entries being updated still conform to the server schema.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## check-syntax-enabled

DS server instance configuration (SER) property check-syntax-enabled

### Description

The behavior of a Directory Server instance is configured according to server properties such as `check-syntax-enabled`.

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies whether the server checks that attribute values being updated have valid syntax. The server logs an error message when encountering an invalid value and prevents the update. When this property is set to `on`, the server checks updates to attribute values defined as Boolean, DN, Directory String, Generalized Time, IA5 String, INTEGER, or Telephone Number syntax. This behavior holds both for offline import and for normal write operations.

By default, syntax checking is off. When syntax checking is on, all import and update operations are checked. Directory Manager (directory super user) cannot bypass syntax checking.

Syntax is not checked on existing entries in the database. To clean up existing data, dump the database to LDIF, turn syntax checking on, and reload the database. Data that violates the syntax is visible in the errors log, and can be corrected and reloaded. You can also repair existing bad data by deleting or replacing the bad value using an LDAP client. If syntax checking is on, when a database is reloaded from LDIF, invalid syntax values are skipped and recorded in the errors log. Valid syntax values are reloaded.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## compat-flag\_5dsconf

DS server instance configuration (SER) property compat-flag

### Description

The behavior of a Directory Server instance is configured according to server properties such as `compat-flag`.

Characteristic	Value
Syntax	<code>none</code>   <code>no-rfc4511</code>   <code>no-rfc4522</code>
Default Value	<code>none</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

Flag which forces server to behave as in previous releases, for compatibility reasons.

The following values are accepted:

- `none`  
The server behavior is not altered.
- `no-rfc4511`  
RFC 4511 specifies that a search filter (such as `(&(attr>=v1)(attr<=v2))`) should return entries that have one value that is greater than or equal to `v1` and one value that is less than or equal to `v2`. In previous versions of Directory Server, this filter was interpreted as entries with values in the range `v1 . . . v2` (which is more restrictive when the attribute is multi-valued). The Directory Server now implements the RFC 4511 behavior by default, unless `compat-flag` is set to `no-rfc4511`.
- `no-rfc4522`  
RFC 4522 clarifies the usage of the binary qualifier in attribute names. It states that an LDAP search response should always append the binary qualifier to the attribute name whenever its syntax allows the binary option and also when the attribute is requested without the binary qualifier. By default, version 7 implements RFC 4522 behavior. If `compat-flag` is set to `no-rfc4522`, the software implements version 6 behavior.

Application requests	Directory Server 6 responds	Directory Server 7 responds (without <code>no-rfc4522</code> )	Directory Server 7 responds (with <code>no-rfc4522</code> )
<code>userCertificate</code>	<code>userCertificate</code>	<code>userCertificate;</code> <code>binary</code>	<code>userCertificate</code>

<b>Application requests</b>	<b>Directory Server 6 responds</b>	<b>Directory Server 7 responds (without no-rfc4522)</b>	<b>Directory Server 7 responds (with no-rfc4522)</b>
userCertificate; binary	userCertificate; binary	userCertificate; binary	userCertificate; binary

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

---

## compressed-entries

Entry eligibility for compression

### Description

Defines entry eligibility for compression.

Characteristic	Value
Valid values	all and overflow
Default value	overflow
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

- `overflow` — Only entries in overflow pages will be compressed.
- `all` — All the entries will be compressed.

Entries are compressed based on the value of `compression-mode`.

**Example 3-1** *Setting* `compressed-entries` *using the* `set-suffix-prop` *subcommand.*

```
$ dsconf set-suffix-prop -p port-number dc=example,dc=com compressed-entries:all
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#)

[compression-mode\(5DSCONF\)](#)

## compression-mode

---

how entries are compressed

### Description

Defines how entries are compressed.

Characteristic	Value
Valid values	none and DSZ
Default value	none
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

- none — No entries compression mechanism will be used.
- DSZ — Entries will be compressed using the DSZ method.

Entries compressed are defined by `compressed-entries`.

**Example 3-2** *Setting* `compression-mode` *using the* `set-suffix-prop` *subcommand.*

```
$ dsconf set-suffix-prop -p port-number dc=example,dc=com compression-mode:DSZ
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#)

[compressed-entries\(5DSCONF\)](#)

---

## config-magic-number

DS server instance configuration (SER) property config-magic-number

### Description

The behavior of a Directory Server instance is configured according to server properties such as `config-magic-number`.

Characteristic	Value
Syntax	STRING
Default Value	D-A00
Is readable	Yes
Is modifiable	No
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies a value used by the Directory Server administration framework and tools to determine the capabilities of a server instance.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## controls

LDAP controls handled by Directory Server

### Description

LDAPv3 controls specify extension information sent as part of a request. An explanation of what an LDAPv3 control is can be found in RFC 2251.

Directory Server handles the LDAP controls listed here according to their interface stability. See `attributes(5)` for descriptions of interface stability.

#### INTERFACE STABILITY: STANDARD

1.2.840.113556.1.4.473

Server-side sort request, described in RFC 2891

2.16.840.1.113730.3.4.2

Manage DSA IT control, described in RFC 3296

2.16.840.1.113730.3.4.15

Authorization bind identity response control, described in RFC 3829

2.16.840.1.113730.3.4.16

Authorization bind identity request control, described in RFC 3829

2.16.840.1.113730.3.4.18

Proxied authorization (version 2) control, described in RFC 4370.

#### INTERFACE STABILITY: EXTERNAL

1.3.6.1.4.1.42.2.27.8.5.1

Password policy control

2.16.840.1.113730.3.4.3

Persistent search control

2.16.840.1.113730.3.4.9

Virtual list view request control

#### INTERFACE STABILITY: STABLE

1.3.6.1.4.1.42.2.27.9.5.2

Get effective rights request control

1.3.6.1.4.1.42.2.27.9.5.8

Account usability control

2.16.840.1.113730.3.4.4

Password expired notification control

2.16.840.1.113730.3.4.5

Password expiring notification control

2.16.840.1.113730.3.4.14  
Specific backend search request control

2.16.840.1.113730.3.4.17  
Real attributes only request control

2.16.840.1.113730.3.4.19  
Virtual attributes only request control

### **INTERFACE STABILITY: PRIVATE**

1.3.6.1.4.1.1466.29539.12  
Chained request control

1.3.6.1.4.1.42.2.27.9.5.6  
Directory Server initialization control

2.16.840.1.113730.3.4.13  
Replication update information control

### **INTERFACE STABILITY: DEPRECATED**

The following control is scheduled for removal.

2.16.840.1.113730.3.4.12  
Proxied authorization (version 1) control

## db-batched-transaction-count

DS server instance configuration (SER) property db-batched-transaction-count

### Description

The behavior of a Directory Server instance is configured according to server properties such as db-batched-transaction-count.

Characteristic	Value
Syntax	INTEGER
Default Value	0
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies how many server transactions are gathered into a batch before being written to the transaction log. If writes to the transaction log are a bottleneck, you may potentially improve performance by increasing this value. Valid range is 0-30, 0 meaning that batching is turned off.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

---

## db-cache-size

DS server instance configuration (SER) property db-cache-size

### Description

The behavior of a Directory Server instance is configured according to server properties such as `db-cache-size`.

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	32M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the amount of physical memory Directory Server requests from the operating system to cache indexes for all suffixes supported by the server instance. See *Directory Server Data Caching* in *Directory Server Enterprise Edition Reference* for suggestions on sizing cache.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## db-checkpoint-interval

DS server instance configuration (SER) property db-checkpoint-interval

### Description

The behavior of a Directory Server instance is configured according to server properties such as `db-checkpoint-interval`.

Characteristic	Value
Syntax	DURATION
Default Value	60s
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the interval between checkpoints recorded in the database transaction log.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## db-env-path

DS server instance configuration (SER) property db-env-path

### Description

The behavior of a Directory Server instance is configured according to server properties such as db-env-path.

Characteristic	Value
Syntax	PATH
Default Value	<i>instance-path/db</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies a valid directory, unique to the server instance. There must be enough space available on the file system to house at least the actual size of the database cache.

When changing this property, you must stop the server, delete the existing database, and reimport all suffixes from LDIF, before restarting the server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## db-lock-count

DS server instance configuration (SER) property db-lock-count

### Description

The behavior of a Directory Server instance is configured according to server properties such as `db-lock-count`.

Characteristic	Value
Syntax	INTEGER
Default Value	20000
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the number of locks available to the server instance database. Increase this value if you observe the following message in the `errors` log:

```
libdb: Lock table is out of available locks
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## db-log-buf-size

DS server instance configuration (SER) property db-log-buf-size

### Description

The behavior of a Directory Server instance is configured according to server properties such as db-log-buf-size.

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	512k
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the transaction log buffer size. Valid range is 0 to the size of the transaction log, which is 10M by default.

After changing this property, you must restart the server in order to take the change into account.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## db-log-path

DS server instance configuration (SER) property db-log-path

### Description

The behavior of a Directory Server instance is configured according to server properties such as db-log-path.

Characteristic	Value
Syntax	PATH
Default Value	<i>instance-path/db</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the file system directory containing the database transaction log.

When changing this property, you must stop the server, delete the existing database, and reimport all suffixes from LDIF, before restarting the server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

---

## db-name\_5dsconf

DS suffix configuration (SUF) properties

### Description

Each Directory Server suffix you create is configured according to the suffix properties documented here and in the documentation specified under the SEE ALSO section.

#### **PROPERTY:** `compression-entries`

Characteristic	Value
Syntax	<code>all overflow</code>
Default Value	<code>overflow</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies entry eligibility for compression.

`all`

All the entries will be compressed.

`overflow`

Only entries in overflow pages will be compressed.

#### **PROPERTY:** `compression-mode`

Characteristic	Value
Syntax	<code>none DSZ</code>
Default Value	<code>None</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies how entries are compressed.

`none`

No entries compression mechanism will be used.

`DSZ`

Entries will be compressed using the DSZ method.

**PROPERTY:** db-name

Characteristic	Value
Syntax	STRING
Default Value	<i>suffixName</i>
Is readable	Yes
Is modifiable	No
Is multi-valued	Yes

This property specifies the suffix that is used to process requests involving the database.

**PROPERTY:** db-path

Characteristic	Value
Syntax	PATH
Default Value	<i>server-instance-dir/db/suffix-dir</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute path to the suffix database.

**PROPERTY:** entry-cache-count

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	unlimited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of entries allowed in the entry cache of the suffix.

**PROPERTY:** entry-cache-size

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	20M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum amount of memory Directory Server requests for the entry cache of the suffix.

**PROPERTY:** `entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the number of entries stored in the suffix.

**PROPERTY:** `entry-crc-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether a CRC is computed on each entry.

**PROPERTY:** `index-filter-analyzer-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	No
Is multi-valued	No
Restart needed	No

This property specifies whether the index filter analyzer is running.

**PROPERTY:** `index-filter-analyzer-max-entries`

Characteristic	Value
Syntax	Integer
Default Value	2000

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies the maximum number of entries that the index filter analyzer may contain.

**PROPERTY:** `parent-suffix-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	DN of the parent entry
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN of the parent entry for the suffix. The value of this property must logically be a parent of the suffix.

For instance, if you have a suffix with DN `dc=com` and a suffix `dc=example, dc=com`, you can set `dc=com` as the `parent-suffix-dn` of `dc=example, dc=com`, and subtree searches with based DN `dc=com` then also travers `dc=example, dc=com`.

**PROPERTY:** `referral-mode`

Characteristic	Value
Syntax	disabled   enabled   only-on-write
Default Value	disabled
Is readable	Yes
Is modifiable	Yes, if the suffix is not replicated
Is multi-valued	No

This property specifies how referrals are used when a client makes a request involving the suffix.

`disabled`  
Handle requests locally; do not return referral URLs.

`enabled`  
Return referral URLs to client requests.

`only-on-write`  
Return referral URLs to client requests only for write operations.

**PROPERTY:** repl-accept-client-update-enabled

Characteristic	Value
Syntax	on   off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the replicated suffix accepts write operations from client applications, or instead returns referral URLs.

**PROPERTY:** repl-cl-max-age

Characteristic	Value
Syntax	DURATION   undefined
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age for a record in the replication changelog. Older records are purged.

**PROPERTY:** repl-cl-max-entry-count

Characteristic	Value
Syntax	INTEGER
Default Value	0 (meaning undefined)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum number of records in the replication changelog. When the limit is exceeded, older records are purged.

**PROPERTY:** repl-id

Characteristic	Value
Syntax	INTEGER
Default Value	None
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication

Characteristic	Value
Is multi-valued	No

This property specifies the replica identification number, 1-65534 for a supplier, 65535 for a consumer or a hub. Once set, this property cannot be modified.

**PROPERTY:** `repl-manager-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the bind DN's of users allowed to bind to perform replication operations on the suffix.

**PROPERTY:** `repl-purge-delay`

Characteristic	Value
Syntax	DURATION   never
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age of tombstone entries used by replication. Tombstone entries are entries marked for deletion that have not yet been removed, and also replication state information associated with the entries. When setting this attribute, ensure that the purge delay is longer than the longest replication cycle in your replication policy to avoid incurring conflict resolution problems and divergence between replicas.

**PROPERTY:** `repl-rewrite-referrals-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether referrals you set can be automatically overwritten by the server to reference replicas.

**PROPERTY:** `repl-role`

Characteristic	Value
Syntax	<code>not-replicated   master   hub   consumer</code>
Default Value	<code>not-replicated</code>
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the role played by the suffix in a replicated topology.

`not-replicated`

The suffix is not part of a replicated topology.

`master`

This suffix is a supplier of replication updates in a replicated topology. It can accept both read and write operations.

`hub`

This suffix is a supplier of replication updates in a replicated topology. It can accept read operations and replication updates.

`consumer`

This suffix is a dedicated consumer of replication updates in a replicated topology. It can accept read operations and replication updates, but not writes from clients.

To promote a replica, use the `dsconf promote-repl` command. To demote a replica, use the `dsconf demote-repl` command.

**PROPERTY:** `require-index-enabled`

Characteristic	Value
Syntax	<code>on   off</code>
Default Value	<code>off</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether unindexed searches are allowed. When `on`, unindexed searches return `LDAP_UNWILLING_TO_PERFORM`.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple

specifiers. However, `MEMORY_SIZE` properties allow decimal values, for example, 1.5M.

#### NAME

A valid `cn` (common name).

#### OCTAL\_MODE

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus `640` specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

#### PASSWORD\_FILE

The full path to the file from which the bind password should be read.

#### PATH

A valid, absolute file system path.

#### STRING

A `DirectoryString` value, as specified by RFC 2252

(<http://www.ietf.org/rfc/rfc2252.txt>).

#### SUPPORTED\_SSL\_CIPHER

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

#### SUPPORTED\_SSL\_PROTOCOL

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

#### TIME

A time of the form `hhmm` in 24-hour format, where `hh` stands for hours and `mm` stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

`dsconf(1M)`, `all-ids-threshold(5DSCONF)`, `db-path(5DSCONF)`, `enabled(5DSCONF)`, `moddn-enabled(5DSCONF)`, `referral-url(5DSCONF)`

---

## db-path

Path to Directory Server database files

### Description

Characteristic	Value
Syntax	PATH
Default Value	<i>instance-path/db</i>
Is readable	Yes
Is modifiable	No (server instance level), Yes (suffix level)
Is multi-valued	No

This property specifies the default file system directory containing the server database files.

This property is modifiable at the suffix level. At server instance level, the property is set when the server instance is created, and cannot be modified.

When changing this property, you must stop the server, delete the existing database, and reimport all suffixes from LDIF, before restarting the server.

### Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

#### ATTR\_NAME

A valid attribute type name such as `cn` or `objectClass`.

#### BOOLEAN

`true` or `false`.

#### DN

A valid distinguished name such as `ou=People,dc=example,dc=com`.

#### DURATION

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

#### EMAIL\_ADDRESS

A valid e-mail address.

#### HOST\_NAME

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [server\(5DSCONF\)](#), [suffix\(5DSCONF\)](#)

## def-repl-manager-pwd

DS server instance configuration (SER) property def-repl-manager-pwd

### Description

The behavior of a Directory Server instance is configured according to server properties such as `def-repl-manager-pwd`.

Characteristic	Value
Syntax	STRING
Default Value	See the description that follows.
Is readable	Yes
Is modifiable	No
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property lets you read the password used for replication binds performed using simple authentication. Either you specify the password before setting up replication by setting `def-repl-manager-pwd-file` to specify the file containing the password you want to use, or you accept the password value generated by the `dsconf accord-replication` subcommand.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## def-repl-manager-pwd-file

DS server instance configuration (SER) property `def-repl-manager-pwd-file`

### Description

The behavior of a Directory Server instance is configured according to server properties such as `def-repl-manager-pwd-file`.

Characteristic	Value
Syntax	PATH   " "
Default Value	" "
Is readable	No
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the file from which the default replication password is read and stored for future use when setting up replication.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

---

## depends-on-named

DS plug-in configuration (PLG) properties

### Description

Directory Server implements some key functionality as plug-ins. Plug-ins take the form of libraries loaded when the server starts, and called at different points in the processing of client application requests. When you create custom plug-ins, you must configure the server to load and use them, then restart Directory Server to load the newly configured plug-ins.

**PROPERTY:** argument

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies arguments passed to the plug-in when it is loaded by Directory Server. Arguments are passed in the order you specify them. Updating the list of arguments replaces all the existing arguments previously specified when the plug-in is loaded again.

**PROPERTY:** depends-on-named

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies names of plug-ins that must be available and loaded before Directory Server loads the current plug-in.

**PROPERTY:** depends-on-type

Characteristic	Value
Syntax	STRING (See the description that follows.)
Default Value	None
Is readable	Yes

Characteristic	Value
Is modifiable	Yes
Is multi-valued	Yes

This property specifies types of plug-ins that must be available and loaded before Directory Server loads the current plug-in. The value must be the value of a plug-in `type` property.

**PROPERTY:** `feature`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in identifier from the `Slapi_PluginDesc` structure.

**PROPERTY:** `init-func`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the name of function called by Directory Server to initialize the plug-in.

**PROPERTY:** `lib-path`

Characteristic	Value
Syntax	PATH
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute file system path to the library containing plug-in.

**PROPERTY:** type

Characteristic	Value
Syntax	STRING (See the description that follows.)
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in type. The following plug-in types are supported.

ldbentryfetchstore

Entry store and fetch plug-in

extendedop

Extended operation plug-in

passwordcheck

Password check plug-in

postoperation

Post-operation plug-in

preoperation

Pre-operation plug-in

internalpostoperation

Internal post-operation plug-in

internalpreoperation

Internal pre-operation plug-in

matchingrule

Matching rule plug-in for extensible match search filters

object

Generic plug-in type, sometimes used to register other plug-ins

passwordcheck

Strong password check plug-in

pwdstoragescheme

Password storage scheme plug-in

**PROPERTY:** vendor

Characteristic	Value
Syntax	STRING
Default Value	Vendor name in plug-in configuration
Is readable	Yes
Is modifiable	Yes

Characteristic	Value
Is multi-valued	No

This property specifies the plug-in vendor from the `Slapi_PluginDesc` structure.

**PROPERTY:** `version`

Characteristic	Value
Syntax	STRING
Default Value	Version string in plug-in configuration
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in version from the `Slapi_PluginDesc` structure.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

ATTR\_NAME

A valid attribute type name such as `cn` or `objectClass`.

BOOLEAN

`true` or `false`.

DN

A valid distinguished name such as `ou=People,dc=example,dc=com`.

DURATION

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

EMAIL\_ADDRESS

A valid e-mail address.

HOST\_NAME

An IP address or host name.

INTEGER

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

TIME

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Stable

## See Also

[dsconf\(1M\)](#), [desc\(5DSCONF\)](#), [enabled\(5DSCONF\)](#)

---

## depends-on-type

DS plug-in configuration (PLG) properties

### Description

Directory Server implements some key functionality as plug-ins. Plug-ins take the form of libraries loaded when the server starts, and called at different points in the processing of client application requests. When you create custom plug-ins, you must configure the server to load and use them, then restart Directory Server to load the newly configured plug-ins.

**PROPERTY:** argument

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies arguments passed to the plug-in when it is loaded by Directory Server. Arguments are passed in the order you specify them. Updating the list of arguments replaces all the existing arguments previously specified when the plug-in is loaded again.

**PROPERTY:** depends-on-named

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies names of plug-ins that must be available and loaded before Directory Server loads the current plug-in.

**PROPERTY:** depends-on-type

Characteristic	Value
Syntax	STRING (See the description that follows.)
Default Value	None
Is readable	Yes

Characteristic	Value
Is modifiable	Yes
Is multi-valued	Yes

This property specifies types of plug-ins that must be available and loaded before Directory Server loads the current plug-in. The value must be the value of a plug-in `type` property.

**PROPERTY:** `feature`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in identifier from the `Slapi_PluginDesc` structure.

**PROPERTY:** `init-func`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the name of function called by Directory Server to initialize the plug-in.

**PROPERTY:** `lib-path`

Characteristic	Value
Syntax	PATH
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute file system path to the library containing plug-in.

**PROPERTY:** type

Characteristic	Value
Syntax	STRING (See the description that follows.)
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in type. The following plug-in types are supported.

ldbentryfetchstore

Entry store and fetch plug-in

extendedop

Extended operation plug-in

passwordcheck

Password check plug-in

postoperation

Post-operation plug-in

preoperation

Pre-operation plug-in

internalpostoperation

Internal post-operation plug-in

internalpreoperation

Internal pre-operation plug-in

matchingrule

Matching rule plug-in for extensible match search filters

object

Generic plug-in type, sometimes used to register other plug-ins

passwordcheck

Strong password check plug-in

pwdstorage

Password storage scheme plug-in

**PROPERTY:** vendor

Characteristic	Value
Syntax	STRING
Default Value	Vendor name in plug-in configuration
Is readable	Yes
Is modifiable	Yes

Characteristic	Value
Is multi-valued	No

This property specifies the plug-in vendor from the `Slapi_PluginDesc` structure.

**PROPERTY:** `version`

Characteristic	Value
Syntax	STRING
Default Value	Version string in plug-in configuration
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in version from the `Slapi_PluginDesc` structure.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

ATTR\_NAME

A valid attribute type name such as `cn` or `objectClass`.

BOOLEAN

`true` or `false`.

DN

A valid distinguished name such as `ou=People,dc=example,dc=com`.

DURATION

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

EMAIL\_ADDRESS

A valid e-mail address.

HOST\_NAME

An IP address or host name.

INTEGER

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

TIME

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Stable

### See Also

[dsconf\(1M\)](#), [desc\(5DSCONF\)](#), [enabled\(5DSCONF\)](#)

---

## desc

Optional description of configuration element

### Description

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

Use this optional property to provide a short description of the configuration element.

### Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

#### ATTR\_NAME

A valid attribute type name such as `cn` or `objectClass`.

#### BOOLEAN

`true` or `false`.

#### DN

A valid distinguished name such as `ou=People,dc=example,dc=com`.

#### DURATION

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

#### EMAIL\_ADDRESS

A valid e-mail address.

#### HOST\_NAME

An IP address or host name.

#### INTEGER

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

---

TIME

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dsconf\(1M\)](#), [encryption\(5DSCONF\)](#), [index\(5DSCONF\)](#), [plugin\(5DSCONF\)](#), [repl-agmt\(5DSCONF\)](#)

## dn-cache-count

DS server instance configuration (SER) property dn-cache-count

### Description

The behavior of a Directory Server instance is configured according to server properties such as dn-cache-count.

Characteristic	Value
Syntax	INTEGER   unlimited   disabled
Default Value	unlimited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the size of the DN cache in terms of number of entries. The value of dn-cache-count is unlimited by default. The value of dn-cache-count can be an integer, unlimited, and disabled and each of these has the following effect on dn-cache-size.

- unlimited — cache is limited to the cache size specified for dn-cache-size.
- disabled — caching is disabled and dn-cache-size is ignored.
- INTEGER — cache is limited to the number of DN's specified by the value that you provide and dn-cache-size is ignored. The value must be 1 or greater than 1.

Changing this property requires you to restart the server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## dn-cache-size

DS server instance configuration (SER) property dn-cache-size

### Description

The behavior of a Directory Server instance is configured according to server properties such as dn-cache-size.

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	10M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the size of the DN cache in terms of memory space. This property is set by default. The cache size must be larger than 1M. The DN cache size specified for this property is taken into account only when dn-cache-count is set to unlimited.

Changing this property requires you to restart the server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## ds5AgreementEnable

Whether replication is enabled

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	on   off
Default Value	on
Syntax	DirectoryString

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

Specifies whether the replication agreement is enabled.

### Examples

```
ds5AgreementEnable: on
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

---

## ds5BeginReplicaAcceptUpdates

Accept, rather than refer, update operations

### Description

PROPERTY	VALUE
Entry DN	cn=replica,cn= <i>suffix name</i> ,cn=mapping tree,cn=config
Valid Range	start stop
Default Value	None
Syntax	DirectoryString

This attribute is part of replica configuration for nsDS5Replica entries.

When this attribute is set to `start`, the server accepts client updates rather than referring them to another server.

### Examples

```
ds5BeginReplicaAcceptUpdates: start
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## ds5LastInitTimeStamp

---

Time stamp for last initialization

### Description

PROPERTY	VALUE
Entry DN	<code>cn=replica,cn=suffix name,cn=mapping tree,cn=config</code>
Valid Range	N/A
Default Value	N/A
Syntax	Integer

This attribute is part of replica configuration for `nsDS5Replica` entries.

This attribute is reserved for internal use.

### Examples

```
ds5LastInitTimeStamp: 0
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

---

## ds5ReferralDelayAfterInit

Accept update operations after the specified delay

### Description

PROPERTY	VALUE
Entry DN	<code>cn=replica,cn=<i>suffix name</i>,cn=mapping tree,cn=config</code>
Valid Range	0 to any 64-bit integer (seconds)
Default Value	Not set (unlimited)
Syntax	Integer

This attribute is part of replica configuration for `nsDS5Replica` entries.

When this attribute is set, the server starts accepting client updates after waiting the number of seconds you specify.

### Examples

```
ds5ReferralDelayAfterInit: 100
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## ds5ReplicaAutomaticInit

Automatically initialize dedicated consumer

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	on   off
Default Value	N/A
Syntax	DirectoryString

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

When set to `on`, this attribute causes the server to perform a total update of the consumer replica as soon as replication fails to proceed normally. Use this attribute only in agreements toward read-only, dedicated consumer replica.

### Examples

```
ds5ReplicaAutomaticInit: on
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## ds5ReplicaConsumerTimeout

Timeout for replication operations

### Description

PROPERTY	VALUE
Entry DN	cn=replica,cn= <i>suffix name</i> ,cn=mapping tree,cn=config
Valid Range	0 maximum integer (seconds)
Default Value	300 (seconds)
Syntax	Integer

This attribute is part of replica configuration for nsDS5Replica entries.

When set, this attribute causes the consumer to close a replication connection with the current supplier, allowing it to open a replication session with another supplier.

This attribute takes effect under the following conditions on the consumer.

- The supplier sending updates on the current replication session connection has been idle for ds5ReplicaConsumerTimeout seconds.
- No local operation on the consumer is currently replaying updates from the current supplier.
- Another supplier is currently attempting to start a replication session.

### Examples

---



---

**Note:** Do not change the value of this attribute unless requested to do so by qualified support personnel.

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ds5ReplicaConsumerTimeout: 300

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## ds5ReplicaTransportCompressionLevel

Compression used for replication

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	0   1   2   3
Default Value	0
Syntax	Integer

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

Specifies the type of compression used for replication protocol messages.

This attribute takes the following values:

- 0  
No compression
- 1  
Default zlib compression (zlib numeric value = -1)
- 2  
Fastest zlib compression (zlib numeric value = 1)
- 3  
Strongest zlib compression (zlib numeric value = 9)

If the bottleneck for replication in your environment is network bandwidth, this attribute can potentially help you tune the replication protocol for better performance.

### Examples

```
ds5ReplicaTransportCompressionLevel: 2
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## ds5ReplicaTransportConcurrencyLevel

Throttle replication concurrency

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	0   1   2
Default Value	2
Syntax	Integer

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

This attribute lets you force the supplier to replay replicated updates on the consumer in the order they occurred on the supplier, or even by a single thread so that the replayed updates happen sequentially. The following values are supported:

0

Replay updates in sequential order using a single thread. This can reduce throughput.

1

Replay updates in sequential order using multiple threads. This can still reduce throughput compared to the default behavior.

2

(Default) Replay unrelated updates in parallel to increase throughput.

Avoid tweaking this attribute as in most cases all you will manage to do is reduce replication performance.

### Examples

```
ds5ReplicaTransportConcurrencyLevel: 2
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## ds5ReplicaTransportGroupSize

Grouping size for replication updates

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	1 to 255
Default Value	1
Syntax	Integer

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

When this attribute is set, the supplier groups updates, for an incremental update, or entries, for total update, before sending those updates or entries to the consumer.

If the bottleneck for replication in your environment is network bandwidth, this attribute can potentially help you tune the replication protocol for better performance.

### Examples

```
ds5ReplicaTransportGroupSize: 10
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## ds5ReplicaTransportGrpPktSize

Effective group packet size

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	0 to 65536
Default Value	N/A
Syntax	Integer

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

This attribute governs the effective packet size sent by the supplier such that maximum BER size is not exceeded on the consumer.

Do not modify this attribute unless told to do so by qualified support personnel.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## ds5ReplicaTransportWindowSize

Window size for replication updates

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	1 to 65535
Default Value	10
Syntax	Integer

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

The supplier sends up to the specified number of replication messages to the consumer before waiting for a response from the consumer to continue.

If the bottleneck for replication in your environment is network latency or network bandwidth, this attribute can potentially help you tune the replication protocol for better performance.

### Examples

```
ds5ReplicaTransportWindowSize: 100
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

---

## ds6ruv

Replication update vector, for version 6 and above

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	N/A
Default Value	N/A
Syntax	DirectoryString

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

This attribute is responsible for managing the internal state of the replica via the replication update vector. It is always present and must not be changed.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## dsChangelogMaxAge

Maximum age of change log entries

### Description

PROPERTY	VALUE
Entry DN	<code>cn=replica, cn=suffix name, cn=mapping tree, cn=config</code>
Valid Range	See the description that follows.
Default Value	7d (one week)
Syntax	IntegerTimeUnit

This attribute is part of replica configuration for `nsDS5Replica` entries.

The change log contains a record for each directory modification and is used when synchronizing consumer servers. Each record contains a timestamp. Any record with a timestamp that is older than the value specified in this attribute is removed.

When this attribute is set, the server purges change log entries older than the time you specify. Age is specified as a number followed by a letter *s* for seconds, *m* for minutes, *h* for hours, *d* for days, or *w* for weeks. If this attribute is set to 0, entries are not removed according to their age. If this attribute is not present, the default age limit on change log records is one week (7d).

### Examples

```
dsChangelogMaxAge: 7d
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

---

## dsChangelogMaxentries

Maximum number of change log records

### Description

PROPERTY	VALUE
Entry DN	cn=replica,cn= <i>suffix name</i> ,cn=mapping tree,cn=config
Valid Range	-1 to maximum integer
Default Value	-1 (unlimited)
Syntax	Integer

This attribute is part of replica configuration for nsDS5Replica entries.

The change log contains a record for each directory modification and is used when synchronizing consumer servers. Each record contains a timestamp. Any record with a timestamp that is older than the value specified in this attribute is removed.

When this attribute is set, the server purges entries from the change log after the maximum you specify is reached. If this attribute is absent, or if it is set to -1, the server does not limit the number of entries in the change log.

### Examples

```
dsChangelogMaxentries: 5000
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

---

## dsFilterSPConfigchecksum

Checksum for partial replication

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config (supplier),cn=replica,cn=suffix name,cn=mapping tree,cn=config (consumer)</i>
Valid Range	N/A
Default Value	N/A
Syntax	DirectoryString

This attribute is part of replica configuration for `nsDS5Replica` and `nsDS5ReplicationAgreement` entries.

This read-only attribute is reserved for internal use. Do not modify its value.

### Examples

```
dsFilterSPConfigchecksum: 0
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

---

## ds-hdsml-clientauthmethod

DSML SSL client authentication

### Description

Defines how the server will identify a client on a secure (SSL) connection.

#### Entry DN

`cn=DSMLv2-SOAP-HTTP,cn=frontends,cn=plugins,cn=config`

#### Valid Range

`clientCertOnly`: the server uses the credentials from the client certificate to identify the client.

`httpBasicOnly`: the server uses the credentials from the HTTP authorization header to identify the client.

`clientCertFirst`: the server attempts to use the client certificate credentials to identify the client. If there are no client certificate credentials, credentials from the HTTP authorization header are used.

#### Default Value

`clientCertFirst`

#### Syntax

DirectoryString

#### Example

`ds-hdsml-clientauthmethod: clientCertFirst`

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## ds-hdsml-dsmlschemalocation

DSMLv2 schema location

### Description

The path to the DSMLv2 schema. This is generated automatically and should not be changed.

#### Entry DN

`cn=DSMLv2-SOAP-HTTP,cn=frontends,cn=plugins,cn=config`

#### Valid Range

Any valid path to the directory storing the DSML schema.

#### Default Value

`instance-path/plugins/DSMLv2.xsd`

#### Syntax

DirectoryString

#### Example

```
ds-hdsml-dsmlschemalocation:  
/local/dsInstance/plugins/DSMLv2.xsd
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## ds-hdsml-iobuffersize

buffer size for DSML requests

### Description

The size of the buffer in which the DSML request is stored. If Directory Server receives many large DSML requests, such as large modify requests, then increasing this value may allow fewer buffers to be passed from the HTTP front end to the DSML parsers.

#### Entry DN

`cn=DSMLv2-SOAP-HTTP,cn=frontends,cn=plugins,cn=config`

#### Valid Range

1 to an appropriate upper limit for your deployment, with a maximum of 2147483647 ( $2^{31}-1$ ). The value must be a multiple of 256.

#### Default Value

8192

#### Syntax

Integer

#### Example

`ds-hdsml-buffersize: 8192`

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## ds-hdsml-poolmaxsize

maximum number of DSML parsers

### Description

The maximum number of DSML parsers kept ready to handle DSML requests. If you expect sustained traffic of many concurrent DSML requests, you may choose to increase the value of this attribute.

#### Entry DN

`cn=DSMLv2-SOAP-HTTP,cn=frontends, cn=plugins,cn=config`

#### Valid Range

1 to an appropriate upper limit for your deployment, with a maximum of 2147483647 ( $2^{31}-1$ ).

#### Default Value

10

#### Syntax

Integer

#### Example

`ds-hdsml-poolmaxsize: 10`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## ds-hdsml-poolsize

default number of DSML parsers

### Description

The minimum, default number of DSML parsers kept ready to handle DSML requests. If you expect sustained traffic of many concurrent DSML requests, you may choose to increase the value of this attribute.

#### Entry DN

`cn=DSMLv2-SOAP-HTTP,cn=frontends,cn=plugins,cn=config`

#### Valid Range

1 to an appropriate upper limit for your deployment, with a maximum of 2147483647 ( $2^{31}-1$ ).

#### Default Value

5

#### Syntax

Integer

#### Example

`ds-hdsml-poolsize: 5`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## ds-hdsml-port

DSML port number

### Description

The HTTP port used for DSML communications. The selected port must be unique on the host system; make sure no other application is attempting to use the same port number. Specifying a port number of less than 1024 requires Directory Server to run as super user.

You must restart the server for a port number change to be taken into account.

#### Entry DN

`cn=DSMLv2-SOAP-HTTP,cn=frontends,cn=plugins,cn=config`

#### Valid Range

1-65535

#### Default Value

disabled

#### Syntax

Integer

#### Example

`ds-hdsml-port: 8080`

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## ds-hdsml-requestmaxsize

maximum DSML request size

### Description

The maximum size of a DSML request. If the request is larger than this value, the server responds with the error message `REQUEST_ENTITY_TOO_LARGE` and closes the connection to prevent the client from continuing the request.

### Entry DN

`cn=DSMLv2-SOAP-HTTP,cn=frontends,cn=plugins,cn=config`

### Valid Range

1-2147483647 ( $2^{31}-1$ )

### Default Value

32768

### Syntax

Integer

### Example

`ds-hdsml-requestmaxsize: 32768`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## ds-hdsml-responsemsgsize

maximum size of DSML response

### Description

The maximum size of a server response to a DSML request, or a fraction of the maximum response size in the case of intermediate search responses. If the response is larger than the size specified here.

#### Entry DN

cn=DSMLv2-SOAP-HTTP, cn=frontends, cn=plugins, cn=config

#### Valid Range

1-2147483647 ( $2^{31}-1$ )

#### Default Value

65536

#### Syntax

Integer

#### Example

ds-hdsml-responsemsgsize: 65536

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## ds-hdsml-rooturl

root URL for DSML

### Description

The root URL used in the HTTP POST request to indicate the request is DSML. On the client side, this corresponds to the first line of the post, such as:

```
POST /dsml HTTP/1.1
```

Client applications must post to the value of this attribute.

### Entry DN

`cn=DSMLv2-SOAP-HTTP,cn=frontends,cn=plugins, cn=config`

### Valid Range

Any valid URL.

### Default Value

`/dsml`

### Syntax

DirectoryString

### Example

`ds-hdsml-rooturl: /dsml`

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## ds-hdsml-secureport

DSML SSL port number

### Description

The port number used for secure DSML communications (over SSL). The selected port must be unique on the host system; make sure no other application is attempting to use the same port number. Specifying a port number of less than 1024 requires Directory Server to run as super user.

You must restart the server for a port number change to be taken into account.

#### Entry DN

`cn=DSMLv2-SOAP-HTTP,cn=frontends,cn=plugins, cn=config`

#### Valid Range

1-65535

#### Default Value

None

#### Syntax

Integer

#### Example

`ds-hdsml-secureport: 1443`

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## ds-hdsml-soapschemalocation

SOAP schema location for DSML

### Description

The path to the SOAP schema. This is generated automatically and should not be changed.

#### Entry DN

`cn=DSMLv2-SOAP-HTTP,cn=frontends,cn=plugins, cn=config`

#### Valid Range

Any valid path to the directory storing the SOAP schema.

#### Default Value

`instance-path/plugins/soap-env.xsd`

#### Syntax

DirectoryString

#### Example

```
ds-hdsml-soapschemalocation:
/local/dsInstance/plugins/soap-env.xsd
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## ds-maxheaphigh

Specify soft and hard thresholds for heap memory use

### Description

PROPERTY	VALUE
Entry DN	cn=config, cn=ldbm database, cn=plugins, cn=config
Valid Range	Range depends on the deployment. The value is checked against the run-time values.
Default Value	Not set by default.
Syntax	Integer

These attributes specify threshold values for dynamic memory footprint. When the memory threshold is reached, Directory Server attempts to free memory from the entry caches, and limit memory use.

- When `ds-maxheaplow` is reached, Directory Server attempts to free memory concurrently with other operations.
- When `ds-maxheaphigh` is reached, Directory Server prevents operations on the cache while memory is freed.

These attributes safeguard against sudden increases of memory footprint due to changes in allocation patterns. As such, the memory thresholds should be higher than the sum of all entry caches, plus the memory footprint at startup.

`ds-maxheaphigh` and `ds-maxheaplow` must be configured in conjunction with each other, as follows.

- If `ds-maxheaphigh` is zero or is not set, `ds-maxheaplow` is ignored.
- If `ds-maxheaphigh` is set, its value must be at least one gigabyte.
- If `ds-maxheaphigh` is set, the value of `ds-maxheaplow` must be less than that of `ds-maxheaphigh`.
- If `ds-maxheaphigh` is set to a value other than zero, `ds-maxheaplow` is automatically set by default to 7/8 of the value of `ds-maxheaphigh`.
- If `ds-maxheaphigh` and `ds-maxheaplow` are both set to a value other than zero, `ds-maxheaplow` must be greater than or equal to  $(ds-maxheaphigh + minheap) / 2$ , where `minheap` is the twice of the memory required during startup. If this condition is not met, `ds-maxheaplow` is automatically set by default to 7/8 of the value of `ds-maxheaphigh`.

The number of times the memory thresholds have been exceeded can be monitored by using the `heapmaxhighhits` and `heapmaxlowhits` attributes.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**

[heapmaxhighhits\(5DSCONF\)](#)

## ds-maxheaplow

Specify soft and hard thresholds for heap memory use

### Description

PROPERTY	VALUE
Entry DN	cn=config, cn=ldbm database, cn=plugins, cn=config
Valid Range	Range depends on the deployment. The value is checked against the run-time values.
Default Value	Not set by default.
Syntax	Integer

These attributes specify threshold values for dynamic memory footprint. When the memory threshold is reached, Directory Server attempts to free memory from the entry caches, and limit memory use.

- When `ds-maxheaplow` is reached, Directory Server attempts to free memory concurrently with other operations.
- When `ds-maxheaphigh` is reached, Directory Server prevents operations on the cache while memory is freed.

These attributes safeguard against sudden increases of memory footprint due to changes in allocation patterns. As such, the memory thresholds should be higher than the sum of all entry caches, plus the memory footprint at startup.

`ds-maxheaphigh` and `ds-maxheaplow` must be configured in conjunction with each other, as follows.

- If `ds-maxheaphigh` is zero or is not set, `ds-maxheaplow` is ignored.
- If `ds-maxheaphigh` is set, its value must be at least one gigabyte.
- If `ds-maxheaphigh` is set, the value of `ds-maxheaplow` must be less than that of `ds-maxheaphigh`.
- If `ds-maxheaphigh` is set to a value other than zero, `ds-maxheaplow` is automatically set by default to 7/8 of the value of `ds-maxheaphigh`.
- If `ds-maxheaphigh` and `ds-maxheaplow` are both set to a value other than zero, `ds-maxheaplow` must be greater than or equal to  $(ds-maxheaphigh + minheap) / 2$ , where `minheap` is the twice of the memory required during startup. If this condition is not met, `ds-maxheaplow` is automatically set by default to 7/8 of the value of `ds-maxheaphigh`.

The number of times the memory thresholds have been exceeded can be monitored by using the `heapmaxhighhits` and `heapmaxlowhits` attributes.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**

[heapmaxhighhits\(5DSCONF\)](#)

## dsml-answer-size

DS server instance configuration (SER) property dsml-answer-size

### Description

The behavior of a Directory Server instance is configured according to server properties such as dsml-answer-size.

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	64k
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the maximum size of a server response to a DSML request. Larger responses are chunked.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

---

## dsml-buffer-size

DS server instance configuration (SER) property dsml-buffer-size

### Description

The behavior of a Directory Server instance is configured according to server properties such as dsml-buffer-size.

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	8k
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the size of the buffer used to store DSML requests. If the server receives many DSML requests larger than this limit, increase the buffer size.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## dsml-client-auth-mode

DS server instance configuration (SER) property dsml-client-auth-mode

### Description

The behavior of a Directory Server instance is configured according to server properties such as dsml-client-auth-mode.

Characteristic	Value
Syntax	clientCertOnly   httpBasicOnly   clientCertFirst
Default Value	httpBasicOnly
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies how the server identifies a client application. The following settings are supported.

`clientCertOnly`

Use credentials from the client certificate to identify the client.

`httpBasicOnly`

Use credentials from the HTTP authorization header to identify the client.

`clientCertFirst`

Attempt to use the client certificate credentials to identify the client. If there are no client certificate credentials, credentials from the HTTP authorization header are used.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

---

## dsml-enabled

DS server instance configuration (SER) property dsml-enabled

### Description

The behavior of a Directory Server instance is configured according to server properties such as dsml-enabled.

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies whether the server accepts DSML requests.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## dsml-max-parser-count

DS server instance configuration (SER) property dsml-max-parser-count

### Description

The behavior of a Directory Server instance is configured according to server properties such as dsml-max-parser-count.

Characteristic	Value
Syntax	INTEGER
Default Value	5
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the maximum number of DSML parsers allocated to handle client requests. Increase the value of this property if the server must handle sustained, high numbers of DSML client requests.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

---

## dsml-min-parser-count

DS server instance configuration (SER) property dsml-min-parser-count

### Description

The behavior of a Directory Server instance is configured according to server properties such as dsml-min-parser-count.

Characteristic	Value
Syntax	INTEGER
Default Value	10
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the minimum number of DSML parsers allocated to handle client requests. Increase the value of this property if the server must handle sustained, high numbers of DSML client requests.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## dsml-port

---

DS server instance configuration (SER) property dsml-port

### Description

The behavior of a Directory Server instance is configured according to server properties such as dsml-port.

Characteristic	Value
Syntax	INTEGER   disabled
Default Value	disabled
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the port number on which the server listens for DSML requests. Changing the value requires that you restart the server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

---

## dsml-relative-root-url

DS server instance configuration (SER) property dsml-relative-root-url

### Description

The behavior of a Directory Server instance is configured according to server properties such as dsml-relative-root-url.

Characteristic	Value
Syntax	STRING
Default Value	/dsml
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the root URL HTTP clients should specify in their POST requests.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## dsml-request-max-size

DS server instance configuration (SER) property dsml-request-max-size

### Description

The behavior of a Directory Server instance is configured according to server properties such as dsml-request-max-size.

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	32k
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the maximum size for DSML client requests.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

---

## dsml-secure-port

DS server instance configuration (SER) property dsml-secure-port

### Description

The behavior of a Directory Server instance is configured according to server properties such as dsml-secure-port.

Characteristic	Value
Syntax	INTEGER   disabled
Default Value	disabled
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the port number on which the server listens for DSML requests over HTTPS. Changing the value requires that you restart the server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## dsReplFractionalExclude

Attribute types to exclude from replication

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	Any valid attribute type
Default Value	N/A
Syntax	DirectoryString

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

When this multi-valued fractional replication configuration attribute is set, the supplier does not send updates for the specified attribute types when replicating to the consumer. This attribute is mutually exclusive with [dsReplFractionalInclude\(5DSCONF\)](#).

### Examples

```
dsReplFractionalExclude: userPassword
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

---

## dsReplFractionalInclude

Attribute types to include in replication

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	Any valid attribute type
Default Value	N/A
Syntax	DirectoryString

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

When this multi-valued fractional replication configuration attribute is set, the supplier send updates only for the specified attribute types when replicating to the consumer. This attribute is mutually exclusive with [dsReplFractionalExclude\(5DSCONF\)](#).

### Examples

```
dsReplFractionalInclude: cn
dsReplFractionalInclude: mail
dsReplFractionalInclude: objectClass
dsReplFractionalInclude: sn
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

---

## enabled

Whether the configuration element is operational

### Description

Characteristic	Value
Syntax	on   off
Default Value	Depends on the configuration element
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

Use this property to turn on the configuration element.

### Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

#### ATTR\_NAME

A valid attribute type name such as `cn` or `objectClass`.

#### BOOLEAN

`true` or `false`.

#### DN

A valid distinguished name such as `ou=People,dc=example,dc=com`.

#### DURATION

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

#### EMAIL\_ADDRESS

A valid e-mail address.

#### HOST\_NAME

An IP address or host name.

#### INTEGER

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

enabled

---

TIME

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dsconf\(1M\)](#), [log\(5DSCONF\)](#), [plugin\(5DSCONF\)](#), [repl-agmt\(5DSCONF\)](#), [suffix\(5DSCONF\)](#)

---

## encryption

DS attribute encryption (ETA) properties

### Description

Directory Server allows you to encrypt individual attributes to protect sensitive information stored in the directory. The encryption does not prevent client applications from reading the attributes. Instead it works at the database index file level to prevent users with access to read database index files from being able to search through the indexes for sensitive information.

For example, before attribute encryption is configured for `uid` attributes, a user with read access to database index files could easily find out that `bjensen` is a `uid` attribute value:

```
$ strings example_uid.db3 | grep bjensen
=bjensen
$
```

Once `uid` attributes are encrypted, the job is not so easy:

```
$ strings example_uid.db3 | grep bjensen
$
```

Notice however that encrypted RDN values are not fully hidden. Instead they appear in clear in the DN index:

```
$ strings example_entrydn.db3 | grep bjensen
=uid=bjensen,ou=people,dc=example,dc=com
=uid=bjensen,ou=people,dc=example,dc=com
$
```

### PROPERTY: `algorithm`

Characteristic	Value
Syntax	<code>des des3 rc2 rc4 aes256 aes128 camellia128 camellia256</code>
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

Directory Server uses a cipher to encrypt a specified attribute in a given suffix. This property specifies the cipher used.

The following property values are supported:

```
des
DES block cipher
```

des3  
Triple-DES block cipher

rc2  
RC2 block cipher

rc4  
RC4 stream cipher

aes128  
AES 128-bit block cipher

aes256  
AES 256-bit block cipher

camellia128  
CAMELLIA 128-bit block cipher

camellia256  
CAMELLIA 256-bit block cipher

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

### ATTR\_NAME

A valid attribute type name such as `cn` or `objectClass`.

### BOOLEAN

`true` or `false`.

### DN

A valid distinguished name such as `ou=People,dc=example,dc=com`.

### DURATION

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

### EMAIL\_ADDRESS

A valid e-mail address.

### HOST\_NAME

An IP address or host name.

### INTEGER

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [desc\(5DSCONF\)](#)

---

## entry-cache-count

DS suffix configuration (SUF) properties

### Description

Each Directory Server suffix you create is configured according to the suffix properties documented here and in the documentation specified under the SEE ALSO section.

#### **PROPERTY:** `compression-entries`

Characteristic	Value
Syntax	<code>all overflow</code>
Default Value	<code>overflow</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies entry eligibility for compression.

`all`

All the entries will be compressed.

`overflow`

Only entries in overflow pages will be compressed.

#### **PROPERTY:** `compression-mode`

Characteristic	Value
Syntax	<code>none DSZ</code>
Default Value	<code>None</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies how entries are compressed.

`none`

No entries compression mechanism will be used.

`DSZ`

Entries will be compressed using the DSZ method.

**PROPERTY:** db-name

Characteristic	Value
Syntax	STRING
Default Value	<i>suffixName</i>
Is readable	Yes
Is modifiable	No
Is multi-valued	Yes

This property specifies the suffix that is used to process requests involving the database.

**PROPERTY:** db-path

Characteristic	Value
Syntax	PATH
Default Value	<i>server-instance-dir/db/suffix-dir</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute path to the suffix database.

**PROPERTY:** entry-cache-count

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	unlimited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of entries allowed in the entry cache of the suffix.

**PROPERTY:** entry-cache-mode

Characteristic	Value
Syntax	automatic   manual
Default Value	automatic
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the server should automatically manage the entry cache size based on the load.

When you create a SUFFIX, the `entry-cache-mode` property is set to `automatic` by default.

To manually modify cache size, set `entry-cache-mode` to `manual`, and then you can manually manage the SUFFIX properties [entry-cache-count](#) and [entry-cache-size](#).

**PROPERTY:** `entry-cache-preload-enabled`

Characteristic	Value
Syntax	<code>on   off</code>
Default Value	<code>off</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether SUFFIX entry cache is preloaded at server startup.

**PROPERTY:** `entry-cache-size`

Characteristic	Value
Syntax	<code>MEMORY_SIZE</code>
Default Value	<code>20M</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum amount of memory Directory Server requests for the entry cache of the suffix.

**PROPERTY:** `entry-count`

Characteristic	Value
Syntax	<code>INTEGER</code>
Default Value	<code>0</code>
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the number of entries stored in the suffix.

**PROPERTY:** entry-crc-enabled

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether a CRC is computed on each entry.

**PROPERTY:** index-filter-analyzer-enabled

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	No
Is multi-valued	No
Restart needed	No

This property specifies whether the index filter analyzer is running.

**PROPERTY:** index-filter-analyzer-max-entries

Characteristic	Value
Syntax	Integer
Default Value	2000
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies the maximum number of entries that the index filter analyzer may contain.

**PROPERTY:** parent-suffix-dn

Characteristic	Value
Syntax	DN   undefined
Default Value	DN of the parent entry

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN of the parent entry for the suffix. The value of this property must logically be a parent of the suffix.

For instance, if you have a suffix with DN `dc=com` and a suffix `dc=example, dc=com`, you can set `dc=com` as the `parent-suffix-dn` of `dc=example, dc=com`, and subtree searches with based DN `dc=com` then also traverses `dc=example, dc=com`.

### PROPERTY: `referral-mode`

Characteristic	Value
Syntax	<code>disabled</code>   <code>enabled</code>   <code>only-on-write</code>
Default Value	<code>disabled</code>
Is readable	Yes
Is modifiable	Yes, if the suffix is not replicated
Is multi-valued	No

This property specifies how referrals are used when a client makes a request involving the suffix.

`disabled`

Handle requests locally; do not return referral URLs.

`enabled`

Return referral URLs to client requests.

`only-on-write`

Return referral URLs to client requests only for write operations.

### PROPERTY: `repl-accept-client-update-enabled`

Characteristic	Value
Syntax	<code>on</code>   <code>off</code>
Default Value	<code>on</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the replicated suffix accepts write operations from client applications, or instead returns referral URLs.

**PROPERTY:** repl-cl-max-age

Characteristic	Value
Syntax	DURATION   undefined
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age for a record in the replication changelog. Older records are purged.

**PROPERTY:** repl-cl-max-entry-count

Characteristic	Value
Syntax	INTEGER
Default Value	0 (meaning undefined)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum number of records in the replication changelog. When the limit is exceeded, older records are purged.

**PROPERTY:** repl-id

Characteristic	Value
Syntax	INTEGER
Default Value	None
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the replica identification number, 1-65534 for a supplier, 65535 for a consumer or a hub. Once set, this property cannot be modified.

**PROPERTY:** repl-manager-bind-dn

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes

Characteristic	Value
Is multi-valued	Yes

This property specifies the bind DN's of users allowed to bind to perform replication operations on the suffix.

**PROPERTY:** `repl-purge-delay`

Characteristic	Value
Syntax	DURATION   never
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age of tombstone entries used by replication. Tombstone entries are entries marked for deletion that have not yet been removed, and also replication state information associated with the entries. When setting this attribute, ensure that the purge delay is longer than the longest replication cycle in your replication policy to avoid incurring conflict resolution problems and divergence between replicas.

**PROPERTY:** `repl-rewrite-referrals-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether referrals you set can be automatically overwritten by the server to reference replicas.

**PROPERTY:** `repl-role`

Characteristic	Value
Syntax	not-replicated   master   hub   consumer
Default Value	not-replicated
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the role played by the suffix in a replicated topology.

not-replicated

The suffix is not part of a replicated topology.

master

This suffix is a supplier of replication updates in a replicated topology. It can accept both read and write operations.

hub

This suffix is a supplier of replication updates in a replicated topology. It can accept read operations and replication updates.

consumer

This suffix is a dedicated consumer of replication updates in a replicated topology. It can accept read operations and replication updates, but not writes from clients.

To promote a replica, use the `dsconf promote-repl` command. To demote a replica, use the `dsconf demote-repl` command.

### **PROPERTY:** `require-index-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether unindexed searches are allowed. When on, unindexed searches return `LDAP_UNWILLING_TO_PERFORM`.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

ATTR\_NAME

A valid attribute type name such as `cn` or `objectClass`.

BOOLEAN

true or false.

DN

A valid distinguished name such as `ou=People,dc=example,dc=com`.

DURATION

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and milliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

STRING

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

SUPPORTED\_SSL\_CIPHER

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

SUPPORTED\_SSL\_PROTOCOL

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

TIME

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	11g R1 (11.1.1.7.0)
Stability Level	Evolving

## See Also

[dsconf\(1M\)](#), [all-ids-threshold\(5DSCONF\)](#), [db-path\(5DSCONF\)](#), [enabled\(5DSCONF\)](#), [moddn-enabled\(5DSCONF\)](#), [referral-url\(5DSCONF\)](#)

---

## entry-cache-mode

DS suffix configuration (SUF) properties

### Description

Each Directory Server suffix you create is configured according to the suffix properties documented here and in the documentation specified under the SEE ALSO section.

#### **PROPERTY:** `compression-entries`

Characteristic	Value
Syntax	<code>all overflow</code>
Default Value	<code>overflow</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies entry eligibility for compression.

`all`

All the entries will be compressed.

`overflow`

Only entries in overflow pages will be compressed.

#### **PROPERTY:** `compression-mode`

Characteristic	Value
Syntax	<code>none DSZ</code>
Default Value	<code>None</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies how entries are compressed.

`none`

No entries compression mechanism will be used.

`DSZ`

Entries will be compressed using the DSZ method.

**PROPERTY:** db-name

Characteristic	Value
Syntax	STRING
Default Value	<i>suffixName</i>
Is readable	Yes
Is modifiable	No
Is multi-valued	Yes

This property specifies the suffix that is used to process requests involving the database.

**PROPERTY:** db-path

Characteristic	Value
Syntax	PATH
Default Value	<i>server-instance-dir/db/suffix-dir</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute path to the suffix database.

**PROPERTY:** entry-cache-count

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	unlimited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of entries allowed in the entry cache of the suffix.

**PROPERTY:** entry-cache-mode

Characteristic	Value
Syntax	automatic   manual
Default Value	automatic
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the server should automatically manage the entry cache size based on the load.

When you create a SUFFIX, the `entry-cache-mode` property is set to `automatic` by default.

To manually modify cache size, set `entry-cache-mode` to `manual`, and then you can manually manage the SUFFIX properties [entry-cache-count](#) and [entry-cache-size](#).

**PROPERTY:** `entry-cache-preload-enabled`

Characteristic	Value
Syntax	<code>on   off</code>
Default Value	<code>off</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether SUFFIX entry cache is preloaded at server startup.

**PROPERTY:** `entry-cache-size`

Characteristic	Value
Syntax	<code>MEMORY_SIZE</code>
Default Value	<code>20M</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum amount of memory Directory Server requests for the entry cache of the suffix.

**PROPERTY:** `entry-count`

Characteristic	Value
Syntax	<code>INTEGER</code>
Default Value	<code>0</code>
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the number of entries stored in the suffix.

**PROPERTY:** entry-crc-enabled

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether a CRC is computed on each entry.

**PROPERTY:** index-filter-analyzer-enabled

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	No
Is multi-valued	No
Restart needed	No

This property specifies whether the index filter analyzer is running.

**PROPERTY:** index-filter-analyzer-max-entries

Characteristic	Value
Syntax	Integer
Default Value	2000
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies the maximum number of entries that the index filter analyzer may contain.

**PROPERTY:** parent-suffix-dn

Characteristic	Value
Syntax	DN   undefined
Default Value	DN of the parent entry

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN of the parent entry for the suffix. The value of this property must logically be a parent of the suffix.

For instance, if you have a suffix with DN `dc=com` and a suffix `dc=example, dc=com`, you can set `dc=com` as the `parent-suffix-dn` of `dc=example, dc=com`, and subtree searches with based DN `dc=com` then also traverses `dc=example, dc=com`.

### PROPERTY: `referral-mode`

Characteristic	Value
Syntax	<code>disabled</code>   <code>enabled</code>   <code>only-on-write</code>
Default Value	<code>disabled</code>
Is readable	Yes
Is modifiable	Yes, if the suffix is not replicated
Is multi-valued	No

This property specifies how referrals are used when a client makes a request involving the suffix.

`disabled`

Handle requests locally; do not return referral URLs.

`enabled`

Return referral URLs to client requests.

`only-on-write`

Return referral URLs to client requests only for write operations.

### PROPERTY: `repl-accept-client-update-enabled`

Characteristic	Value
Syntax	<code>on</code>   <code>off</code>
Default Value	<code>on</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the replicated suffix accepts write operations from client applications, or instead returns referral URLs.

**PROPERTY:** repl-cl-max-age

Characteristic	Value
Syntax	DURATION   undefined
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age for a record in the replication changelog. Older records are purged.

**PROPERTY:** repl-cl-max-entry-count

Characteristic	Value
Syntax	INTEGER
Default Value	0 (meaning undefined)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum number of records in the replication changelog. When the limit is exceeded, older records are purged.

**PROPERTY:** repl-id

Characteristic	Value
Syntax	INTEGER
Default Value	None
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the replica identification number, 1-65534 for a supplier, 65535 for a consumer or a hub. Once set, this property cannot be modified.

**PROPERTY:** repl-manager-bind-dn

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes

Characteristic	Value
Is multi-valued	Yes

This property specifies the bind DN's of users allowed to bind to perform replication operations on the suffix.

**PROPERTY:** `repl-purge-delay`

Characteristic	Value
Syntax	DURATION   never
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age of tombstone entries used by replication. Tombstone entries are entries marked for deletion that have not yet been removed, and also replication state information associated with the entries. When setting this attribute, ensure that the purge delay is longer than the longest replication cycle in your replication policy to avoid incurring conflict resolution problems and divergence between replicas.

**PROPERTY:** `repl-rewrite-referrals-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether referrals you set can be automatically overwritten by the server to reference replicas.

**PROPERTY:** `repl-role`

Characteristic	Value
Syntax	not-replicated   master   hub   consumer
Default Value	not-replicated
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the role played by the suffix in a replicated topology.

not-replicated

The suffix is not part of a replicated topology.

master

This suffix is a supplier of replication updates in a replicated topology. It can accept both read and write operations.

hub

This suffix is a supplier of replication updates in a replicated topology. It can accept read operations and replication updates.

consumer

This suffix is a dedicated consumer of replication updates in a replicated topology. It can accept read operations and replication updates, but not writes from clients.

To promote a replica, use the `dsconf promote-repl` command. To demote a replica, use the `dsconf demote-repl` command.

**PROPERTY:** `require-index-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether unindexed searches are allowed. When on, unindexed searches return `LDAP_UNWILLING_TO_PERFORM`.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

ATTR\_NAME

A valid attribute type name such as `cn` or `objectClass`.

BOOLEAN

true or false.

DN

A valid distinguished name such as `ou=People,dc=example,dc=com`.

DURATION

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and milliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	11g R1 (11.1.1.7.0)
Stability Level	Evolving

## See Also

[dsconf\(1M\)](#), [all-ids-threshold\(5DSCONF\)](#), [db-path\(5DSCONF\)](#), [enabled\(5DSCONF\)](#), [moddn-enabled\(5DSCONF\)](#), [referral-url\(5DSCONF\)](#)

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## entry-cache-preload-enabled

DS suffix configuration (SUF) properties

### Description

Each Directory Server suffix you create is configured according to the suffix properties documented here and in the documentation specified under the SEE ALSO section.

#### **PROPERTY:** `compression-entries`

Characteristic	Value
Syntax	<code>all overflow</code>
Default Value	<code>overflow</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies entry eligibility for compression.

`all`

All the entries will be compressed.

`overflow`

Only entries in overflow pages will be compressed.

#### **PROPERTY:** `compression-mode`

Characteristic	Value
Syntax	<code>none DSZ</code>
Default Value	<code>None</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies how entries are compressed.

`none`

No entries compression mechanism will be used.

`DSZ`

Entries will be compressed using the DSZ method.

**PROPERTY:** db-name

Characteristic	Value
Syntax	STRING
Default Value	<i>suffixName</i>
Is readable	Yes
Is modifiable	No
Is multi-valued	Yes

This property specifies the suffix that is used to process requests involving the database.

**PROPERTY:** db-path

Characteristic	Value
Syntax	PATH
Default Value	<i>server-instance-dir/db/suffix-dir</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute path to the suffix database.

**PROPERTY:** entry-cache-count

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	unlimited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of entries allowed in the entry cache of the suffix.

**PROPERTY:** entry-cache-mode

Characteristic	Value
Syntax	automatic   manual
Default Value	automatic
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the server should automatically manage the entry cache size based on the load.

When you create a SUFFIX, the `entry-cache-mode` property is set to `automatic` by default.

To manually modify cache size, set `entry-cache-mode` to `manual`, and then you can manually manage the SUFFIX properties [entry-cache-count](#) and [entry-cache-size](#).

**PROPERTY:** `entry-cache-preload-enabled`

Characteristic	Value
Syntax	<code>on   off</code>
Default Value	<code>off</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether SUFFIX entry cache is preloaded at server startup.

**PROPERTY:** `entry-cache-size`

Characteristic	Value
Syntax	<code>MEMORY_SIZE</code>
Default Value	<code>20M</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum amount of memory Directory Server requests for the entry cache of the suffix.

**PROPERTY:** `entry-count`

Characteristic	Value
Syntax	<code>INTEGER</code>
Default Value	<code>0</code>
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the number of entries stored in the suffix.

**PROPERTY:** entry-crc-enabled

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether a CRC is computed on each entry.

**PROPERTY:** index-filter-analyzer-enabled

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	No
Is multi-valued	No
Restart needed	No

This property specifies whether the index filter analyzer is running.

**PROPERTY:** index-filter-analyzer-max-entries

Characteristic	Value
Syntax	Integer
Default Value	2000
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies the maximum number of entries that the index filter analyzer may contain.

**PROPERTY:** parent-suffix-dn

Characteristic	Value
Syntax	DN   undefined
Default Value	DN of the parent entry

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN of the parent entry for the suffix. The value of this property must logically be a parent of the suffix.

For instance, if you have a suffix with DN `dc=com` and a suffix `dc=example, dc=com`, you can set `dc=com` as the `parent-suffix-dn` of `dc=example, dc=com`, and subtree searches with based DN `dc=com` then also traverses `dc=example, dc=com`.

### PROPERTY: `referral-mode`

Characteristic	Value
Syntax	<code>disabled</code>   <code>enabled</code>   <code>only-on-write</code>
Default Value	<code>disabled</code>
Is readable	Yes
Is modifiable	Yes, if the suffix is not replicated
Is multi-valued	No

This property specifies how referrals are used when a client makes a request involving the suffix.

`disabled`

Handle requests locally; do not return referral URLs.

`enabled`

Return referral URLs to client requests.

`only-on-write`

Return referral URLs to client requests only for write operations.

### PROPERTY: `repl-accept-client-update-enabled`

Characteristic	Value
Syntax	<code>on</code>   <code>off</code>
Default Value	<code>on</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the replicated suffix accepts write operations from client applications, or instead returns referral URLs.

**PROPERTY:** repl-cl-max-age

Characteristic	Value
Syntax	DURATION   undefined
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age for a record in the replication changelog. Older records are purged.

**PROPERTY:** repl-cl-max-entry-count

Characteristic	Value
Syntax	INTEGER
Default Value	0 (meaning undefined)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum number of records in the replication changelog. When the limit is exceeded, older records are purged.

**PROPERTY:** repl-id

Characteristic	Value
Syntax	INTEGER
Default Value	None
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the replica identification number, 1-65534 for a supplier, 65535 for a consumer or a hub. Once set, this property cannot be modified.

**PROPERTY:** repl-manager-bind-dn

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes

Characteristic	Value
Is multi-valued	Yes

This property specifies the bind DN's of users allowed to bind to perform replication operations on the suffix.

**PROPERTY:** `repl-purge-delay`

Characteristic	Value
Syntax	DURATION   never
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age of tombstone entries used by replication. Tombstone entries are entries marked for deletion that have not yet been removed, and also replication state information associated with the entries. When setting this attribute, ensure that the purge delay is longer than the longest replication cycle in your replication policy to avoid incurring conflict resolution problems and divergence between replicas.

**PROPERTY:** `repl-rewrite-referrals-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether referrals you set can be automatically overwritten by the server to reference replicas.

**PROPERTY:** `repl-role`

Characteristic	Value
Syntax	not-replicated   master   hub   consumer
Default Value	not-replicated
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the role played by the suffix in a replicated topology.

not-replicated

The suffix is not part of a replicated topology.

master

This suffix is a supplier of replication updates in a replicated topology. It can accept both read and write operations.

hub

This suffix is a supplier of replication updates in a replicated topology. It can accept read operations and replication updates.

consumer

This suffix is a dedicated consumer of replication updates in a replicated topology. It can accept read operations and replication updates, but not writes from clients.

To promote a replica, use the `dsconf promote-repl` command. To demote a replica, use the `dsconf demote-repl` command.

### **PROPERTY:** `require-index-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether unindexed searches are allowed. When on, unindexed searches return `LDAP_UNWILLING_TO_PERFORM`.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

true or false.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and milliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

STRING

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

SUPPORTED\_SSL\_CIPHER

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

SUPPORTED\_SSL\_PROTOCOL

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

TIME

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	11g R1 (11.1.1.7.0)
Stability Level	Evolving

## See Also

`dsconf(1M)`, `all-ids-threshold(5DSCONF)`, `db-path(5DSCONF)`, `enabled(5DSCONF)`, `moddn-enabled(5DSCONF)`, `referral-url(5DSCONF)`

---

## entry-cache-size

DS suffix configuration (SUF) properties

### Description

Each Directory Server suffix you create is configured according to the suffix properties documented here and in the documentation specified under the SEE ALSO section.

#### **PROPERTY:** `compression-entries`

Characteristic	Value
Syntax	<code>all overflow</code>
Default Value	<code>overflow</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies entry eligibility for compression.

`all`

All the entries will be compressed.

`overflow`

Only entries in overflow pages will be compressed.

#### **PROPERTY:** `compression-mode`

Characteristic	Value
Syntax	<code>none DSZ</code>
Default Value	<code>None</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies how entries are compressed.

`none`

No entries compression mechanism will be used.

`DSZ`

Entries will be compressed using the DSZ method.

**PROPERTY:** db-name

Characteristic	Value
Syntax	STRING
Default Value	<i>suffixName</i>
Is readable	Yes
Is modifiable	No
Is multi-valued	Yes

This property specifies the suffix that is used to process requests involving the database.

**PROPERTY:** db-path

Characteristic	Value
Syntax	PATH
Default Value	<i>server-instance-dir/db/suffix-dir</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute path to the suffix database.

**PROPERTY:** entry-cache-count

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	unlimited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of entries allowed in the entry cache of the suffix.

**PROPERTY:** entry-cache-size

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	20M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum amount of memory Directory Server requests for the entry cache of the suffix.

**PROPERTY:** `entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the number of entries stored in the suffix.

**PROPERTY:** `entry-crc-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether a CRC is computed on each entry.

**PROPERTY:** `index-filter-analyzer-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	No
Is multi-valued	No
Restart needed	No

This property specifies whether the index filter analyzer is running.

**PROPERTY:** `index-filter-analyzer-max-entries`

Characteristic	Value
Syntax	Integer
Default Value	2000

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies the maximum number of entries that the index filter analyzer may contain.

**PROPERTY:** `parent-suffix-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	DN of the parent entry
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN of the parent entry for the suffix. The value of this property must logically be a parent of the suffix.

For instance, if you have a suffix with DN `dc=com` and a suffix `dc=example, dc=com`, you can set `dc=com` as the `parent-suffix-dn` of `dc=example, dc=com`, and subtree searches with based DN `dc=com` then also travers `dc=example, dc=com`.

**PROPERTY:** `referral-mode`

Characteristic	Value
Syntax	disabled   enabled   only-on-write
Default Value	disabled
Is readable	Yes
Is modifiable	Yes, if the suffix is not replicated
Is multi-valued	No

This property specifies how referrals are used when a client makes a request involving the suffix.

`disabled`  
Handle requests locally; do not return referral URLs.

`enabled`  
Return referral URLs to client requests.

`only-on-write`  
Return referral URLs to client requests only for write operations.

**PROPERTY:** `repl-accept-client-update-enabled`

Characteristic	Value
Syntax	on   off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the replicated suffix accepts write operations from client applications, or instead returns referral URLs.

**PROPERTY:** `repl-cl-max-age`

Characteristic	Value
Syntax	DURATION   undefined
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age for a record in the replication changelog. Older records are purged.

**PROPERTY:** `repl-cl-max-entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0 (meaning undefined)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum number of records in the replication changelog. When the limit is exceeded, older records are purged.

**PROPERTY:** `repl-id`

Characteristic	Value
Syntax	INTEGER
Default Value	None
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication

Characteristic	Value
Is multi-valued	No

This property specifies the replica identification number, 1-65534 for a supplier, 65535 for a consumer or a hub. Once set, this property cannot be modified.

**PROPERTY:** `repl-manager-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the bind DN's of users allowed to bind to perform replication operations on the suffix.

**PROPERTY:** `repl-purge-delay`

Characteristic	Value
Syntax	DURATION   never
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age of tombstone entries used by replication. Tombstone entries are entries marked for deletion that have not yet been removed, and also replication state information associated with the entries. When setting this attribute, ensure that the purge delay is longer than the longest replication cycle in your replication policy to avoid incurring conflict resolution problems and divergence between replicas.

**PROPERTY:** `repl-rewrite-referrals-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether referrals you set can be automatically overwritten by the server to reference replicas.

**PROPERTY:** `repl-role`

Characteristic	Value
Syntax	<code>not-replicated</code>   <code>master</code>   <code>hub</code>   <code>consumer</code>
Default Value	<code>not-replicated</code>
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the role played by the suffix in a replicated topology.

`not-replicated`

The suffix is not part of a replicated topology.

`master`

This suffix is a supplier of replication updates in a replicated topology. It can accept both read and write operations.

`hub`

This suffix is a supplier of replication updates in a replicated topology. It can accept read operations and replication updates.

`consumer`

This suffix is a dedicated consumer of replication updates in a replicated topology. It can accept read operations and replication updates, but not writes from clients.

To promote a replica, use the `dsconf promote-repl` command. To demote a replica, use the `dsconf demote-repl` command.

**PROPERTY:** `require-index-enabled`

Characteristic	Value
Syntax	<code>on</code>   <code>off</code>
Default Value	<code>off</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether unindexed searches are allowed. When `on`, unindexed searches return `LDAP_UNWILLING_TO_PERFORM`.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple

specifiers. However, `MEMORY_SIZE` properties allow decimal values, for example, 1.5M.

**NAME**

A valid `cn` (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus `640` specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

`dsconf(1M)`, `all-ids-threshold(5DSCONF)`, `db-path(5DSCONF)`, `enabled(5DSCONF)`, `moddn-enabled(5DSCONF)`, `referral-url(5DSCONF)`

## entry-count

DS suffix configuration (SUF) properties

### Description

Each Directory Server suffix you create is configured according to the suffix properties documented here and in the documentation specified under the SEE ALSO section.

#### **PROPERTY:** `compression-entries`

Characteristic	Value
Syntax	<code>all overflow</code>
Default Value	<code>overflow</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies entry eligibility for compression.

`all`

All the entries will be compressed.

`overflow`

Only entries in overflow pages will be compressed.

#### **PROPERTY:** `compression-mode`

Characteristic	Value
Syntax	<code>none DSZ</code>
Default Value	<code>None</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies how entries are compressed.

`none`

No entries compression mechanism will be used.

`DSZ`

Entries will be compressed using the DSZ method.

**PROPERTY:** db-name

Characteristic	Value
Syntax	STRING
Default Value	<i>suffixName</i>
Is readable	Yes
Is modifiable	No
Is multi-valued	Yes

This property specifies the suffix that is used to process requests involving the database.

**PROPERTY:** db-path

Characteristic	Value
Syntax	PATH
Default Value	<i>server-instance-dir/db/suffix-dir</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute path to the suffix database.

**PROPERTY:** entry-cache-count

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	unlimited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of entries allowed in the entry cache of the suffix.

**PROPERTY:** entry-cache-size

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	20M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum amount of memory Directory Server requests for the entry cache of the suffix.

**PROPERTY:** entry-count

Characteristic	Value
Syntax	INTEGER
Default Value	0
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the number of entries stored in the suffix.

**PROPERTY:** entry-crc-enabled

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether a CRC is computed on each entry.

**PROPERTY:** index-filter-analyzer-enabled

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	No
Is multi-valued	No
Restart needed	No

This property specifies whether the index filter analyzer is running.

**PROPERTY:** index-filter-analyzer-max-entries

Characteristic	Value
Syntax	Integer
Default Value	2000

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies the maximum number of entries that the index filter analyzer may contain.

**PROPERTY:** `parent-suffix-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	DN of the parent entry
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN of the parent entry for the suffix. The value of this property must logically be a parent of the suffix.

For instance, if you have a suffix with DN `dc=com` and a suffix `dc=example, dc=com`, you can set `dc=com` as the `parent-suffix-dn` of `dc=example, dc=com`, and subtree searches with based DN `dc=com` then also traverses `dc=example, dc=com`.

**PROPERTY:** `referral-mode`

Characteristic	Value
Syntax	disabled   enabled   only-on-write
Default Value	disabled
Is readable	Yes
Is modifiable	Yes, if the suffix is not replicated
Is multi-valued	No

This property specifies how referrals are used when a client makes a request involving the suffix.

`disabled`  
Handle requests locally; do not return referral URLs.

`enabled`  
Return referral URLs to client requests.

`only-on-write`  
Return referral URLs to client requests only for write operations.

**PROPERTY:** repl-accept-client-update-enabled

Characteristic	Value
Syntax	on   off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the replicated suffix accepts write operations from client applications, or instead returns referral URLs.

**PROPERTY:** repl-cl-max-age

Characteristic	Value
Syntax	DURATION   undefined
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age for a record in the replication changelog. Older records are purged.

**PROPERTY:** repl-cl-max-entry-count

Characteristic	Value
Syntax	INTEGER
Default Value	0 (meaning undefined)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum number of records in the replication changelog. When the limit is exceeded, older records are purged.

**PROPERTY:** repl-id

Characteristic	Value
Syntax	INTEGER
Default Value	None
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication

Characteristic	Value
Is multi-valued	No

This property specifies the replica identification number, 1-65534 for a supplier, 65535 for a consumer or a hub. Once set, this property cannot be modified.

**PROPERTY:** `repl-manager-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the bind DN's of users allowed to bind to perform replication operations on the suffix.

**PROPERTY:** `repl-purge-delay`

Characteristic	Value
Syntax	DURATION   never
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age of tombstone entries used by replication. Tombstone entries are entries marked for deletion that have not yet been removed, and also replication state information associated with the entries. When setting this attribute, ensure that the purge delay is longer than the longest replication cycle in your replication policy to avoid incurring conflict resolution problems and divergence between replicas.

**PROPERTY:** `repl-rewrite-referrals-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether referrals you set can be automatically overwritten by the server to reference replicas.

**PROPERTY:** `repl-role`

Characteristic	Value
Syntax	<code>not-replicated   master   hub   consumer</code>
Default Value	<code>not-replicated</code>
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the role played by the suffix in a replicated topology.

`not-replicated`

The suffix is not part of a replicated topology.

`master`

This suffix is a supplier of replication updates in a replicated topology. It can accept both read and write operations.

`hub`

This suffix is a supplier of replication updates in a replicated topology. It can accept read operations and replication updates.

`consumer`

This suffix is a dedicated consumer of replication updates in a replicated topology. It can accept read operations and replication updates, but not writes from clients.

To promote a replica, use the `dsconf promote-repl` command. To demote a replica, use the `dsconf demote-repl` command.

**PROPERTY:** `require-index-enabled`

Characteristic	Value
Syntax	<code>on   off</code>
Default Value	<code>off</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether unindexed searches are allowed. When `on`, unindexed searches return `LDAP_UNWILLING_TO_PERFORM`.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

true or false.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple

specifiers. However, `MEMORY_SIZE` properties allow decimal values, for example, 1.5M.

**NAME**

A valid `cn` (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus `640` specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form `hhmm` in 24-hour format, where `hh` stands for hours and `mm` stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

`dsconf(1M)`, `all-ids-threshold(5DSCONF)`, `db-path(5DSCONF)`, `enabled(5DSCONF)`, `moddn-enabled(5DSCONF)`, `referral-url(5DSCONF)`

---

## entry-crc-enabled

DS suffix configuration (SUF) properties

### Description

Each Directory Server suffix you create is configured according to the suffix properties documented here and in the documentation specified under the SEE ALSO section.

#### **PROPERTY:** `compression-entries`

Characteristic	Value
Syntax	<code>all overflow</code>
Default Value	<code>overflow</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies entry eligibility for compression.

`all`

All the entries will be compressed.

`overflow`

Only entries in overflow pages will be compressed.

#### **PROPERTY:** `compression-mode`

Characteristic	Value
Syntax	<code>none DSZ</code>
Default Value	<code>None</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies how entries are compressed.

`none`

No entries compression mechanism will be used.

`DSZ`

Entries will be compressed using the DSZ method.

**PROPERTY:** db-name

Characteristic	Value
Syntax	STRING
Default Value	<i>suffixName</i>
Is readable	Yes
Is modifiable	No
Is multi-valued	Yes

This property specifies the suffix that is used to process requests involving the database.

**PROPERTY:** db-path

Characteristic	Value
Syntax	PATH
Default Value	<i>server-instance-dir/db/suffix-dir</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute path to the suffix database.

**PROPERTY:** entry-cache-count

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	unlimited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of entries allowed in the entry cache of the suffix.

**PROPERTY:** entry-cache-size

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	20M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum amount of memory Directory Server requests for the entry cache of the suffix.

**PROPERTY:** entry-count

Characteristic	Value
Syntax	INTEGER
Default Value	0
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the number of entries stored in the suffix.

**PROPERTY:** entry-crc-enabled

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether a CRC is computed on each entry.

**PROPERTY:** index-filter-analyzer-enabled

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	No
Is multi-valued	No
Restart needed	No

This property specifies whether the index filter analyzer is running.

**PROPERTY:** index-filter-analyzer-max-entries

Characteristic	Value
Syntax	Integer
Default Value	2000

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies the maximum number of entries that the index filter analyzer may contain.

**PROPERTY:** `parent-suffix-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	DN of the parent entry
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN of the parent entry for the suffix. The value of this property must logically be a parent of the suffix.

For instance, if you have a suffix with DN `dc=com` and a suffix `dc=example, dc=com`, you can set `dc=com` as the `parent-suffix-dn` of `dc=example, dc=com`, and subtree searches with based DN `dc=com` then also travers `dc=example, dc=com`.

**PROPERTY:** `referral-mode`

Characteristic	Value
Syntax	disabled   enabled   only-on-write
Default Value	disabled
Is readable	Yes
Is modifiable	Yes, if the suffix is not replicated
Is multi-valued	No

This property specifies how referrals are used when a client makes a request involving the suffix.

`disabled`  
Handle requests locally; do not return referral URLs.

`enabled`  
Return referral URLs to client requests.

`only-on-write`  
Return referral URLs to client requests only for write operations.

**PROPERTY:** `repl-accept-client-update-enabled`

Characteristic	Value
Syntax	on   off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the replicated suffix accepts write operations from client applications, or instead returns referral URLs.

**PROPERTY:** `repl-cl-max-age`

Characteristic	Value
Syntax	DURATION   undefined
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age for a record in the replication changelog. Older records are purged.

**PROPERTY:** `repl-cl-max-entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0 (meaning undefined)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum number of records in the replication changelog. When the limit is exceeded, older records are purged.

**PROPERTY:** `repl-id`

Characteristic	Value
Syntax	INTEGER
Default Value	None
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication

Characteristic	Value
Is multi-valued	No

This property specifies the replica identification number, 1-65534 for a supplier, 65535 for a consumer or a hub. Once set, this property cannot be modified.

**PROPERTY:** `repl-manager-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the bind DN's of users allowed to bind to perform replication operations on the suffix.

**PROPERTY:** `repl-purge-delay`

Characteristic	Value
Syntax	DURATION   never
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age of tombstone entries used by replication. Tombstone entries are entries marked for deletion that have not yet been removed, and also replication state information associated with the entries. When setting this attribute, ensure that the purge delay is longer than the longest replication cycle in your replication policy to avoid incurring conflict resolution problems and divergence between replicas.

**PROPERTY:** `repl-rewrite-referrals-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether referrals you set can be automatically overwritten by the server to reference replicas.

**PROPERTY:** `repl-role`

Characteristic	Value
Syntax	<code>not-replicated   master   hub   consumer</code>
Default Value	<code>not-replicated</code>
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the role played by the suffix in a replicated topology.

`not-replicated`

The suffix is not part of a replicated topology.

`master`

This suffix is a supplier of replication updates in a replicated topology. It can accept both read and write operations.

`hub`

This suffix is a supplier of replication updates in a replicated topology. It can accept read operations and replication updates.

`consumer`

This suffix is a dedicated consumer of replication updates in a replicated topology. It can accept read operations and replication updates, but not writes from clients.

To promote a replica, use the `dsconf promote-repl` command. To demote a replica, use the `dsconf demote-repl` command.

**PROPERTY:** `require-index-enabled`

Characteristic	Value
Syntax	<code>on   off</code>
Default Value	<code>off</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether unindexed searches are allowed. When `on`, unindexed searches return `LDAP_UNWILLING_TO_PERFORM`.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form `hhmm-hhmm 0123456`, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple

specifiers. However, `MEMORY_SIZE` properties allow decimal values, for example, 1.5M.

**NAME**

A valid `cn` (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus `640` specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

`dsconf(1M)`, `all-ids-threshold(5DSCONF)`, `db-path(5DSCONF)`, `enabled(5DSCONF)`, `moddn-enabled(5DSCONF)`, `referral-url(5DSCONF)`

## eq-enabled

DS attribute indexing (IDX) properties

### Description

Directory Server can index attributes, making them faster to search. The `dsconf` command helps you configure five of the six supported index types:

1. Equality indexes to determine expediently whether an attribute value is equal to a specified value
2. Presence indexes to determine whether a specified attribute has any values
3. Substring indexes to determine whether a specified attribute has values containing a specified string, also used to compare regular expressions to attribute values
4. Approximate indexes, based on metaphone approximation and useful for English language strings only, to determine whether a specified attribute has any values that sound like the specified string
5. International indexes, also called matching rule indexes, to expedite sorting and searching in accordance with the language rules of a particular locale

The `dsconf` command does not help you configure virtual list view, also known as browsing, indexes.

The `dsconf` command does help you assign all IDs threshold values to indexes. As the number of entries and attribute values grows in a directory, the number of attribute values to index also grows, as does therefore the size of the indexes. In some deployments a server can end up maintaining index lists so large that the cost of rebuilding an index when attributes are modified or added outweighs the benefit the index provides for searches. All IDs thresholds limit the growth of large indexes by defining the maximum number of entry identifiers Directory Server maintains in an index list. You can define all IDs thresholds for individual indexes and for some types of indexes.

Some indexes are maintained by the server for its own use. These are called system indexes. In general, do not modify or remove systems indexes; such modifications could have severe repercussions on performance.

See *Directory Server Indexing in Reference for Oracle Directory Server Enterprise Edition* for further details about indexing.

#### **PROPERTY:** `all-ids-threshold`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of entry IDs the server maintains in an index list for the specified attribute type. By default its value is inherited from the `all-ids-threshold` setting for the suffix, whose default value in turn is inherited from the `all-ids-threshold` setting for the server, which by default is 4000. In addition to inheritance of default settings, this property handles settings as follows:

`inherited`

The threshold is inherited from the more global setting.

`<2000`

The threshold value is rounded up to 2000.

`>2000`

The setting is used as a guaranteed minimum threshold. Because of internal mechanisms, the real value can be slightly more than the specified value.

After you modify this property, reindex the attribute for which you changed the threshold. For example:

```
$ dsconf set-index-prop dc=example,dc=com uid all-ids-threshold:5000
$ dsconf reindex -t uid dc=example,dc=com
```

```
## example: Indexing attribute: uid
## example: Finished indexing.
```

```
Task completed (slapd exit code: 0).
$
```

### PROPERTY: `all-ids-threshold-eq`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for equality indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

### PROPERTY: `all-ids-threshold-pres`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for presence indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

**PROPERTY:** `all-ids-threshold-sub`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for substring indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

**PROPERTY:** `approx-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether approximate indexes are maintained for the specified attribute type. You cannot set an all IDs threshold value for approximate indexes.

**PROPERTY:** `desc`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

Use this optional property to provide a short description of the index configuration.

**PROPERTY:** eq-enabled

Characteristic	Value
Syntax	on off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether equality indexes are maintained for the specified attribute type.

**PROPERTY:** matching-rule

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the matching rule indexes maintained for the specified attribute type.

Values for this property must be valid collation order object identifiers (OIDs). See *Directory Server Internationalized Directory in Directory Server Enterprise Edition Reference* for the OIDs corresponding to supported locales.

**PROPERTY:** pres-enabled

Characteristic	Value
Syntax	on off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether presence indexes are maintained for the specified attribute type.

**PROPERTY:** sub-enabled

Characteristic	Value
Syntax	on off
Default Value	off

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether substring indexes are maintained for the specified attribute type.

**PROPERTY:** `system`

Characteristic	Value
Syntax	<code>true false</code>
Default Value	<code>false</code>
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property identifies whether the specified index is a system index, and therefore should be left alone.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [all-ids-threshold\(5DSCONF\)](#), [desc\(5DSCONF\)](#)

---

## extended-operations

LDAP extended operations handled by Directory Server

### Description

LDAPv3 extended operations allow definition of additional LDAP operations not defined in RFC 2251.

Directory Server handles the LDAP extended operations described here according to their interface stability. See `attributes(5)` for descriptions of interface stability.

#### INTERFACE STABILITY: STANDARD

1.3.6.1.4.1.1466.20037

Start TLS extended operation request, described in RFC 2849

1.3.6.1.4.1.4203.1.11.1

Password modify extended operation, described in RFC 3062

1.3.6.1.4.1.4203.1.11.3

Who am I? extended operation, described in RFC 4532

#### INTERFACE STABILITY: PRIVATE

1.3.6.1.4.1.42.2.27.9.6.1

Replication protocol private extended operation

1.3.6.1.4.1.42.2.27.9.6.2

Replication protocol private extended operation

1.3.6.1.4.1.42.2.27.9.6.3

Replication protocol private extended operation

1.3.6.1.4.1.42.2.27.9.6.4

Replication protocol private extended operation

1.3.6.1.4.1.42.2.27.9.6.5

Replication protocol private extended operation

1.3.6.1.4.1.42.2.27.9.6.6

Replication protocol private extended operation

1.3.6.1.4.1.42.2.27.9.6.7

Replication protocol private extended operation

1.3.6.1.4.1.42.2.27.9.6.8

Replication protocol private extended operation

1.3.6.1.4.1.42.2.27.9.6.9

Replication protocol private extended operation

1.3.6.1.4.1.42.2.27.9.6.11

Replication protocol private extended operation

1.3.6.1.4.1.42.2.27.9.6.12  
Replication protocol private extended operation

1.3.6.1.4.1.42.2.27.9.6.13  
Replication protocol private extended operation

1.3.6.1.4.1.42.2.27.9.6.14  
Replication protocol private extended operation

1.3.6.1.4.1.42.2.27.9.6.15  
Replication protocol private extended operation

1.3.6.1.4.1.42.2.27.9.6.16  
Replication protocol private extended operation

1.3.6.1.4.1.42.2.27.9.6.17  
Replication protocol private extended operation

1.3.6.1.4.1.42.2.27.9.6.18  
Replication protocol private extended operation

1.3.6.1.4.1.42.2.27.9.6.19  
Replication protocol private extended operation

1.3.6.1.4.1.42.2.27.9.6.21  
Replication protocol private extended operation

1.3.6.1.4.1.42.2.27.9.6.22  
Replication protocol private extended operation

1.3.6.1.4.1.42.2.27.9.6.23  
Replication protocol private extended operation

2.16.840.1.113730.3.5.3  
Replication protocol private extended operation

2.16.840.1.113730.3.5.4  
Replication protocol private extended operation

2.16.840.1.113730.3.5.5  
Replication protocol private extended operation

2.16.840.1.113730.3.5.6  
Replication protocol private extended operation

2.16.840.1.113730.3.5.7  
Bulk import start extended operation

2.16.840.1.113730.3.5.8  
Bulk import finished extended operation

---

## feature

DS plug-in configuration (PLG) properties

### Description

Directory Server implements some key functionality as plug-ins. Plug-ins take the form of libraries loaded when the server starts, and called at different points in the processing of client application requests. When you create custom plug-ins, you must configure the server to load and use them, then restart Directory Server to load the newly configured plug-ins.

**PROPERTY:** `argument`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies arguments passed to the plug-in when it is loaded by Directory Server. Arguments are passed in the order you specify them. Updating the list of arguments replaces all the existing arguments previously specified when the plug-in is loaded again.

**PROPERTY:** `depends-on-named`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies names of plug-ins that must be available and loaded before Directory Server loads the current plug-in.

**PROPERTY:** `depends-on-type`

Characteristic	Value
Syntax	STRING (See the description that follows.)
Default Value	None
Is readable	Yes

Characteristic	Value
Is modifiable	Yes
Is multi-valued	Yes

This property specifies types of plug-ins that must be available and loaded before Directory Server loads the current plug-in. The value must be the value of a plug-in `type` property.

**PROPERTY:** `feature`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in identifier from the `Slapi_PluginDesc` structure.

**PROPERTY:** `init-func`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the name of function called by Directory Server to initialize the plug-in.

**PROPERTY:** `lib-path`

Characteristic	Value
Syntax	PATH
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute file system path to the library containing plug-in.

**PROPERTY:** type

Characteristic	Value
Syntax	STRING (See the description that follows.)
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in type. The following plug-in types are supported.

ldbentryfetchstore

Entry store and fetch plug-in

extendedop

Extended operation plug-in

passwordcheck

Password check plug-in

postoperation

Post-operation plug-in

preoperation

Pre-operation plug-in

internalpostoperation

Internal post-operation plug-in

internalpreoperation

Internal pre-operation plug-in

matchingrule

Matching rule plug-in for extensible match search filters

object

Generic plug-in type, sometimes used to register other plug-ins

passwordcheck

Strong password check plug-in

pwdstorage scheme

Password storage scheme plug-in

**PROPERTY:** vendor

Characteristic	Value
Syntax	STRING
Default Value	Vendor name in plug-in configuration
Is readable	Yes
Is modifiable	Yes

Characteristic	Value
Is multi-valued	No

This property specifies the plug-in vendor from the `Slapi_PluginDesc` structure.

**PROPERTY:** `version`

Characteristic	Value
Syntax	STRING
Default Value	Version string in plug-in configuration
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in version from the `Slapi_PluginDesc` structure.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

**DURATION** properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

TIME

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Stable

## See Also

[dsconf\(1M\)](#), [desc\(5DSCONF\)](#), [enabled\(5DSCONF\)](#)

## file-descriptor-count

DS server instance configuration (SER) property file-descriptor-count

### Description

The behavior of a Directory Server instance is configured according to server properties such as `file-descriptor-count`.

Characteristic	Value
Syntax	INTEGER
Default Value	1024
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the maximum number of file descriptors the server instance attempts to use to handle client requests. Increase this value if you observe the following message in the errors log:

```
Not listening for new connections -- too many fds open
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## heap-high-threshold-size

DS server instance configuration (SER) property heap-high-threshold-size

### Description

The behavior of a Directory Server instance is configured according to server properties such as heap-high-threshold-size.

Characteristic	Value
Syntax	MEMORY_SIZE   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies a threshold value for the dynamic memory footprint. When the threshold memory is reached, Directory Server attempts to free memory from the entry caches, and to limit memory use.

- When heap-low-threshold-size is reached, Directory Server attempts to free memory concurrently with other operations.
- When heap-high-threshold-size is reached, Directory Server prevents operations on the cache while memory is freed.

heap-high-threshold-size and heap-low-threshold-size must be configured in conjunction with each other, as follows.

- If heap-high-threshold-size is set to undefined or is not set, heap-low-threshold-size is ignored.
- If heap-high-threshold-size is set, its value must be at least one gigabyte.
- If heap-high-threshold-size is set, the value of heap-low-threshold-size must be less than that of heap-high-threshold-size. If not, heap-low-threshold-size is automatically set by default to 7/8 of the value of heap-high-threshold-size.
- If heap-high-threshold-size is set to a value other than undefined, heap-low-threshold-size is automatically set by default to 7/8 of the value of heap-high-threshold-size.
- If heap-high-threshold-size and heap-low-threshold-size are both set to a value other than undefined, heap-low-threshold-size must be greater than or equal to  $(\text{heap-high-threshold-size} + \text{minheap}) / 2$ , where minheap is the amount of heap memory used by the server at startup. If this condition is not met, heap-low-threshold-size is automatically set by default to 7/8 of the value of heap-high-threshold-size.

The number of times the memory thresholds have been exceeded can be monitored by using the `heapmaxhighhits` and `heapmaxlowhits` attributes on `cn=monitor`.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## heap-low-threshold-size

DS server instance configuration (SER) property heap-low-threshold-size

### Description

The behavior of a Directory Server instance is configured according to server properties such as heap-low-threshold-size.

Characteristic	Value
Syntax	MEMORY_SIZE   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

See the description for heap-high-threshold-size.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

---

## heapmaxhighhits

Counts the number of times `ds-maxheaphigh` or `ds-maxheaplow` has been exceeded

### Description

PROPERTY	VALUE
Entry DN	<code>cn=monitor</code>
Valid Range	N/A
Default Value	N/A
Syntax	Integer

This read-only attribute counts the number of times that the `heapmaxhighhits` attribute or the `heapmaxlowhits` attribute has been exceeded:

- `heapmaxhighhits` counts the number of times `ds-maxheaphigh` has been exceeded
- `heapmaxlowhits` counts the number of times `ds-maxheaplow` has been exceeded

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	<code>SUNWdsee7</code>
Stability Level	Unstable

### See Also

[ds-maxheaphigh\(5DSCONF\)](#)

## heapmaxlowhits

---

Counts the number of times `ds-maxheaphigh` or `ds-maxheaplow` has been exceeded

### Description

PROPERTY	VALUE
Entry DN	<code>cn=monitor</code>
Valid Range	N/A
Default Value	N/A
Syntax	Integer

This read-only attribute counts the number of times that the `heapmaxhighhits` attribute or the `heapmaxlowhits` attribute has been exceeded:

- `heapmaxhighhits` counts the number of times `ds-maxheaphigh` has been exceeded
- `heapmaxlowhits` counts the number of times `ds-maxheaplow` has been exceeded

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	<code>SUNWdsee7</code>
Stability Level	Unstable

### See Also

[ds-maxheaphigh\(5DSCONF\)](#)

---

## host-access-dir-path

DS server instance configuration (SER) property host-access-dir-path

### Description

The behavior of a Directory Server instance is configured according to server properties such as `host-access-dir-path`.

Characteristic	Value
Syntax	PATH   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the local directory path on the server host where `hosts.allow` and `hosts.deny` files are located. If this property is not set, or if the files are not found, Directory Server does not enable the additional connection-based access controls provided by these files.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## idle-timeout

DS server instance configuration (SER) property idle-timeout

### Description

The behavior of a Directory Server instance is configured according to server properties such as `idle-timeout`.

Characteristic	Value
Syntax	INTEGER   none
Default Value	none
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies how many seconds the server waits for traffic on an idle LDAP client connection before closing the connection.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## import-cache-size

DS server instance configuration (SER) property import-cache-size

### Description

The behavior of a Directory Server instance is configured according to server properties such as `import-cache-size`.

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	64M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the amount of physical memory Directory Server requests from the operating system to cache data used when initializing a suffix from LDIF. See *Directory Server Data Caching* in *Directory Server Enterprise Edition Reference* for suggestions on sizing cache.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

---

## index

DS attribute indexing (IDX) properties

### Description

Directory Server can index attributes, making them faster to search. The `dsconf` command helps you configure five of the six supported index types:

1. Equality indexes to determine expediently whether an attribute value is equal to a specified value
2. Presence indexes to determine whether a specified attribute has any values
3. Substring indexes to determine whether a specified attribute has values containing a specified string, also used to compare regular expressions to attribute values
4. Approximate indexes, based on metaphone approximation and useful for English language strings only, to determine whether a specified attribute has any values that sound like the specified string
5. International indexes, also called matching rule indexes, to expedite sorting and searching in accordance with the language rules of a particular locale

The `dsconf` command does not help you configure virtual list view, also known as browsing, indexes.

The `dsconf` command does help you assign all IDs threshold values to indexes. As the number of entries and attribute values grows in a directory, the number of attribute values to index also grows, as does therefore the size of the indexes. In some deployments a server can end up maintaining index lists so large that the cost of rebuilding an index when attributes are modified or added outweighs the benefit the index provides for searches. All IDs thresholds limit the growth of large indexes by defining the maximum number of entry identifiers Directory Server maintains in an index list. You can define all IDs thresholds for individual indexes and for some types of indexes.

Some indexes are maintained by the server for its own use. These are called system indexes. In general, do not modify or remove systems indexes; such modifications could have severe repercussions on performance.

See *Directory Server Indexing in Reference for Oracle Directory Server Enterprise Edition* for further details about indexing.

**PROPERTY:** `all-ids-threshold`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of entry IDs the server maintains in an index list for the specified attribute type. By default its value is inherited from the `all-ids-threshold` setting for the suffix, whose default value in turn is inherited from the `all-ids-threshold` setting for the server, which by default is 4000. In addition to inheritance of default settings, this property handles settings as follows:

`inherited`

The threshold is inherited from the more global setting.

`<2000`

The threshold value is rounded up to 2000.

`>2000`

The setting is used as a guaranteed minimum threshold. Because of internal mechanisms, the real value can be slightly more than the specified value.

After you modify this property, reindex the attribute for which you changed the threshold. For example:

```
$ dsconf set-index-prop dc=example,dc=com uid all-ids-threshold:5000
$ dsconf reindex -t uid dc=example,dc=com
```

```
## example: Indexing attribute: uid
## example: Finished indexing.
```

```
Task completed (slapd exit code: 0).
$
```

### PROPERTY: `all-ids-threshold-eq`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for equality indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

### PROPERTY: `all-ids-threshold-pres`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for presence indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

**PROPERTY:** `all-ids-threshold-sub`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for substring indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

**PROPERTY:** `approx-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether approximate indexes are maintained for the specified attribute type. You cannot set an all IDs threshold value for approximate indexes.

**PROPERTY:** `desc`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

Use this optional property to provide a short description of the index configuration.

**PROPERTY:** eq-enabled

Characteristic	Value
Syntax	on off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether equality indexes are maintained for the specified attribute type.

**PROPERTY:** matching-rule

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the matching rule indexes maintained for the specified attribute type.

Values for this property must be valid collation order object identifiers (OIDs). See *Directory Server Internationalized Directory in Directory Server Enterprise Edition Reference* for the OIDs corresponding to supported locales.

**PROPERTY:** pres-enabled

Characteristic	Value
Syntax	on off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether presence indexes are maintained for the specified attribute type.

**PROPERTY:** sub-enabled

Characteristic	Value
Syntax	on off
Default Value	off

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether substring indexes are maintained for the specified attribute type.

**PROPERTY:** `system`

Characteristic	Value
Syntax	<code>true false</code>
Default Value	<code>false</code>
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property identifies whether the specified index is a system index, and therefore should be left alone.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike **DURATION** properties, **MEMORY\_SIZE** properties cannot combine multiple specifiers. However, **MEMORY\_SIZE** properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [all-ids-threshold\(5DSCONF\)](#), [desc\(5DSCONF\)](#)

---

## index-filter-analyzer-enabled

DS suffix configuration (SUF) properties

### Description

Each Directory Server suffix you create is configured according to the suffix properties documented here and in the documentation specified under the SEE ALSO section.

#### **PROPERTY:** `compression-entries`

Characteristic	Value
Syntax	<code>all overflow</code>
Default Value	<code>overflow</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies entry eligibility for compression.

`all`

All the entries will be compressed.

`overflow`

Only entries in overflow pages will be compressed.

#### **PROPERTY:** `compression-mode`

Characteristic	Value
Syntax	<code>none DSZ</code>
Default Value	<code>None</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies how entries are compressed.

`none`

No entries compression mechanism will be used.

`DSZ`

Entries will be compressed using the DSZ method.

**PROPERTY:** db-name

Characteristic	Value
Syntax	STRING
Default Value	<i>suffixName</i>
Is readable	Yes
Is modifiable	No
Is multi-valued	Yes

This property specifies the suffix that is used to process requests involving the database.

**PROPERTY:** db-path

Characteristic	Value
Syntax	PATH
Default Value	<i>server-instance-dir/db/suffix-dir</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute path to the suffix database.

**PROPERTY:** entry-cache-count

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	unlimited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of entries allowed in the entry cache of the suffix.

**PROPERTY:** entry-cache-size

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	20M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum amount of memory Directory Server requests for the entry cache of the suffix.

**PROPERTY:** `entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the number of entries stored in the suffix.

**PROPERTY:** `entry-crc-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether a CRC is computed on each entry.

**PROPERTY:** `index-filter-analyzer-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	No
Is multi-valued	No
Restart needed	No

This property specifies whether the index filter analyzer is running.

**PROPERTY:** `index-filter-analyzer-max-entries`

Characteristic	Value
Syntax	Integer
Default Value	2000

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies the maximum number of entries that the index filter analyzer may contain.

**PROPERTY:** `parent-suffix-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	DN of the parent entry
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN of the parent entry for the suffix. The value of this property must logically be a parent of the suffix.

For instance, if you have a suffix with DN `dc=com` and a suffix `dc=example, dc=com`, you can set `dc=com` as the `parent-suffix-dn` of `dc=example, dc=com`, and subtree searches with based DN `dc=com` then also travers `dc=example, dc=com`.

**PROPERTY:** `referral-mode`

Characteristic	Value
Syntax	disabled   enabled   only-on-write
Default Value	disabled
Is readable	Yes
Is modifiable	Yes, if the suffix is not replicated
Is multi-valued	No

This property specifies how referrals are used when a client makes a request involving the suffix.

`disabled`  
Handle requests locally; do not return referral URLs.

`enabled`  
Return referral URLs to client requests.

`only-on-write`  
Return referral URLs to client requests only for write operations.

**PROPERTY:** `repl-accept-client-update-enabled`

Characteristic	Value
Syntax	on   off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the replicated suffix accepts write operations from client applications, or instead returns referral URLs.

**PROPERTY:** `repl-cl-max-age`

Characteristic	Value
Syntax	DURATION   undefined
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age for a record in the replication changelog. Older records are purged.

**PROPERTY:** `repl-cl-max-entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0 (meaning undefined)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum number of records in the replication changelog. When the limit is exceeded, older records are purged.

**PROPERTY:** `repl-id`

Characteristic	Value
Syntax	INTEGER
Default Value	None
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication

Characteristic	Value
Is multi-valued	No

This property specifies the replica identification number, 1-65534 for a supplier, 65535 for a consumer or a hub. Once set, this property cannot be modified.

**PROPERTY:** `repl-manager-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the bind DN's of users allowed to bind to perform replication operations on the suffix.

**PROPERTY:** `repl-purge-delay`

Characteristic	Value
Syntax	DURATION   never
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age of tombstone entries used by replication. Tombstone entries are entries marked for deletion that have not yet been removed, and also replication state information associated with the entries. When setting this attribute, ensure that the purge delay is longer than the longest replication cycle in your replication policy to avoid incurring conflict resolution problems and divergence between replicas.

**PROPERTY:** `repl-rewrite-referrals-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether referrals you set can be automatically overwritten by the server to reference replicas.

**PROPERTY:** `repl-role`

Characteristic	Value
Syntax	<code>not-replicated   master   hub   consumer</code>
Default Value	<code>not-replicated</code>
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the role played by the suffix in a replicated topology.

`not-replicated`

The suffix is not part of a replicated topology.

`master`

This suffix is a supplier of replication updates in a replicated topology. It can accept both read and write operations.

`hub`

This suffix is a supplier of replication updates in a replicated topology. It can accept read operations and replication updates.

`consumer`

This suffix is a dedicated consumer of replication updates in a replicated topology. It can accept read operations and replication updates, but not writes from clients.

To promote a replica, use the `dsconf promote-repl` command. To demote a replica, use the `dsconf demote-repl` command.

**PROPERTY:** `require-index-enabled`

Characteristic	Value
Syntax	<code>on   off</code>
Default Value	<code>off</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether unindexed searches are allowed. When `on`, unindexed searches return `LDAP_UNWILLING_TO_PERFORM`.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple

specifiers. However, `MEMORY_SIZE` properties allow decimal values, for example, 1.5M.

**NAME**

A valid `cn` (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus `640` specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form `hhmm` in 24-hour format, where `hh` stands for hours and `mm` stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

`dsconf(1M)`, `all-ids-threshold(5DSCONF)`, `db-path(5DSCONF)`, `enabled(5DSCONF)`, `moddn-enabled(5DSCONF)`, `referral-url(5DSCONF)`

## index-filter-analyzer-max-entries

DS suffix configuration (SUF) properties

### Description

Each Directory Server suffix you create is configured according to the suffix properties documented here and in the documentation specified under the SEE ALSO section.

#### **PROPERTY:** `compression-entries`

Characteristic	Value
Syntax	<code>all overflow</code>
Default Value	<code>overflow</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies entry eligibility for compression.

`all`

All the entries will be compressed.

`overflow`

Only entries in overflow pages will be compressed.

#### **PROPERTY:** `compression-mode`

Characteristic	Value
Syntax	<code>none DSZ</code>
Default Value	<code>None</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies how entries are compressed.

`none`

No entries compression mechanism will be used.

`DSZ`

Entries will be compressed using the DSZ method.

**PROPERTY:** db-name

Characteristic	Value
Syntax	STRING
Default Value	<i>suffixName</i>
Is readable	Yes
Is modifiable	No
Is multi-valued	Yes

This property specifies the suffix that is used to process requests involving the database.

**PROPERTY:** db-path

Characteristic	Value
Syntax	PATH
Default Value	<i>server-instance-dir/db/suffix-dir</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute path to the suffix database.

**PROPERTY:** entry-cache-count

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	unlimited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of entries allowed in the entry cache of the suffix.

**PROPERTY:** entry-cache-size

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	20M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum amount of memory Directory Server requests for the entry cache of the suffix.

**PROPERTY:** `entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the number of entries stored in the suffix.

**PROPERTY:** `entry-crc-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether a CRC is computed on each entry.

**PROPERTY:** `index-filter-analyzer-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	No
Is multi-valued	No
Restart needed	No

This property specifies whether the index filter analyzer is running.

**PROPERTY:** `index-filter-analyzer-max-entries`

Characteristic	Value
Syntax	Integer
Default Value	2000

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies the maximum number of entries that the index filter analyzer may contain.

**PROPERTY:** `parent-suffix-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	DN of the parent entry
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN of the parent entry for the suffix. The value of this property must logically be a parent of the suffix.

For instance, if you have a suffix with DN `dc=com` and a suffix `dc=example`, `dc=com`, you can set `dc=com` as the `parent-suffix-dn` of `dc=example`, `dc=com`, and subtree searches with based DN `dc=com` then also traverses `dc=example`, `dc=com`.

**PROPERTY:** `referral-mode`

Characteristic	Value
Syntax	disabled   enabled   only-on-write
Default Value	disabled
Is readable	Yes
Is modifiable	Yes, if the suffix is not replicated
Is multi-valued	No

This property specifies how referrals are used when a client makes a request involving the suffix.

`disabled`  
Handle requests locally; do not return referral URLs.

`enabled`  
Return referral URLs to client requests.

`only-on-write`  
Return referral URLs to client requests only for write operations.

**PROPERTY:** repl-accept-client-update-enabled

Characteristic	Value
Syntax	on   off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the replicated suffix accepts write operations from client applications, or instead returns referral URLs.

**PROPERTY:** repl-cl-max-age

Characteristic	Value
Syntax	DURATION   undefined
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age for a record in the replication changelog. Older records are purged.

**PROPERTY:** repl-cl-max-entry-count

Characteristic	Value
Syntax	INTEGER
Default Value	0 (meaning undefined)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum number of records in the replication changelog. When the limit is exceeded, older records are purged.

**PROPERTY:** repl-id

Characteristic	Value
Syntax	INTEGER
Default Value	None
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication

Characteristic	Value
Is multi-valued	No

This property specifies the replica identification number, 1-65534 for a supplier, 65535 for a consumer or a hub. Once set, this property cannot be modified.

**PROPERTY:** `repl-manager-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the bind DN's of users allowed to bind to perform replication operations on the suffix.

**PROPERTY:** `repl-purge-delay`

Characteristic	Value
Syntax	DURATION   never
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age of tombstone entries used by replication. Tombstone entries are entries marked for deletion that have not yet been removed, and also replication state information associated with the entries. When setting this attribute, ensure that the purge delay is longer than the longest replication cycle in your replication policy to avoid incurring conflict resolution problems and divergence between replicas.

**PROPERTY:** `repl-rewrite-referrals-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether referrals you set can be automatically overwritten by the server to reference replicas.

**PROPERTY:** `repl-role`

Characteristic	Value
Syntax	<code>not-replicated</code>   <code>master</code>   <code>hub</code>   <code>consumer</code>
Default Value	<code>not-replicated</code>
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the role played by the suffix in a replicated topology.

`not-replicated`

The suffix is not part of a replicated topology.

`master`

This suffix is a supplier of replication updates in a replicated topology. It can accept both read and write operations.

`hub`

This suffix is a supplier of replication updates in a replicated topology. It can accept read operations and replication updates.

`consumer`

This suffix is a dedicated consumer of replication updates in a replicated topology. It can accept read operations and replication updates, but not writes from clients.

To promote a replica, use the `dsconf promote-repl` command. To demote a replica, use the `dsconf demote-repl` command.

**PROPERTY:** `require-index-enabled`

Characteristic	Value
Syntax	<code>on</code>   <code>off</code>
Default Value	<code>off</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether unindexed searches are allowed. When `on`, unindexed searches return `LDAP_UNWILLING_TO_PERFORM`.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

true or false.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form `hhmm-hhmm 0123456`, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple

specifiers. However, `MEMORY_SIZE` properties allow decimal values, for example, 1.5M.

**NAME**

A valid `cn` (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus `640` specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form `hhmm` in 24-hour format, where `hh` stands for hours and `mm` stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

`dsconf(1M)`, `all-ids-threshold(5DSCONF)`, `db-path(5DSCONF)`, `enabled(5DSCONF)`, `moddn-enabled(5DSCONF)`, `referral-url(5DSCONF)`

## init-func

DS plug-in configuration (PLG) properties

### Description

Directory Server implements some key functionality as plug-ins. Plug-ins take the form of libraries loaded when the server starts, and called at different points in the processing of client application requests. When you create custom plug-ins, you must configure the server to load and use them, then restart Directory Server to load the newly configured plug-ins.

**PROPERTY:** argument

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies arguments passed to the plug-in when it is loaded by Directory Server. Arguments are passed in the order you specify them. Updating the list of arguments replaces all the existing arguments previously specified when the plug-in is loaded again.

**PROPERTY:** depends-on-named

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies names of plug-ins that must be available and loaded before Directory Server loads the current plug-in.

**PROPERTY:** depends-on-type

Characteristic	Value
Syntax	STRING (See the description that follows.)
Default Value	None
Is readable	Yes

Characteristic	Value
Is modifiable	Yes
Is multi-valued	Yes

This property specifies types of plug-ins that must be available and loaded before Directory Server loads the current plug-in. The value must be the value of a plug-in `type` property.

**PROPERTY:** `feature`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in identifier from the `Slapi_PluginDesc` structure.

**PROPERTY:** `init-func`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the name of function called by Directory Server to initialize the plug-in.

**PROPERTY:** `lib-path`

Characteristic	Value
Syntax	PATH
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute file system path to the library containing plug-in.

**PROPERTY:** type

Characteristic	Value
Syntax	STRING (See the description that follows.)
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in type. The following plug-in types are supported.

ldbentryfetchstore

Entry store and fetch plug-in

extendedop

Extended operation plug-in

passwordcheck

Password check plug-in

postoperation

Post-operation plug-in

preoperation

Pre-operation plug-in

internalpostoperation

Internal post-operation plug-in

internalpreoperation

Internal pre-operation plug-in

matchingrule

Matching rule plug-in for extensible match search filters

object

Generic plug-in type, sometimes used to register other plug-ins

passwordcheck

Strong password check plug-in

pwdstorage scheme

Password storage scheme plug-in

**PROPERTY:** vendor

Characteristic	Value
Syntax	STRING
Default Value	Vendor name in plug-in configuration
Is readable	Yes
Is modifiable	Yes

Characteristic	Value
Is multi-valued	No

This property specifies the plug-in vendor from the `Slapi_PluginDesc` structure.

**PROPERTY:** `version`

Characteristic	Value
Syntax	STRING
Default Value	Version string in plug-in configuration
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in version from the `Slapi_PluginDesc` structure.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

ATTR\_NAME

A valid attribute type name such as `cn` or `objectClass`.

BOOLEAN

`true` or `false`.

DN

A valid distinguished name such as `ou=People,dc=example,dc=com`.

DURATION

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

EMAIL\_ADDRESS

A valid e-mail address.

HOST\_NAME

An IP address or host name.

INTEGER

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

TIME

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Stable

## See Also

[dsconf\(1M\)](#), [desc\(5DSCONF\)](#), [enabled\(5DSCONF\)](#)

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## instance-path

DS server instance configuration (SER) property instance-path

### Description

The behavior of a Directory Server instance is configured according to server properties such as `instance-path`.

Characteristic	Value
Syntax	PATH
Default Value	Path set at server creation
Is readable	Yes
Is modifiable	No
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the file system directory under which the server instance was created using the `dsadm create` command.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## ldap-port\_5dsconf

DS server instance configuration (SER) property ldap-port

### Description

The behavior of a Directory Server instance is configured according to server properties such as ldap-port.

Characteristic	Value
Syntax	INTEGER   disabled
Default Value	389   1389
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the port on which the server listens for LDAP client requests. The default port is 389 when the instance is created by the system super user, 1389 otherwise. Changing this property requires that you restart the server.

If you set both ldap-port and ldap-secure-port to disabled, you can no longer use dsconf to configure the server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## ldap-secure-port

DS server instance configuration (SER) property ldap-secure-port

### Description

The behavior of a Directory Server instance is configured according to server properties such as ldap-secure-port.

Characteristic	Value
Syntax	INTEGER   disabled
Default Value	636   1636
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the port on which the server listens for LDAPS client requests using TLS or SSL. The default port is 636 when the instance is created by the system super user, 1636 otherwise. Changing this property requires that you restart the server.

If you set both ldap-port and ldap-secure-port to disabled, you can no longer use dsconf to configure the server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

---

## level

DS logging configuration (LOG) properties

### Description

Directory Server writes to three main types of log files you can configure, the *INSTANCE\_PATH/logs/access*, *INSTANCE\_PATH/logs/audit*, and *INSTANCE\_PATH/logs/errors* logs, where *INSTANCE\_PATH* is the full path where the server instance is located, such as */local/dsInst*.

When you specify one of these properties with `dsconf get-log-prop` or `dsconf set-log-prop`, you must specify which type of log configuration, *access*, *audit*, or *error*, you want to examine. For example, to see whether audit logging is enabled for a server instance:

```
$ dsconf get-log-prop audit enabled
enabled : off
$
```

#### PROPERTY: buffering-enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, not applicable to audit and errors logs
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether Directory Server writes access log entries directly to disk, or use a buffer, by default.

#### PROPERTY: enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, off for audit, on for errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether the specified log type is enabled.

**PROPERTY:** level

Characteristic	Value
Syntax	See the description that follows.
Default Value	default
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property defines which kinds of messages get logged. This property is applicable only to access and errors logs.

**access log levels**

The following settings are supported:

`acc-internal`

Log access information for internal operations.

`default`

Log client access to entries.

`acc-default_plus_referrals`

As default, but also log access to referrals.

`acc-timing`

Use precise timing for microsecond resolution of elapsed times.

**errors log levels**

The following settings are supported:

`default`

Log startup, shutdown, errors, and warnings.

`err-function-calls`

Log when server enters or exits a function.

`err-search-args`

Log search arguments.

`err-connection`

Connection management.

`err-packets`

Log packets sent and received.

`err-search-filter`

Log search filter information.

`err-config-file`

Log information for changes to the configuration file `dse.ldif`.

`err-acl`

Log access control processing information.

`err-ldbm`  
Log information from the ldbm database plugin.

`err-entry-parsing`  
Log LDIF parsing errors.

`err-housekeeping`  
Log event queue information.

`err-replication`  
Log information about replication operations.

`err-entry-cache`  
Log entry cache information.

`err-plugins`  
Log information from server plug-ins.

`err-dsml`  
Log information from DSML front end.

`err-dsml-advanced`  
Debugging information for DSML.

**PROPERTY:** `max-age`

Characteristic	Value
Syntax	DURATION   unlimited
Default Value	1M (one month)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the age beyond which the specified type of log file is deleted.

**PROPERTY:** `max-disk-space-size`

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	500M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum disk space the specified type of log is allowed to consume. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

**PROPERTY:** `max-file-count`

Characteristic	Value
Syntax	Integer
Default Value	10 for access, 2 for errors, 1 for audit
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of log files, including rotated logs, of the specified type that the server allows to be created in the log file directory. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

When you set this property to 1, the specified log is not rotated.

**PROPERTY:** `max-size`

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	100M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum file size for the specified log. When the limit is reached, the server rotates the log file, unless `max-file-count` is set to 1.

**PROPERTY:** `min-free-disk-space-size`

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	5M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum free space allowed on the disk where the specified log is stored. When the limit is reached, the server deletes the oldest log files until enough space is available.

**PROPERTY:** `path`

Characteristic	Value
Syntax	PATH

Characteristic	Value
Default Value	<i>INSTANCE_PATH</i> /logs/access, <i>INSTANCE_PATH</i> /logs/audit, <i>INSTANCE_PATH</i> /logs/errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the full path to the specified log file type.

**PROPERTY:** perm

Characteristic	Value
Syntax	OCTAL_MODE
Default Value	600
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the read, write, and execute permissions on the specified log file.

**PROPERTY:** rotation-interval

Characteristic	Value
Syntax	DURATION   unlimited
Default Value	1d (one day) for access, 1w (one week) for audit and errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the duration between rotations of the specified log file.

**PROPERTY:** rotation-min-file-size

Characteristic	Value
Syntax	MEMORY_SIZE   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum size the specified log file must have before the server rotates it.

**PROPERTY:** rotation-time

Characteristic	Value
Syntax	TIME   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the time of day when the server rotates the specified log file.

**PROPERTY:** verbose-enabled

Characteristic	Value
Syntax	on off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether extra informational messages are written to the `errors` log.

**Syntax Values**

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and milliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [enabled\(5DSCONF\)](#)

## lib-path

DS plug-in configuration (PLG) properties

### Description

Directory Server implements some key functionality as plug-ins. Plug-ins take the form of libraries loaded when the server starts, and called at different points in the processing of client application requests. When you create custom plug-ins, you must configure the server to load and use them, then restart Directory Server to load the newly configured plug-ins.

**PROPERTY:** argument

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies arguments passed to the plug-in when it is loaded by Directory Server. Arguments are passed in the order you specify them. Updating the list of arguments replaces all the existing arguments previously specified when the plug-in is loaded again.

**PROPERTY:** depends-on-named

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies names of plug-ins that must be available and loaded before Directory Server loads the current plug-in.

**PROPERTY:** depends-on-type

Characteristic	Value
Syntax	STRING (See the description that follows.)
Default Value	None
Is readable	Yes

Characteristic	Value
Is modifiable	Yes
Is multi-valued	Yes

This property specifies types of plug-ins that must be available and loaded before Directory Server loads the current plug-in. The value must be the value of a plug-in type property.

**PROPERTY:** `feature`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in identifier from the `Slapi_PluginDesc` structure.

**PROPERTY:** `init-func`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the name of function called by Directory Server to initialize the plug-in.

**PROPERTY:** `lib-path`

Characteristic	Value
Syntax	PATH
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute file system path to the library containing plug-in.

**PROPERTY:** type

Characteristic	Value
Syntax	STRING (See the description that follows.)
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in type. The following plug-in types are supported.

ldbmentryfetchstore

Entry store and fetch plug-in

extendedop

Extended operation plug-in

passwordcheck

Password check plug-in

postoperation

Post-operation plug-in

preoperation

Pre-operation plug-in

internalpostoperation

Internal post-operation plug-in

internalpreoperation

Internal pre-operation plug-in

matchingrule

Matching rule plug-in for extensible match search filters

object

Generic plug-in type, sometimes used to register other plug-ins

passwordcheck

Strong password check plug-in

pwdstoragescheme

Password storage scheme plug-in

**PROPERTY:** vendor

Characteristic	Value
Syntax	STRING
Default Value	Vendor name in plug-in configuration
Is readable	Yes
Is modifiable	Yes

Characteristic	Value
Is multi-valued	No

This property specifies the plug-in vendor from the `Slapi_PluginDesc` structure.

**PROPERTY:** `version`

Characteristic	Value
Syntax	STRING
Default Value	Version string in plug-in configuration
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in version from the `Slapi_PluginDesc` structure.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

---

TIME

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Stable

## See Also

[dsconf\(1M\)](#), [desc\(5DSCONF\)](#), [enabled\(5DSCONF\)](#)

## listen-address\_5dsconf

DS server instance configuration (SER) property listen-address

### Description

The behavior of a Directory Server instance is configured according to server properties such as `listen-address`.

Characteristic	Value
Syntax	STRING
Default Value	0.0.0.0
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the IP address at which the server listens for LDAP client requests using the regular LDAP port. You can specify more than one listen address for the same port number. The default listen address is 0.0.0.0. Changing this property requires that you restart the server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## log

DS logging configuration (LOG) properties

### Description

Directory Server writes to three main types of log files you can configure, the *INSTANCE\_PATH/logs/access*, *INSTANCE\_PATH/logs/audit*, and *INSTANCE\_PATH/logs/errors* logs, where *INSTANCE\_PATH* is the full path where the server instance is located, such as */local/dsInst*.

When you specify one of these properties with `dsconf get-log-prop` or `dsconf set-log-prop`, you must specify which type of log configuration, *access*, *audit*, or *error*, you want to examine. For example, to see whether audit logging is enabled for a server instance:

```
$ dsconf get-log-prop audit enabled
enabled : off
$
```

#### PROPERTY: buffering-enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, not applicable to audit and errors logs
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether Directory Server writes access log entries directly to disk, or use a buffer, by default.

#### PROPERTY: enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, off for audit, on for errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether the specified log type is enabled.

**PROPERTY:** level

Characteristic	Value
Syntax	See the description that follows.
Default Value	default
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property defines which kinds of messages get logged. This property is applicable only to `access` and `errors` logs.

**access log levels**

The following settings are supported:

`acc-control-oids`

Log Control OIDs for incoming operations.

`acc-internal`

Log access information for internal operations.

`acc-default_plus_referrals`

As default, but also log access to referrals.

`acc-timing`

Use precise timing for microsecond resolution of elapsed times.

`default`

Log client access to entries.

`none`

Nothing is logged in the access log.

**errors log levels**

The following settings are supported:

`default`

Log startup, shutdown, errors, and warnings.

`err-function-calls`

Log when server enters or exits a function.

`err-search-args`

Log search arguments.

`err-connection`

Connection management.

`err-packets`

Log packets sent and received.

`err-search-filter`

Log search filter information.

`err-config-file`  
Log information for changes to the configuration file `dse.ldif`.

`err-acl`  
Log access control processing information.

`err-ldbm`  
Log information from the `ldbm` database plugin.

`err-entry-parsing`  
Log LDIF parsing errors.

`err-housekeeping`  
Log event queue information.

`err-replication`  
Log information about replication operations.

`err-entry-cache`  
Log entry cache information.

`err-plugins`  
Log information from server plug-ins.

`err-dsml`  
Log information from DSML front end.

`err-dsml-advanced`  
Debugging information for DSML.

#### **PROPERTY:** `max-age`

Characteristic	Value
Syntax	<code>DURATION</code>   <code>unlimited</code>
Default Value	<code>1M</code> (one month)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the age beyond which the specified type of log file is deleted.

#### **PROPERTY:** `max-disk-space-size`

Characteristic	Value
Syntax	<code>MEMORY_SIZE</code>   <code>unlimited</code>
Default Value	<code>500M</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum disk space the specified type of log is allowed to consume. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

**PROPERTY:** `max-file-count`

Characteristic	Value
Syntax	Integer
Default Value	10 for access, 2 for errors, 1 for audit
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of log files, including rotated logs, of the specified type that the server allows to be created in the log file directory. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

When you set this property to 1, the specified log is not rotated.

**PROPERTY:** `max-size`

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	100M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum file size for the specified log. When the limit is reached, the server rotates the log file, unless `max-file-count` is set to 1.

**PROPERTY:** `min-free-disk-space-size`

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	5M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum free space allowed on the disk where the specified log is stored. When the limit is reached, the server deletes the oldest log files until enough space is available.

**PROPERTY:** path

Characteristic	Value
Syntax	PATH
Default Value	<i>INSTANCE_PATH</i> /logs/access, <i>INSTANCE_PATH</i> /logs/audit, <i>INSTANCE_PATH</i> /logs/errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the full path to the specified log file type.

**PROPERTY:** perm

Characteristic	Value
Syntax	OCTAL_MODE
Default Value	600
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the read, write, and execute permissions on the specified log file.

**PROPERTY:** rotation-interval

Characteristic	Value
Syntax	DURATION   unlimited
Default Value	1d (one day) for access, 1w (one week) for audit and errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the duration between rotations of the specified log file.

**PROPERTY:** rotation-min-file-size

Characteristic	Value
Syntax	MEMORY_SIZE   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum size the specified log file must have before the server rotates it.

**PROPERTY:** `rotation-time`

Characteristic	Value
Syntax	TIME   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the time of day when the server rotates the specified log file.

**PROPERTY:** `verbose-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether extra informational messages are written to the `errors` log.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [enabled\(5DSCONF\)](#)

---

## look-through-limit

DS server instance configuration (SER) property look-through-limit

### Description

The behavior of a Directory Server instance is configured according to server properties such as `look-through-limit`.

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	5000
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the maximum number of entries the server examines when checking candidates to respond to a search request.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

---

## matching-rule

DS attribute indexing (IDX) properties

### Description

Directory Server can index attributes, making them faster to search. The `dsconf` command helps you configure five of the six supported index types:

1. Equality indexes to determine expediently whether an attribute value is equal to a specified value
2. Presence indexes to determine whether a specified attribute has any values
3. Substring indexes to determine whether a specified attribute has values containing a specified string, also used to compare regular expressions to attribute values
4. Approximate indexes, based on metaphone approximation and useful for English language strings only, to determine whether a specified attribute has any values that sound like the specified string
5. International indexes, also called matching rule indexes, to expedite sorting and searching in accordance with the language rules of a particular locale

The `dsconf` command does not help you configure virtual list view, also known as browsing, indexes.

The `dsconf` command does help you assign all IDs threshold values to indexes. As the number of entries and attribute values grows in a directory, the number of attribute values to index also grows, as does therefore the size of the indexes. In some deployments a server can end up maintaining index lists so large that the cost of rebuilding an index when attributes are modified or added outweighs the benefit the index provides for searches. All IDs thresholds limit the growth of large indexes by defining the maximum number of entry identifiers Directory Server maintains in an index list. You can define all IDs thresholds for individual indexes and for some types of indexes.

Some indexes are maintained by the server for its own use. These are called system indexes. In general, do not modify or remove systems indexes; such modifications could have severe repercussions on performance.

See *Directory Server Indexing* in *Reference for Oracle Directory Server Enterprise Edition* for further details about indexing.

#### **PROPERTY:** `all-ids-threshold`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of entry IDs the server maintains in an index list for the specified attribute type. By default its value is inherited from the `all-ids-threshold` setting for the suffix, whose default value in turn is inherited from the `all-ids-threshold` setting for the server, which by default is 4000. In addition to inheritance of default settings, this property handles settings as follows:

`inherited`

The threshold is inherited from the more global setting.

`<2000`

The threshold value is rounded up to 2000.

`>2000`

The setting is used as a guaranteed minimum threshold. Because of internal mechanisms, the real value can be slightly more than the specified value.

After you modify this property, reindex the attribute for which you changed the threshold. For example:

```
$ dsconf set-index-prop dc=example,dc=com uid all-ids-threshold:5000
$ dsconf reindex -t uid dc=example,dc=com
```

```
## example: Indexing attribute: uid
## example: Finished indexing.
```

```
Task completed (slapd exit code: 0).
$
```

### PROPERTY: `all-ids-threshold-eq`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for equality indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

### PROPERTY: `all-ids-threshold-pres`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for presence indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

**PROPERTY:** `all-ids-threshold-sub`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for substring indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

**PROPERTY:** `approx-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether approximate indexes are maintained for the specified attribute type. You cannot set an all IDs threshold value for approximate indexes.

**PROPERTY:** `desc`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

Use this optional property to provide a short description of the index configuration.

**PROPERTY:** eq-enabled

Characteristic	Value
Syntax	on off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether equality indexes are maintained for the specified attribute type.

**PROPERTY:** matching-rule

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the matching rule indexes maintained for the specified attribute type.

Values for this property must be valid collation order object identifiers (OIDs). See *Directory Server Internationalized Directory in Directory Server Enterprise Edition Reference* for the OIDs corresponding to supported locales.

**PROPERTY:** pres-enabled

Characteristic	Value
Syntax	on off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether presence indexes are maintained for the specified attribute type.

**PROPERTY:** sub-enabled

Characteristic	Value
Syntax	on off
Default Value	off

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether substring indexes are maintained for the specified attribute type.

**PROPERTY:** `system`

Characteristic	Value
Syntax	<code>true false</code>
Default Value	<code>false</code>
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property identifies whether the specified index is a system index, and therefore should be left alone.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [all-ids-threshold\(5DSCONF\)](#), [desc\(5DSCONF\)](#)

---

## max-age\_5dsconf

DS logging configuration (LOG) properties

### Description

Directory Server writes to three main types of log files you can configure, the *INSTANCE\_PATH/logs/access*, *INSTANCE\_PATH/logs/audit*, and *INSTANCE\_PATH/logs/errors* logs, where *INSTANCE\_PATH* is the full path where the server instance is located, such as */local/dsInst*.

When you specify one of these properties with `dsconf get-log-prop` or `dsconf set-log-prop`, you must specify which type of log configuration, *access*, *audit*, or *error*, you want to examine. For example, to see whether audit logging is enabled for a server instance:

```
$ dsconf get-log-prop audit enabled
enabled : off
$
```

### PROPERTY: buffering-enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, not applicable to audit and errors logs
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether Directory Server writes access log entries directly to disk, or use a buffer, by default.

### PROPERTY: enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, off for audit, on for errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether the specified log type is enabled.

**PROPERTY:** level

Characteristic	Value
Syntax	See the description that follows.
Default Value	default
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property defines which kinds of messages get logged. This property is applicable only to `access` and `errors` logs.

**access log levels**

The following settings are supported:

`acc-internal`

Log access information for internal operations.

`default`

Log client access to entries.

`acc-default_plus_referrals`

As default, but also log access to referrals.

`acc-timing`

Use precise timing for microsecond resolution of elapsed times.

**errors log levels**

The following settings are supported:

`default`

Log startup, shutdown, errors, and warnings.

`err-function-calls`

Log when server enters or exits a function.

`err-search-args`

Log search arguments.

`err-connection`

Connection management.

`err-packets`

Log packets sent and received.

`err-search-filter`

Log search filter information.

`err-config-file`

Log information for changes to the configuration file `dse.ldif`.

`err-acl`

Log access control processing information.

err-ldbm  
Log information from the ldbm database plugin.

err-entry-parsing  
Log LDIF parsing errors.

err-housekeeping  
Log event queue information.

err-replication  
Log information about replication operations.

err-entry-cache  
Log entry cache information.

err-plugins  
Log information from server plug-ins.

err-dsml  
Log information from DSML front end.

err-dsml-advanced  
Debugging information for DSML.

**PROPERTY:** max-age

Characteristic	Value
Syntax	DURATION   unlimited
Default Value	1M (one month)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the age beyond which the specified type of log file is deleted.

**PROPERTY:** max-disk-space-size

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	500M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum disk space the specified type of log is allowed to consume. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

**PROPERTY:** max-file-count

Characteristic	Value
Syntax	Integer
Default Value	10 for access, 2 for errors, 1 for audit
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of log files, including rotated logs, of the specified type that the server allows to be created in the log file directory. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

When you set this property to 1, the specified log is not rotated.

**PROPERTY:** max-size

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	100M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum file size for the specified log. When the limit is reached, the server rotates the log file, unless max-file-count is set to 1.

**PROPERTY:** min-free-disk-space-size

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	5M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum free space allowed on the disk where the specified log is stored. When the limit is reached, the server deletes the oldest log files until enough space is available.

**PROPERTY:** path

Characteristic	Value
Syntax	PATH

Characteristic	Value
Default Value	<i>INSTANCE_PATH/logs/access, INSTANCE_PATH/logs/audit, INSTANCE_PATH/logs/errors</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the full path to the specified log file type.

**PROPERTY:** `perm`

Characteristic	Value
Syntax	<code>OCTAL_MODE</code>
Default Value	<code>600</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the read, write, and execute permissions on the specified log file.

**PROPERTY:** `rotation-interval`

Characteristic	Value
Syntax	<code>DURATION   unlimited</code>
Default Value	<code>1d (one day) for access, 1w (one week) for audit and errors</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the duration between rotations of the specified log file.

**PROPERTY:** `rotation-min-file-size`

Characteristic	Value
Syntax	<code>MEMORY_SIZE   undefined</code>
Default Value	<code>undefined</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum size the specified log file must have before the server rotates it.

**PROPERTY:** rotation-time

Characteristic	Value
Syntax	TIME   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the time of day when the server rotates the specified log file.

**PROPERTY:** verbose-enabled

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether extra informational messages are written to the errors log.

**Syntax Values**

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as cn or objectClass.

**BOOLEAN**

true or false.

**DN**

A valid distinguished name such as ou=People, dc=example, dc=com.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as 1w, 7d, 168h, 10080m, or 604800s. You can also specify one week as 1w0d0h0m0s.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike **DURATION** properties, **MEMORY\_SIZE** properties cannot combine multiple specifiers. However, **MEMORY\_SIZE** properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [enabled\(5DSCONF\)](#)

## max-disk-space-size

DS logging configuration (LOG) properties

### Description

Directory Server writes to three main types of log files you can configure, the *INSTANCE\_PATH/logs/access*, *INSTANCE\_PATH/logs/audit*, and *INSTANCE\_PATH/logs/errors* logs, where *INSTANCE\_PATH* is the full path where the server instance is located, such as */local/dsInst*.

When you specify one of these properties with `dsconf get-log-prop` or `dsconf set-log-prop`, you must specify which type of log configuration, *access*, *audit*, or *error*, you want to examine. For example, to see whether audit logging is enabled for a server instance:

```
$ dsconf get-log-prop audit enabled
enabled : off
$
```

### PROPERTY: buffering-enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, not applicable to audit and errors logs
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether Directory Server writes access log entries directly to disk, or use a buffer, by default.

### PROPERTY: enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, off for audit, on for errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether the specified log type is enabled.

**PROPERTY:** level

Characteristic	Value
Syntax	See the description that follows.
Default Value	default
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property defines which kinds of messages get logged. This property is applicable only to `access` and `errors` logs.

**access log levels**

The following settings are supported:

`acc-internal`

Log access information for internal operations.

`default`

Log client access to entries.

`acc-default_plus_referrals`

As default, but also log access to referrals.

`acc-timing`

Use precise timing for microsecond resolution of elapsed times.

**errors log levels**

The following settings are supported:

`default`

Log startup, shutdown, errors, and warnings.

`err-function-calls`

Log when server enters or exits a function.

`err-search-args`

Log search arguments.

`err-connection`

Connection management.

`err-packets`

Log packets sent and received.

`err-search-filter`

Log search filter information.

`err-config-file`

Log information for changes to the configuration file `dse.ldif`.

`err-acl`

Log access control processing information.

err-ldbm  
Log information from the ldbm database plugin.

err-entry-parsing  
Log LDIF parsing errors.

err-housekeeping  
Log event queue information.

err-replication  
Log information about replication operations.

err-entry-cache  
Log entry cache information.

err-plugins  
Log information from server plug-ins.

err-dsml  
Log information from DSML front end.

err-dsml-advanced  
Debugging information for DSML.

#### **PROPERTY:** max-age

Characteristic	Value
Syntax	DURATION   unlimited
Default Value	1M (one month)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the age beyond which the specified type of log file is deleted.

#### **PROPERTY:** max-disk-space-size

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	500M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum disk space the specified type of log is allowed to consume. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

**PROPERTY:** max-file-count

Characteristic	Value
Syntax	Integer
Default Value	10 for access, 2 for errors, 1 for audit
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of log files, including rotated logs, of the specified type that the server allows to be created in the log file directory. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

When you set this property to 1, the specified log is not rotated.

**PROPERTY:** max-size

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	100M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum file size for the specified log. When the limit is reached, the server rotates the log file, unless max-file-count is set to 1.

**PROPERTY:** min-free-disk-space-size

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	5M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum free space allowed on the disk where the specified log is stored. When the limit is reached, the server deletes the oldest log files until enough space is available.

**PROPERTY:** path

Characteristic	Value
Syntax	PATH

Characteristic	Value
Default Value	<i>INSTANCE_PATH/logs/access, INSTANCE_PATH/logs/audit, INSTANCE_PATH/logs/errors</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the full path to the specified log file type.

**PROPERTY:** `perm`

Characteristic	Value
Syntax	OCTAL_MODE
Default Value	600
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the read, write, and execute permissions on the specified log file.

**PROPERTY:** `rotation-interval`

Characteristic	Value
Syntax	DURATION   unlimited
Default Value	1d (one day) for access, 1w (one week) for audit and errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the duration between rotations of the specified log file.

**PROPERTY:** `rotation-min-file-size`

Characteristic	Value
Syntax	MEMORY_SIZE   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum size the specified log file must have before the server rotates it.

**PROPERTY:** rotation-time

Characteristic	Value
Syntax	TIME   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the time of day when the server rotates the specified log file.

**PROPERTY:** verbose-enabled

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether extra informational messages are written to the errors log.

**Syntax Values**

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as cn or objectClass.

**BOOLEAN**

true or false.

**DN**

A valid distinguished name such as ou=People, dc=example, dc=com.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as 1w, 7d, 168h, 10080m, or 604800s. You can also specify one week as 1w0d0h0m0s.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike **DURATION** properties, **MEMORY\_SIZE** properties cannot combine multiple specifiers. However, **MEMORY\_SIZE** properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

SUPPORTED\_SSL\_CIPHER

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

SUPPORTED\_SSL\_PROTOCOL

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

TIME

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dsconf\(1M\)](#), [enabled\(5DSCONF\)](#)

---

## max-file-count

DS logging configuration (LOG) properties

### Description

Directory Server writes to three main types of log files you can configure, the *INSTANCE\_PATH/logs/access*, *INSTANCE\_PATH/logs/audit*, and *INSTANCE\_PATH/logs/errors* logs, where *INSTANCE\_PATH* is the full path where the server instance is located, such as */local/dsInst*.

When you specify one of these properties with `dsconf get-log-prop` or `dsconf set-log-prop`, you must specify which type of log configuration, *access*, *audit*, or *error*, you want to examine. For example, to see whether audit logging is enabled for a server instance:

```
$ dsconf get-log-prop audit enabled
enabled : off
$
```

### PROPERTY: buffering-enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, not applicable to audit and errors logs
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether Directory Server writes access log entries directly to disk, or use a buffer, by default.

### PROPERTY: enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, off for audit, on for errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether the specified log type is enabled.

**PROPERTY:** level

Characteristic	Value
Syntax	See the description that follows.
Default Value	default
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property defines which kinds of messages get logged. This property is applicable only to `access` and `errors` logs.

**access log levels**

The following settings are supported:

`acc-internal`

Log access information for internal operations.

`default`

Log client access to entries.

`acc-default_plus_referrals`

As default, but also log access to referrals.

`acc-timing`

Use precise timing for microsecond resolution of elapsed times.

**errors log levels**

The following settings are supported:

`default`

Log startup, shutdown, errors, and warnings.

`err-function-calls`

Log when server enters or exits a function.

`err-search-args`

Log search arguments.

`err-connection`

Connection management.

`err-packets`

Log packets sent and received.

`err-search-filter`

Log search filter information.

`err-config-file`

Log information for changes to the configuration file `dse.ldif`.

`err-acl`

Log access control processing information.

err-ldbm  
Log information from the ldbm database plugin.

err-entry-parsing  
Log LDIF parsing errors.

err-housekeeping  
Log event queue information.

err-replication  
Log information about replication operations.

err-entry-cache  
Log entry cache information.

err-plugins  
Log information from server plug-ins.

err-dsml  
Log information from DSML front end.

err-dsml-advanced  
Debugging information for DSML.

**PROPERTY:** max-age

Characteristic	Value
Syntax	DURATION   unlimited
Default Value	1M (one month)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the age beyond which the specified type of log file is deleted.

**PROPERTY:** max-disk-space-size

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	500M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum disk space the specified type of log is allowed to consume. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

**PROPERTY:** max-file-count

Characteristic	Value
Syntax	Integer
Default Value	10 for access, 2 for errors, 1 for audit
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of log files, including rotated logs, of the specified type that the server allows to be created in the log file directory. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

When you set this property to 1, the specified log is not rotated.

**PROPERTY:** max-size

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	100M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum file size for the specified log. When the limit is reached, the server rotates the log file, unless max-file-count is set to 1.

**PROPERTY:** min-free-disk-space-size

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	5M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum free space allowed on the disk where the specified log is stored. When the limit is reached, the server deletes the oldest log files until enough space is available.

**PROPERTY:** path

Characteristic	Value
Syntax	PATH

Characteristic	Value
Default Value	<i>INSTANCE_PATH/logs/access, INSTANCE_PATH/logs/audit, INSTANCE_PATH/logs/errors</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the full path to the specified log file type.

**PROPERTY:** `perm`

Characteristic	Value
Syntax	OCTAL_MODE
Default Value	600
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the read, write, and execute permissions on the specified log file.

**PROPERTY:** `rotation-interval`

Characteristic	Value
Syntax	DURATION   unlimited
Default Value	1d (one day) for access, 1w (one week) for audit and errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the duration between rotations of the specified log file.

**PROPERTY:** `rotation-min-file-size`

Characteristic	Value
Syntax	MEMORY_SIZE   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum size the specified log file must have before the server rotates it.

**PROPERTY:** rotation-time

Characteristic	Value
Syntax	TIME   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the time of day when the server rotates the specified log file.

**PROPERTY:** verbose-enabled

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether extra informational messages are written to the errors log.

**Syntax Values**

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as cn or objectClass.

**BOOLEAN**

true or false.

**DN**

A valid distinguished name such as ou=People, dc=example, dc=com.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as 1w, 7d, 168h, 10080m, or 604800s. You can also specify one week as 1w0d0h0m0s.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike **DURATION** properties, **MEMORY\_SIZE** properties cannot combine multiple specifiers. However, **MEMORY\_SIZE** properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [enabled\(5DSCONF\)](#)

---

## max-psearch-count

DS server instance configuration (SER) property max-psearch-count

### Description

The behavior of a Directory Server instance is configured according to server properties such as max-psearch-count.

Characteristic	Value
Syntax	INTEGER
Default Value	30
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the maximum number persistent searches allowed. You can read the number of active persistent searches in the value of `currentpsearches` on `cn=monitor`.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## max-size\_5dsconf

DS logging configuration (LOG) properties

### Description

Directory Server writes to three main types of log files you can configure, the *INSTANCE\_PATH/logs/access*, *INSTANCE\_PATH/logs/audit*, and *INSTANCE\_PATH/logs/errors* logs, where *INSTANCE\_PATH* is the full path where the server instance is located, such as */local/dsInst*.

When you specify one of these properties with `dsconf get-log-prop` or `dsconf set-log-prop`, you must specify which type of log configuration, *access*, *audit*, or *error*, you want to examine. For example, to see whether audit logging is enabled for a server instance:

```
$ dsconf get-log-prop audit enabled
enabled : off
$
```

### PROPERTY: buffering-enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, not applicable to audit and errors logs
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether Directory Server writes access log entries directly to disk, or use a buffer, by default.

### PROPERTY: enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, off for audit, on for errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether the specified log type is enabled.

**PROPERTY:** level

Characteristic	Value
Syntax	See the description that follows.
Default Value	default
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property defines which kinds of messages get logged. This property is applicable only to access and errors logs.

**access log levels**

The following settings are supported:

`acc-internal`

Log access information for internal operations.

`default`

Log client access to entries.

`acc-default_plus_referrals`

As default, but also log access to referrals.

`acc-timing`

Use precise timing for microsecond resolution of elapsed times.

**errors log levels**

The following settings are supported:

`default`

Log startup, shutdown, errors, and warnings.

`err-function-calls`

Log when server enters or exits a function.

`err-search-args`

Log search arguments.

`err-connection`

Connection management.

`err-packets`

Log packets sent and received.

`err-search-filter`

Log search filter information.

`err-config-file`

Log information for changes to the configuration file `dse.ldif`.

`err-acl`

Log access control processing information.

err-ldbm  
Log information from the ldbm database plugin.

err-entry-parsing  
Log LDIF parsing errors.

err-housekeeping  
Log event queue information.

err-replication  
Log information about replication operations.

err-entry-cache  
Log entry cache information.

err-plugins  
Log information from server plug-ins.

err-dsml  
Log information from DSML front end.

err-dsml-advanced  
Debugging information for DSML.

**PROPERTY:** max-age

Characteristic	Value
Syntax	DURATION   unlimited
Default Value	1M (one month)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the age beyond which the specified type of log file is deleted.

**PROPERTY:** max-disk-space-size

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	500M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum disk space the specified type of log is allowed to consume. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

**PROPERTY:** `max-file-count`

Characteristic	Value
Syntax	Integer
Default Value	10 for access, 2 for errors, 1 for audit
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of log files, including rotated logs, of the specified type that the server allows to be created in the log file directory. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

When you set this property to 1, the specified log is not rotated.

**PROPERTY:** `max-size`

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	100M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum file size for the specified log. When the limit is reached, the server rotates the log file, unless `max-file-count` is set to 1.

**PROPERTY:** `min-free-disk-space-size`

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	5M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum free space allowed on the disk where the specified log is stored. When the limit is reached, the server deletes the oldest log files until enough space is available.

**PROPERTY:** `path`

Characteristic	Value
Syntax	PATH

Characteristic	Value
Default Value	<i>INSTANCE_PATH</i> /logs/access, <i>INSTANCE_PATH</i> /logs/audit, <i>INSTANCE_PATH</i> /logs/errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the full path to the specified log file type.

**PROPERTY:** perm

Characteristic	Value
Syntax	OCTAL_MODE
Default Value	600
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the read, write, and execute permissions on the specified log file.

**PROPERTY:** rotation-interval

Characteristic	Value
Syntax	DURATION   unlimited
Default Value	1d (one day) for access, 1w (one week) for audit and errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the duration between rotations of the specified log file.

**PROPERTY:** rotation-min-file-size

Characteristic	Value
Syntax	MEMORY_SIZE   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum size the specified log file must have before the server rotates it.

**PROPERTY:** rotation-time

Characteristic	Value
Syntax	TIME   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the time of day when the server rotates the specified log file.

**PROPERTY:** verbose-enabled

Characteristic	Value
Syntax	on off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether extra informational messages are written to the `errors` log.

**Syntax Values**

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and milliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [enabled\(5DSCONF\)](#)

## max-thread-count

DS server instance configuration (SER) property max-thread-count

### Description

The behavior of a Directory Server instance is configured according to server properties such as `max-thread-count`.

Characteristic	Value
Syntax	INTEGER
Default Value	30
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the number of threads created at startup to process operations. When tuning server performance, try setting this to twice the number of processors or 20 plus the number of simultaneous updates expected. You can read the number of active threads in the value of `threads` on `cn=monitor`.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## max-thread-per-connection-count

DS server instance configuration (SER) property max-thread-per-connection-count

### Description

The behavior of a Directory Server instance is configured according to server properties such as `max-thread-per-connection-count`.

Characteristic	Value
Syntax	INTEGER
Default Value	5
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the maximum number of concurrent threads used to process operations on a single connection.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## min-free-disk-space-size\_5dsconf

DS logging configuration (LOG) properties

### Description

Directory Server writes to three main types of log files you can configure, the *INSTANCE\_PATH/logs/access*, *INSTANCE\_PATH/logs/audit*, and *INSTANCE\_PATH/logs/errors* logs, where *INSTANCE\_PATH* is the full path where the server instance is located, such as */local/dsInst*.

When you specify one of these properties with `dsconf get-log-prop` or `dsconf set-log-prop`, you must specify which type of log configuration, *access*, *audit*, or *error*, you want to examine. For example, to see whether audit logging is enabled for a server instance:

```
$ dsconf get-log-prop audit enabled
enabled : off
$
```

### PROPERTY: buffering-enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, not applicable to audit and errors logs
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether Directory Server writes access log entries directly to disk, or use a buffer, by default.

### PROPERTY: enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, off for audit, on for errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether the specified log type is enabled.

**PROPERTY:** level

Characteristic	Value
Syntax	See the description that follows.
Default Value	default
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property defines which kinds of messages get logged. This property is applicable only to `access` and `errors` logs.

**access log levels**

The following settings are supported:

`acc-internal`

Log access information for internal operations.

`default`

Log client access to entries.

`acc-default_plus_referrals`

As default, but also log access to referrals.

`acc-timing`

Use precise timing for microsecond resolution of elapsed times.

**errors log levels**

The following settings are supported:

`default`

Log startup, shutdown, errors, and warnings.

`err-function-calls`

Log when server enters or exits a function.

`err-search-args`

Log search arguments.

`err-connection`

Connection management.

`err-packets`

Log packets sent and received.

`err-search-filter`

Log search filter information.

`err-config-file`

Log information for changes to the configuration file `dse.ldif`.

`err-acl`

Log access control processing information.

`err-ldbm`  
Log information from the ldbm database plugin.

`err-entry-parsing`  
Log LDIF parsing errors.

`err-housekeeping`  
Log event queue information.

`err-replication`  
Log information about replication operations.

`err-entry-cache`  
Log entry cache information.

`err-plugins`  
Log information from server plug-ins.

`err-dsml`  
Log information from DSML front end.

`err-dsml-advanced`  
Debugging information for DSML.

**PROPERTY:** `max-age`

Characteristic	Value
Syntax	DURATION   unlimited
Default Value	1M (one month)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the age beyond which the specified type of log file is deleted.

**PROPERTY:** `max-disk-space-size`

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	500M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum disk space the specified type of log is allowed to consume. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

**PROPERTY:** `max-file-count`

Characteristic	Value
Syntax	Integer
Default Value	10 for access, 2 for errors, 1 for audit
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of log files, including rotated logs, of the specified type that the server allows to be created in the log file directory. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

When you set this property to 1, the specified log is not rotated.

**PROPERTY:** `max-size`

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	100M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum file size for the specified log. When the limit is reached, the server rotates the log file, unless `max-file-count` is set to 1.

**PROPERTY:** `min-free-disk-space-size`

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	5M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum free space allowed on the disk where the specified log is stored. When the limit is reached, the server deletes the oldest log files until enough space is available.

**PROPERTY:** `path`

Characteristic	Value
Syntax	PATH

Characteristic	Value
Default Value	<i>INSTANCE_PATH</i> /logs/access, <i>INSTANCE_PATH</i> /logs/audit, <i>INSTANCE_PATH</i> /logs/errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the full path to the specified log file type.

**PROPERTY:** perm

Characteristic	Value
Syntax	OCTAL_MODE
Default Value	600
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the read, write, and execute permissions on the specified log file.

**PROPERTY:** rotation-interval

Characteristic	Value
Syntax	DURATION   unlimited
Default Value	1d (one day) for access, 1w (one week) for audit and errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the duration between rotations of the specified log file.

**PROPERTY:** rotation-min-file-size

Characteristic	Value
Syntax	MEMORY_SIZE   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum size the specified log file must have before the server rotates it.

**PROPERTY:** rotation-time

Characteristic	Value
Syntax	TIME   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the time of day when the server rotates the specified log file.

**PROPERTY:** verbose-enabled

Characteristic	Value
Syntax	on off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether extra informational messages are written to the `errors` log.

**Syntax Values**

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [enabled\(5DSCONF\)](#)

## moddn-enabled

Whether the server accepts mod DN operations

### Description

Characteristic	Value
Syntax	on   off
Default Value	off (inherited at suffix level)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the server accepts requests to perform modify DN operations (to move entries).

All server instances in a replication topology must be recent enough to have support for modify DN operations before you set this property to on.

### Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [server\(5DSCONF\)](#), [suffix\(5DSCONF\)](#)

---

## mod-tracking-enabled

DS server instance configuration (SER) property mod-tracking-enabled

### Description

The behavior of a Directory Server instance is configured according to server properties such as `mod-tracking-enabled`.

Characteristic	Value
Syntax	on   off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies whether the server maintains modification timestamps for updated entries.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## nsAbandonedSearchCheckInterval

interval between checks for abandoned chaining operations

### Description

The number of seconds that pass before the server checks for abandoned operations.

#### Entry DN

cn=default instance config,cn=chaining database,  
cn=plugins,cn=config

#### Valid Range

0 to 2147483647 seconds

#### Default Value

2

#### Syntax

Integer

#### Example

nsabandonedsearchcheckinterval: 10

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsActiveChainingComponents

components using chaining

### Description

Lists the components using chaining. A component is any functional unit in the server. The value of this attribute overrides the value in the global configuration attribute. To disable chaining on a particular database instance, use the value `None`.

This attribute also allows you to alter the components used to chain. By default, no components are allowed to chain. For this reason, this attribute does not appear in a list of `cn=config`, `cn=chaining database`, `cn=config` attributes, as LDAP considers empty attributes to be nonexistent.

#### Entry DN

`cn=config,cn=chaining database,cn=plugins,cn=config`

#### Valid Range

Any valid component entry.

#### Default Value

None

#### Syntax

DirectoryString

#### Example

```
nsActiveChainingComponents: cn=uid
uniqueness,cn=plugins,cn=config
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsBindConnectionsLimit

maximum TCP connections for chaining

### Description

Maximum number of TCP connections the chained suffix establishes with the remote server.

#### Entry DN

cn=default instance config,cn=chaining database,  
cn=plugins,cn=config

#### Valid Range

1 to 50 connections

#### Default Value

3

#### Syntax

Integer

#### Example

nsbindconnectionslimit: 3

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsBindRetryLimit

maximum bind attempts for chaining suffix

### Description

Number of times a chained suffix attempts to bind with the remote server if the initial bind attempt is unsuccessful. A value of 0 here indicates that the chained suffix will only attempt to bind once only.

#### Entry DN

cn=default instance config,cn=chaining database,  
cn=plugins,cn=config

#### Valid Range

0 to 5

#### Default Value

3

#### Syntax

Integer

#### Example

nsbindretrylimit: 3

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsBindTimeout

timeout for chaining binds

### Description

Period of time before the bind attempt times out. There is no real Valid Range for this attribute, except reasonable patience limits.

#### Entry DN

cn=default instance config,cn=chaining database,  
cn=plugins,cn=config

#### Valid Range

0 to 60 seconds

#### Default Value

15

#### Syntax

Integer

#### Example

nsbindtimeout:15

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsCheckLocalACI

evaluate access control on chained suffix

### Description

Reserved for advanced use only. Controls whether ACIs are evaluated on the chained suffix as well as the remote data server. Changes to this attribute only take effect once the server has been restarted.

#### Entry DN

cn=default instance config,cn=chaining database,  
cn=plugins,cn=config

#### Valid Range

on | off

#### Default Value

off

#### Syntax

DirectoryString

#### Example

nschecklocalaci: on

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsConcurrentBindLimit

maximum concurrent binds on TCP connection for chaining

### Description

The maximum number of concurrent bind operations per TCP connection.

#### Entry DN

cn=default instance config,cn=chaining database,  
cn=plugins,cn=config

#### Valid Range

1 to 25 binds

#### Default Value

10

#### Syntax

Integer

#### Example

nsconcurrentbindlimit:10

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsConcurrentOperationsLimit

maximum concurrent operations for chaining

### Description

The maximum number of concurrent operations allowed.

#### Entry DN

cn=default instance config,cn=chaining database,  
cn=plugins,cn=config

#### Valid Range

1 to 50 operations

#### Default Value

50

#### Syntax

Integer

#### Example

nsconcurrentoperationslimit: 50

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsConnectionLife

connection lifetime for chaining

### Description

Specifies the connection lifetime. You can keep connections between the chained suffix and the remote server open for an unspecified time, or you can close them after a specific period of time. Keeping the connections open is faster, but uses more resources. When the value is 0 and a list of failover servers is provided in the nsFarmServerURL attribute, the "main" server is never contacted after failover to the alternate server.

#### Entry DN

cn=default instance config,cn=chaining database,  
cn=plugins,cn=config

#### Valid Range

0 to limitless seconds (where 0 means forever)

#### Default Value

0

#### Syntax

Integer

#### Example

nsconnectionlife: 0

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsds50ruv

Replication update vector, version 5

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	N/A
Default Value	N/A
Syntax	DirectoryString

This attribute is part of replica configuration for nsDS5ReplicationAgreement entries.

This attribute is responsible for managing the internal state of the replica via the replication update vector. It is always present and must not be changed.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

---

## nsds5BeginReplicaRefresh

Force initialization of the consumer

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	start   stop
Default Value	N/A
Syntax	DirectoryString

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

When set to `start`, this attribute causes the supplier to perform a total update of the consumer.

### Examples

```
nsds5BeginReplicaRefresh: start
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## nsDS5Flags

Change logging and referral flags

### Description

PROPERTY	VALUE
Entry DN	cn=replica,cn= <i>suffix name</i> ,cn=mapping tree,cn=config
Valid Range	0   1   4   5
Default Value	1 (master), 0 (consumer)
Syntax	Integer

This attribute is part of replica configuration for nsDS5Replica entries.

This attribute takes one of the following values:

0

No changes are logged. Automatic referrals are not overwritten.

1

Changes are logged. Automatic referrals are not overwritten.

4

No changes are logged. Automatic referrals are overwritten.

5

Changes are logged. Automatic referrals are overwritten.

### Examples

nsDS5Flags: 1

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## nsDS5Replica

Directory Server replication configuration

### Description

---

---

**Note:** In most cases you do not need to know how to manage the object classes and attributes mentioned here. Instead you handle replication configuration through Directory Service Control Center or the `dsconf(1M)` command. The information here is included primarily for those of you who are familiar with command-line configuration for replication in previous Directory Server versions.

---

---

Replication works in Directory Server using extended operations. Changes to a suffix on a supplier server are replayed on the consumer server. Each server stores configuration information defining its role in replication, and defining the user account that has access to perform replication operations. The supplier server also stores configuration information about the replication agreement it has with the consumer.

Replication configuration is reflected in object classes and attributes under `cn=config` of the Directory Server instance.

### Replica Configuration

The configuration entry that indicates a suffix is replicated has a DN of the following form.

```
cn=replica,cn=suffix name,cn=mapping tree,cn=config
```

For example, the following configuration entry DN corresponds to the suffix `dc=example,dc=com`.

```
cn=replica,cn=dc\=example\,dc\=com,cn=mapping tree,cn=config
```

Such entries have the object class `nsDS5Replica`.

### Replication Agreement Configuration

The configuration entries that describe replication agreements with other servers have DNs of the following form.

```
cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,  
cn=config
```

For example, the following configuration entry DN corresponds to the suffix `dc=example,dc=com`.

```
cn=ds.example.com:389,cn=replica,cn=dc\=example\,dc\=com,  
cn=mapping tree,cn=config
```

Replication agreement entries have the object class `nsDS5ReplicationAgreement`.

## Replication Priority Configuration

The configuration entries that describe replication priority rules have DNs of the form:

```
cn=rule name,cn=replica,cn=suffix name,cn=mapping tree,
cn=config
```

For example, the following configuration entry DN corresponds to the suffix `dc=example,dc=com`.

```
cn=pwdReplPrio,cn=replica,cn=dc\=example\,dc\=com,cn=mapping tree,
cn=config
```

Replication priority rule entries have the object class `ReplPriorityRule`.

## Replication Manager Configuration

The configuration entry for the account used to bind and perform replication has, by default, the DN:

```
cn=replication manager,cn=replication,cn=config
```

The account entry is a standard `person(5DSOC)` object class. It defines the DN and `userPassword` for replication. The password policy for the account used to bind and perform replication has, by default, the DN:

```
cn>Password Policy,cn=replication manager,cn=replication,
cn=config
```

The password policy entry is governed by the schema for `pwpolicy(5DSSD)`. As both `person` and `pwpolicy` related object classes and attribute types are described elsewhere, they are not further described here.

## Extended Description

This section examines replication configuration on a master supplier server, and on a dedicated consumer server. The sample configurations shown here were created using the `dsconf` to configure replication.

### Supplier Side Configuration

On the supplier side, the key configuration entries are the replica configuration and the replication agreement.

#### Supplier Replica Configuration

For a master supplier, an `nsDS5Replica` configuration entry looks something like the following:

```
dn: cn=replica,cn=\dc=example\,dc\=com,cn=mapping tree,cn=config
nsDS5ReplicaRoot: dc=example,dc=com
nsDS5ReplicaBindDN: cn=replication manager,cn=replication,cn=config
objectClass: top
objectClass: nsDS5Replica
nsDS5ReplicaId: 1
nsDS5Flags: 1
nsDS5ReplicaType: 3
cn: replica
creatorsName: cn=directory manager
modifiersName: cn=directory manager
nsState:: AAEAAAAAAAAAAAAAAAAQ4rs0AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAA==
nsDS5ReplicaName: d2e14d02-600311da-80ace5db-c83e55ac
```

numSubordinates: 1

In this example, the key attributes are the following:

nsDS5ReplicaRoot

Holds the DN of the root of the replicated suffix. Once set, it must not be modified.

nsDS5ReplicaBindDN

Holds the DN of the account used to bind for replication. If replication is performed over SSL, this attribute can hold the certificate identity associated with the DN.

nsDS5ReplicaId

Specifies the unique ID of this master supplier server, a value from 1-65534, inclusive.

A hub uses the same replica ID as a consumer, 65535.

nsDS5Flags

Governs change logging and automatic referrals. It takes one of the following values:

0

No changes are logged. Automatic referrals are not overwritten.

1

Changes are logged. Automatic referrals are not overwritten.

4

No changes are logged. Automatic referrals are overwritten.

5

Changes are logged. Automatic referrals are overwritten.

nsDS5ReplicaType

Defines the role this replica plays in replicating with other servers. It takes one of the following values:

0

Reserved for internal use

1

Dedicated supplier

2

Dedicated consumer (read-only)

3

Supplier/consumer (read-write)

cn

This attribute names the replica. Once set, it must not be modified.

nsState

Stores the state of the clock for handling synchronization. Reserved for internal use.

nsDS5ReplicaName

Read-only unique identifier for the replica.

The replica configuration entry can also hold the following attributes not shown here:

[ds5BeginReplicaAcceptUpdates\(5DSCONF\)](#)

```

ds5ReplicaConsumerTimeout(5DSCONF)
ds5LastInitTimeStamp(5DSCONF)
ds5ReferralDelayAfterInit(5DSCONF)
dsChangelogMaxAge(5DSCONF)
dsChangelogMaxentries(5DSCONF)
dsFilterSPConfigchecksum(5DSCONF)
nsDS5ReplicaAutoReferral(5DSCONF)
nsDS5ReplicaChangeCount(5DSCONF)
nsDS5ReplicaPurgeDelay(5DSCONF)
nsDS5ReplicaReferral(5DSCONF)
nsDS5ReplicaTombstonePurgeInterval(5DSCONF)
nsDS5Task(5DSCONF)

```

### Supplier Replication Agreement

For a master supplier, an nsDS5ReplicationAgreement configuration entry looks something like the following:

```

dn: cn=ds.example.com:389,cn=replica,cn=dc\=example\,dc\=com,
   cn=mapping tree,cn=config
nsDS5ReplicaHost: ds.example.com
nsDS5ReplicaUpdateSchedule: *
nsDS5ReplicaTransportInfo: LDAP
objectClass: top
objectClass: nsDS5ReplicationAgreement
nsDS5ReplicaPort: 389
nsDS5ReplicaBindMethod: SIMPLE
cn: ds.example.com:389
nsDS5ReplicaRoot: dc=example,dc=com
nsDS5ReplicaBindDN: cn=replication manager,cn=replication,
   cn=config
nsDS5ReplicaCredentials:: e0RFU31JakduS3VZSWhEcThEcExDQ1U2
   V1N2QTdjcUw4emhDdXl3S1dmc3NTZ2t3eS9mWmR4VmpUZ1VYRE1NLzR2T
   UVBDQpyZVdYU3A3U1ZwYz0=

```

In this example, the key attributes are the following:

nsDS5ReplicaHost

Holds the host name where the consumer runs.

nsDS5ReplicaUpdateSchedule

Specifies when replication happens. If you must restrict the time when replication can happen, set this attribute. This attribute can take multiple values of the form *hmm-hmm 0123456*, where the first element specifies the time span, and the second specifies which days, starting with Sunday (0) to Saturday (6).

nsDS5ReplicaTransportInfo

Specifies the transport used for replication, LDAP or SSL.

nsDS5ReplicaPort

Holds port number on which the consumer listens.

cn

This attribute names the replication agreement. Once set, it must not be modified.

nsDS5ReplicaBindMethod

Specifies bind protocol, SIMPLE, SSLCLIENTAUTH.

`nsDS5ReplicaRoot`  
Holds the DN of the root of the replicated suffix. Once set, it must not be modified.

`nsDS5ReplicaBindDN`  
Holds the DN of the account on the consumer used for replication.

`nsDS5ReplicaCredentials`  
Holds the bind credentials of the account on the consumer used for replication.

The replication agreement entry can also hold the following attributes not shown here:

`description_5dsat(5DSAT)`  
`ds5AgreementEnable(5DSCONF)`  
`ds5ReplicaAutomaticInit(5DSCONF)`  
`ds5ReplicaTransportCompressionLevel(5DSCONF)`  
`ds5ReplicaTransportConcurrencyLevel(5DSCONF)`  
`ds5ReplicaTransportGroupSize(5DSCONF)`  
`ds5ReplicaTransportGrpPktSize(5DSCONF)`  
`ds5ReplicaTransportWindowSize(5DSCONF)`  
`ds6ruv(5DSCONF)`  
`dsReplFractionalExclude(5DSCONF)`  
`dsReplFractionalInclude(5DSCONF)`  
`nsDS5ReplicaUpdateSchedule(5DSCONF)`  
`nsds50ruv(5DSCONF)`  
`nsds5BeginReplicaRefresh(5DSCONF)`  
`nsds5ReplicaTimeout(5DSCONF)`  
`nsds5replicaChangesSentSinceStartup(5DSCONF)`  
`nsds5replicaLastInitEnd(5DSCONF)`  
`nsds5replicaLastInitStart(5DSCONF)`  
`nsds5replicaLastInitStatus(5DSCONF)`  
`nsds5replicaLastUpdateEnd(5DSCONF)`  
`nsds5replicaLastUpdateStart(5DSCONF)`  
`nsds5replicaLastUpdateStatus(5DSCONF)`  
`nsds5replicaUpdateInProgress(5DSCONF)`

### Supplier Priority Rule

For a master supplier, a `ReplPriorityRule` configuration entry looks something like the following:

```
dn: cn=pwdReplPrio,cn=replica,cn=dc\=example\,dc\=com,cn=mapping tree,cn=config
objectClass: top
objectClass: ReplPriorityRule
replPriorityType: mod
replPriorityAttribute: userPassword
nsDS5ReplicaRoot: dc=example,dc=com
cn: pwdReplPrio
```

In this example, the key attributes are the following:

`replPriorityType`  
Specifies the type of operation which are replicated with high priority.

`replPriorityAttribute`  
Specifies the attribute whose changes are replicated with high priority.

`nsDS5ReplicaRoot`  
Holds the DN of the root of the replicated suffix to which this priority rule applies.

cn

This attribute names the priority rule.

The replication priority rule entry can also hold the following attributes not shown here:

[replPriorityBaseDN\(5DSCONF\)](#)  
[replPriorityBindDN\(5DSCONF\)](#)

## Consumer Side Configuration

On the consumer side, the key configuration entry is the replica configuration. On a dedicated consumer, it is also useful to see how the mapping tree entry for the suffix is configured to refer updates to the supplier.

### Consumer Replica Configuration

For a dedicated consumer, an nsDS5Replica configuration entry looks something like the following:

```
dn: cn=replica,cn=dc\=example\,dc\=com,cn=mapping tree,cn=config
nsDS5ReplicaRoot: dc=example,dc=com
nsDS5ReplicaBindDN: cn=replication manager,cn=replication,cn=config
objectClass: top
objectClass: nsDS5Replica
nsDS5Flags: 0
nsDS5ReplicaType: 2
cn: replica
nsDS5ReplicaId: 65535
nsState: //8AAAAAAAAAAAAAQ4rtPAAAAAAAAAAAAAAAAAAAAQAAAAAAAA==
nsDS5ReplicaName: 07ed9f82-600411da-8096d729-0ba76005
dsFilterSPConfigchecksum: 0
ds5LastInitTimeStamp: 0
```

Key attributes in this example are explained in *Supplier Replica Configuration*.

A hub uses the same replica ID as a consumer, 65535.

### Referrals On Consumer

For a dedicated consumer suffix, the mapping tree configuration entry refers client applications to the supplier for write operations:

```
dn: cn=dc\=example\,dc\=com,cn=mapping tree,cn=config
objectClass: top
objectClass: extensibleObject
objectClass: nsMappingTree
nsslapd-backend: example
cn: dc=example,dc=com
numSubordinates: 1
nsslapd-referral: ldap://master.example.com:389/dc%3Dexample,dc%3Dcom
nsslapd-state: referral on update
```

Notice that the nsslapd-referral attribute refers clients to the master on host master.example.com and port 389 when they request update operations that would write to the directory. These attributes are set by the server when replication is initialized. The dedicated consumer then accepts write operations only from the supplier replica.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**

[dsconf\(1M\)](#), [person\(5DSOC\)](#), [pwpolicy\(5DSSD\)](#)

---

## nsDS5ReplicaAutoReferral

Reserved for internal use

### Description

PROPERTY	VALUE
Entry DN	cn=replica,cn= <i>suffix name</i> ,cn=mapping tree,cn=config
Valid Range	N/A
Default Value	None
Syntax	DirectoryString

This attribute is part of replica configuration for nsDS5Replica entries.

This attribute is reserved for internal use.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

---

## nsDS5ReplicaBindDN

Bind DN for replication operations

### Description

PROPERTY	VALUE
Entry DN	cn=replica, cn= <i>suffix name</i> , cn=mapping tree, cn=config
Valid Range	Any valid account DN
Default Value	cn=replication manager, cn=replication, cn=config
Syntax	DN

This attribute is part of replica configuration for nsDS5Replica, and nsDS5ReplicationAgreement entries.

When this multi-valued attribute is set, the accounts with the specified DNs can be used by the server to bind before performing replication operations. The DNs specified in this attribute can be used in replication agreements on the supplier side, and to bind on the consumer side. The DN can either be a local entry on the consumer server or, in the case of an SSL connection, the certificate identity associated with the same DN.

### Examples

```
nsDS5ReplicaBindDN: cn=replication manager, cn=replication,
cn=config
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## nsDS5ReplicaBindMethod

Bind protocol used for replication

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	SIMPLE   SSLCLIENTAUTH
Default Value	SIMPLE
Syntax	DirectoryString

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

Specifies the bind protocol used for replication. When this attribute is set to `SIMPLE`, simple authentication is used. When this attribute is set to `SSLCLIENTAUTH`, SSL client authentication is used.

### Examples

```
nsDS5ReplicaBindMethod: SIMPLE
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## nsDS5ReplicaChangeCount

Number of entries in the change log

### Description

PROPERTY	VALUE
Entry DN	<code>cn=replica,cn=suffix name,cn=mapping tree,cn=config</code>
Valid Range	N/A
Default Value	N/A
Syntax	Integer

This attribute is part of replica configuration for `nsDS5Replica` entries.

This read-only attribute shows the number of entries remaining in the change log. The change log is purged according to how `nsslapd-changelogmaxage` and `nsslapd-changelogmaxentries` are set.

### Examples

```
nsDS5ReplicaChangeCount: 10
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

---

## nsds5replicaChangesSentSinceStartup

Number of updates since startup

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	0 maximum integer
Default Value	None
Syntax	Integer

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

This read-only attribute shows the number of changes sent to this replica since the server started.

### Examples

`nsds5replicaChangesSentSinceStartup: 161803399`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## nsDS5ReplicaCredentials

Credentials for replication operations

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	N/A
Default Value	N/A
Syntax	DirectoryString

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

Specifies the credentials on the consumer for the account with DN [nsDS5ReplicaBindDN\(5DSCONF\)](#) used for replication configured to use simple authentication.

### Examples

```
nsDS5ReplicaCredentials:: e0RFU31JakduS3VZSWhEcThEcExDQ1U2
V1N2QTdjcUw4emhDdXl3S1dmc3NTZ2t3eS9mWmR4VmpUZ1VYRE1NLzR2T
UVBDQpyZVdYU3A3U1ZwYz0=
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

---

## nsDS5ReplicaHost

Host name of consumer

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	Any valid host name
Default Value	N/A
Syntax	DirectoryString

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

Specifies the hostname for the host where the consumer replica is located. Do not modify this attribute after it has been set.

### Examples

`nsDS5ReplicaHost: ds.example.com`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## nsDS5ReplicaId

Replica identification number

### Description

PROPERTY	VALUE
Entry DN	<code>cn=replica, cn=suffix name, cn=mapping tree, cn=config</code>
Valid Range	1-65534 (master), 65535 (consumer or hub)
Default Value	None
Syntax	Integer

This attribute is part of replica configuration for `nsDS5Replica` entries.

This attribute specifies a unique ID for a master replica in a particular topology, or the ID 65535 for a consumer, or for a hub.

### Examples

```
nsDS5ReplicaId: 1
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

---

## nsds5replicaLastInitEnd

Time of last initialization

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	A valid timestamp
Default Value	None
Syntax	GeneralizedTime

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

This read-only attribute shows when the most recent initialization of the replica finished.

### Examples

`nsds5replicaLastInitEnd: 20051223113229`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## nsds5replicaLastInitStart

Time of last initialization

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	A valid timestamp
Default Value	None
Syntax	GeneralizedTime

This attribute is part of replica configuration for nsDS5ReplicationAgreement entries.

This read-only attribute shows when the most recent initialization of the replica started.

### Examples

```
nsds5replicaLastInitStart: 20051223113214
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

---

## nsds5replicaLastInitStatus

Replica initialization status

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	A message concerning initialization
Default Value	None
Syntax	DirectoryString

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

This read-only attribute shows the status of the most recent replication initialization.

### Examples

```
nsds5replicaLastInitStatus: 0 Consumer Initialization Succeeded
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## nsds5replicaLastUpdateEnd

Time of last update

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	A valid timestamp
Default Value	None
Syntax	GeneralizedTime

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

This read-only attribute shows when the most recent update of the replica finished.

### Examples

```
nsds5replicaLastUpdateEnd: 20051223113229
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

---

## nsds5replicaLastUpdateStart

Time of last update

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	A valid timestamp
Default Value	None
Syntax	GeneralizedTime

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

This read-only attribute shows when the most recent update of the replica started.

### Examples

```
nsds5replicaLastUpdateStart: 20051223113214
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## nsds5replicaLastUpdateStatus

Replica update status

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	A message concerning the last update
Default Value	None
Syntax	DirectoryString

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

This read-only attribute shows the status of the latest update of the replica.

Messages include the following.

**-1 Could not bind to replica**

**Cause:**

**Action:** The credentials are wrong for the replication manager bind DN. Fix the replication agreement.

**-1 Incremental update has failed and requires a total update**

**Cause:**

**Action:** Reinitialize the replica. See the `errors` log to determine what led to the problem.

**-1 Incremental update has failed and requires administrator action**

**Cause:**

**Action:** Reinitialize the replica. See the `errors` log to determine what led to the problem.

**-1 Internal error: Could not get access to the replica RUV**

**Cause:**

**Action:** Replication stopped and requires a total update. Reinitialize the replica.

**-1 Partial replication configuration error**

**Cause:**

**Action:** Replication stopped and requires configuration fix. Fix the configuration.

**-1 Partial replication configuration has changed**

**Cause:**

**Action:** Replication stopped and requires a total update. Reinitialize the replica.

**-1 Total update required**

**Cause:**

**Action:** Reinitialize the replica. See the `errors` log to determine what led to the problem.

**0 Incremental update session interrupted**

**Cause:**

**Action:** A directory administrator has stopped or disabled replication.

**0 Incremental update session started**

**Cause:**

**Action:** Replication is proceeding normally.

**0 Incremental update session stopped: nothing to replicate**

**Cause:**

**Action:** Replication is proceeding normally.

**0 Incremental update session succeeded**

**Cause:**

**Action:** Replication is proceeding normally.

**0 Incremental update started**

**Cause:**

**Action:** Replication is proceeding normally

**0 Incremental update stopped : Nothing acquired**

**Cause:**

**Action:** Replication is proceeding normally. Another supplier is replicating to the consumer, and replication from this supplier will resume after that operation finishes.

**0 Incremental update succeeded**

**Cause:**

**Action:** Replication is proceeding normally.

**0 No replication sessions started since server startup**

**Cause:**

**Action:** No replication operation has been attempted yet and therefore no status is available. This is typically the case when restarting replication.

**0 Replica acquired successfully**

**Cause:**

**Action:** Replication is proceeding normally.

**0 Replication session successful**

**Cause:**

**Action:** Replication is proceeding normally.

**1 Replication error acquiring replica: replica busy**

**Cause:**

**Action:** Another supplier is replicating to the consumer, and replication from this supplier will resume after that operation finishes.

**11 Replication error acquiring replica: duplicate replica ID detected**

**Cause:**

**Action:** More than one master is using the same replica ID. Fix the configuration.

**12 Replication session aborted****Cause:**

**Action:** The consumer is disabled. Error 8194 should also appear in the `errors` log. Investigate the cause of the problem, fix it, and restart replication.

**2 Replication error acquiring replica: excessive clock skew.****Cause:**

**Action:** The time difference for clocks on different replicas is too big for replication to handle. Synchronize the system clocks.

**202 Incremental update session aborted: Timeout while waiting for change acknowledgement [hostname:port-number]****Cause:**

**Action:** Replication is proceeding normally. A timeout temporarily prevented replication from continuing.

**3 Replication error acquiring replica: permission denied****Cause:**

**Action:** The credentials are wrong for the replication manager bind DN. Fix the replication agreement.

**4 Replication error acquiring replica: decoding error****Cause:**

**Action:** A protocol error occurred.

**401 Incremental update session stopped: Could not parse update vector****Cause:**

**Action:** Replication is proceeding normally. A parse error temporarily prevented replication from continuing.

**401 Replication session failed, consumer replica needs to be initialized****Cause:**

**Action:** The database on the consumer has not been initialized. Either perform a total update on the consumer, or initialize the consumer with the same data as the supplier.

**402 Replication session failed, consumer replica has a different data version****Cause:**

**Action:** The database on the consumer has been initialized with different data from that of the supplier. Either perform a total update on the consumer, or initialize the consumer with the same data as the supplier.

**5 Replication error acquiring replica: unknown update protocol****Cause:**

**Action:** The consumer does not support the same replication protocol as the supplier.

**6 Replication error acquiring replica: no such replica****Cause:**

**Action:** The consumer is not configured for replication for the suffix to be replicated.

#### 7 Replication error acquiring replica: csn below purge point

**Cause:**

**Action:** The replication change log has been purged and therefore no longer contains the changes necessary to update the consumer.

#### 8 Replication error acquiring replica: internal error

**Cause:**

**Action:** The consumer failed to replay a replication operation. See the `errors` log on the consumer to determine what led to the problem.

#### 801 Incremental update session aborted : Unable to adjust the time between replicas

**Cause:**

**Action:** The time difference for clocks on different replicas is too big for replication to handle. Synchronize the system clocks, perhaps using the network time protocol (NTP).

#### 810 Replication error acquiring replica: Supplier and consumer use the same replica ID

**Cause:**

**Action:** More than one replica is using the same replica ID. Fix the configuration.

#### 820 Incremental update session stopped: unable to replicate schema

**Cause:**

**Action:** Replication is proceeding normally, but schema could not be replicated. If this message is observed repeatedly, replicate schema to the consumer manually.

#### 829 Replication error acquiring replica: not able to use partial replication to read-write replica

**Cause:**

**Action:** Only consumers can be partial replica. Fix the configuration.

#### 9 Replication error acquiring replica: replica released

**Cause:**

**Action:** Replication is proceeding normally.

## Examples

```
nsds5replicaLastUpdateStatus: 0 replica acquired successfully
```

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**

[replication\(5DSCONF\)](#)

---

## nsDS5ReplicaName

Unique replica identifier

### Description

PROPERTY	VALUE
Entry DN	cn=replica,cn= <i>suffix name</i> ,cn=mapping tree,cn=config
Valid Range	N/A
Default Value	N/A
Syntax	DirectoryString

This attribute is part of replica configuration for nsDS5Replica entries.

This attribute value is allocated by the server when the replica is created. Reserved for internal use.

### Examples

nsDS5ReplicaName: d2e14d02-600311da-80ace5db-c83e55ac

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## nsDS5ReplicaPort

Port number on which consumer listens

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	Any valid port number
Default Value	N/A
Syntax	Integer

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

Specifies the hostname for the port number on which the consumer replica listens. Do not modify this attribute after it has been set.

### Examples

```
nsDS5ReplicaPort: 389
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## nsDS5ReplicaPurgeDelay

Maximum time to keep tombstones

### Description

PROPERTY	VALUE
Entry DN	cn=replica,cn= <i>suffix name</i> ,cn=mapping tree,cn=config
Valid Range	0 (keep forever) to max. integer seconds
Default Value	604800 (one week)
Syntax	Integer

This attribute is part of replica configuration for nsDS5Replica entries.

When this attribute is set, the server deletes tombstone entries older than the number of seconds you specify. Tombstone entries are those entries that have been marked for deletion but not yet removed, and the associated replication state information. When setting this attribute, ensure that the purge delay is longer than the longest replication cycle in your replication policy to avoid incurring conflict resolution problems and divergence between replica.

### Examples

```
nsDS5ReplicaPurgeDelay: 604800
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

---

## nsDS5ReplicaReferral

Referrals for a replica

### Description

PROPERTY	VALUE
Entry DN	<code>cn=replica, cn=<i>suffix name</i>, cn=mapping tree, cn=config</code>
Valid Range	Any valid LDAP URL
Default Value	N/A
Syntax	DirectoryString

This attribute is part of replica configuration for `nsDS5Replica` entries.

This attribute should be set on a consumer only. When this multi-valued attribute is set, the server returns these referrals when a client attempts to update a read-only consumer.

If this attribute is not set, the read-only consumer refers clients to supplier servers on update.

### Examples

```
nsDS5ReplicaReferral: ldap://master.example.com
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

---

## nsDS5ReplicaRoot

Base DN for replication

### Description

PROPERTY	VALUE
Entry DN	cn=replica,cn= <i>suffix name</i> ,cn=mapping tree,cn=config
Valid Range	DN of replicated suffix
Default Value	None
Syntax	DirectoryString

This attribute is part of replica configuration for nsDS5Replica entries.

The server replicates entries below the entry with this DN. This DN must correspond to the root DN of a replicated suffix. Once set, this attribute must not be modified.

### Examples

```
nsDS5ReplicaRoot: dc=example,dc=com
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## nsDS5ReplicatedAttributeList

Attributes not to replicate

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	Any valid attribute types
Default Value	N/A
Syntax	DirectoryString

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

When this multi-valued attribute is set, the supplier does not replicate updates to the specified attribute types to the consumer.

### Examples

```
nsDS5ReplicatedAttributeList: userPassword
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

---

## nsds5ReplicaTimeout

Timeout for replication operations

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	0 maximum integer (seconds)
Default Value	600 (seconds)
Syntax	Integer

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

When set, this attribute causes the supplier to wait at most the specified number of seconds for a response from the consumer concerning a replication operation.

If you see Warning: timed out messages in the `errors` log file, then you should increase the value of this attribute. You can find out the amount of time the operation actually lasted by examining the `access` log on the consumer. You can then tune this attribute to optimize performance.

### Examples

```
nsds5ReplicaTimeout: 1200
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## nsDS5ReplicationAgreement

Directory Server replication configuration

### Description

---

---

**Note:** In most cases you do not need to know how to manage the object classes and attributes mentioned here. Instead you handle replication configuration through Directory Service Control Center or the `dsconf(1M)` command. The information here is included primarily for those of you who are familiar with command-line configuration for replication in previous Directory Server versions.

---

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Replication works in Directory Server using extended operations. Changes to a suffix on a supplier server are replayed on the consumer server. Each server stores configuration information defining its role in replication, and defining the user account that has access to perform replication operations. The supplier server also stores configuration information about the replication agreement it has with the consumer.

Replication configuration is reflected in object classes and attributes under `cn=config` of the Directory Server instance.

### Replica Configuration

The configuration entry that indicates a suffix is replicated has a DN of the following form.

```
cn=replica,cn=suffix name,cn=mapping tree,cn=config
```

For example, the following configuration entry DN corresponds to the suffix `dc=example,dc=com`.

```
cn=replica,cn=dc\=example\,dc\=com,cn=mapping tree,cn=config
```

Such entries have the object class `nsDS5Replica`.

### Replication Agreement Configuration

The configuration entries that describe replication agreements with other servers have DNs of the following form.

```
cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,  
cn=config
```

For example, the following configuration entry DN corresponds to the suffix `dc=example,dc=com`.

```
cn=ds.example.com:389,cn=replica,cn=dc\=example\,dc\=com,  
cn=mapping tree,cn=config
```

Replication agreement entries have the object class `nsDS5ReplicationAgreement`.

## Replication Priority Configuration

The configuration entries that describe replication priority rules have DNs of the form:

```
cn=rule name,cn=replica,cn=suffix name,cn=mapping tree,
cn=config
```

For example, the following configuration entry DN corresponds to the suffix `dc=example,dc=com`.

```
cn=pwdReplPrio,cn=replica,cn=dc\=example\,dc\=com,cn=mapping tree,
cn=config
```

Replication priority rule entries have the object class `ReplPriorityRule`.

## Replication Manager Configuration

The configuration entry for the account used to bind and perform replication has, by default, the DN:

```
cn=replication manager,cn=replication,cn=config
```

The account entry is a standard `person(5DSOC)` object class. It defines the DN and `userPassword` for replication. The password policy for the account used to bind and perform replication has, by default, the DN:

```
cn>Password Policy,cn=replication manager,cn=replication,
cn=config
```

The password policy entry is governed by the schema for `pwpolicy(5DSSD)`. As both `person` and `pwpolicy` related object classes and attribute types are described elsewhere, they are not further described here.

## Extended Description

This section examines replication configuration on a master supplier server, and on a dedicated consumer server. The sample configurations shown here were created using the `dsconf` to configure replication.

### Supplier Side Configuration

On the supplier side, the key configuration entries are the replica configuration and the replication agreement.

#### Supplier Replica Configuration

For a master supplier, an `nsDS5Replica` configuration entry looks something like the following:

```
dn: cn=replica,cn=\dc=example\,dc\=com,cn=mapping tree,cn=config
nsDS5ReplicaRoot: dc=example,dc=com
nsDS5ReplicaBindDN: cn=replication manager,cn=replication,cn=config
objectClass: top
objectClass: nsDS5Replica
nsDS5ReplicaId: 1
nsDS5Flags: 1
nsDS5ReplicaType: 3
cn: replica
creatorsName: cn=directory manager
modifiersName: cn=directory manager
nsState:: AAEAAAAAAAAAAAAAAAAQ4rs0AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAA==
nsDS5ReplicaName: d2e14d02-600311da-80ace5db-c83e55ac
```

numSubordinates: 1

In this example, the key attributes are the following:

nsDS5ReplicaRoot

Holds the DN of the root of the replicated suffix. Once set, it must not be modified.

nsDS5ReplicaBindDN

Holds the DN of the account used to bind for replication. If replication is performed over SSL, this attribute can hold the certificate identity associated with the DN.

nsDS5ReplicaId

Specifies the unique ID of this master supplier server, a value from 1-65534, inclusive.

A hub uses the same replica ID as a consumer, 65535.

nsDS5Flags

Governs change logging and automatic referrals. It takes one of the following values:

0

No changes are logged. Automatic referrals are not overwritten.

1

Changes are logged. Automatic referrals are not overwritten.

4

No changes are logged. Automatic referrals are overwritten.

5

Changes are logged. Automatic referrals are overwritten.

nsDS5ReplicaType

Defines the role this replica plays in replicating with other servers. It takes one of the following values:

0

Reserved for internal use

1

Dedicated supplier

2

Dedicated consumer (read-only)

3

Supplier/consumer (read-write)

cn

This attribute names the replica. Once set, it must not be modified.

nsState

Stores the state of the clock for handling synchronization. Reserved for internal use.

nsDS5ReplicaName

Read-only unique identifier for the replica.

The replica configuration entry can also hold the following attributes not shown here:

[ds5BeginReplicaAcceptUpdates\(5DSCONF\)](#)

```

ds5ReplicaConsumerTimeout(5DSCONF)
ds5LastInitTimeStamp(5DSCONF)
ds5ReferralDelayAfterInit(5DSCONF)
dsChangelogMaxAge(5DSCONF)
dsChangelogMaxentries(5DSCONF)
dsFilterSPConfigchecksum(5DSCONF)
nsDS5ReplicaAutoReferral(5DSCONF)
nsDS5ReplicaChangeCount(5DSCONF)
nsDS5ReplicaPurgeDelay(5DSCONF)
nsDS5ReplicaReferral(5DSCONF)
nsDS5ReplicaTombstonePurgeInterval(5DSCONF)
nsDS5Task(5DSCONF)

```

### Supplier Replication Agreement

For a master supplier, an nsDS5ReplicationAgreement configuration entry looks something like the following:

```

dn: cn=ds.example.com:389,cn=replica,cn=dc\=example\,dc\=com,
   cn=mapping tree,cn=config
nsDS5ReplicaHost: ds.example.com
nsDS5ReplicaUpdateSchedule: *
nsDS5ReplicaTransportInfo: LDAP
objectClass: top
objectClass: nsDS5ReplicationAgreement
nsDS5ReplicaPort: 389
nsDS5ReplicaBindMethod: SIMPLE
cn: ds.example.com:389
nsDS5ReplicaRoot: dc=example,dc=com
nsDS5ReplicaBindDN: cn=replication manager,cn=replication,
   cn=config
nsDS5ReplicaCredentials:: e0RFU31JakduS3VZSWhEcThEcExDQ1U2
   V1N2QTdjcUw4emhDdXl3S1dmc3NTZ2t3eS9mWmR4VmpUZ1VYRE1NLzR2T
   UVBDQpyZVdYU3A3U1ZwYz0=

```

In this example, the key attributes are the following:

nsDS5ReplicaHost

Holds the host name where the consumer runs.

nsDS5ReplicaUpdateSchedule

Specifies when replication happens. If you must restrict the time when replication can happen, set this attribute. This attribute can take multiple values of the form *hmm-hmm 0123456*, where the first element specifies the time span, and the second specifies which days, starting with Sunday (0) to Saturday (6).

nsDS5ReplicaTransportInfo

Specifies the transport used for replication, LDAP or SSL.

nsDS5ReplicaPort

Holds port number on which the consumer listens.

cn

This attribute names the replication agreement. Once set, it must not be modified.

nsDS5ReplicaBindMethod

Specifies bind protocol, SIMPLE, SSLCLIENTAUTH.

nsDS5ReplicaRoot

Holds the DN of the root of the replicated suffix. Once set, it must not be modified.

nsDS5ReplicaBindDN

Holds the DN of the account on the consumer used for replication.

nsDS5ReplicaCredentials

Holds the bind credentials of the account on the consumer used for replication.

The replication agreement entry can also hold the following attributes not shown here:

description\_5dsat(5DSAT)  
ds5AgreementEnable(5DSCONF)  
ds5ReplicaAutomaticInit(5DSCONF)  
ds5ReplicaTransportCompressionLevel(5DSCONF)  
ds5ReplicaTransportConcurrencyLevel(5DSCONF)  
ds5ReplicaTransportGroupSize(5DSCONF)  
ds5ReplicaTransportGrpPktSize(5DSCONF)  
ds5ReplicaTransportWindowSize(5DSCONF)  
ds6ruv(5DSCONF)  
dsReplFractionalExclude(5DSCONF)  
dsReplFractionalInclude(5DSCONF)  
nsDS5ReplicaUpdateSchedule(5DSCONF)  
nsds50ruv(5DSCONF)  
nsds5BeginReplicaRefresh(5DSCONF)  
nsds5ReplicaTimeout(5DSCONF)  
nsds5replicaChangesSentSinceStartup(5DSCONF)  
nsds5replicaLastInitEnd(5DSCONF)  
nsds5replicaLastInitStart(5DSCONF)  
nsds5replicaLastInitStatus(5DSCONF)  
nsds5replicaLastUpdateEnd(5DSCONF)  
nsds5replicaLastUpdateStart(5DSCONF)  
nsds5replicaLastUpdateStatus(5DSCONF)  
nsds5replicaUpdateInProgress(5DSCONF)

### Supplier Priority Rule

For a master supplier, a ReplPriorityRule configuration entry looks something like the following:

```
dn: cn=pwdReplPrio,cn=replica,cn=dc\=example\,dc\=com,cn=mapping tree,cn=config
objectClass: top
objectClass: ReplPriorityRule
replPriorityType: mod
replPriorityAttribute: userPassword
nsDS5ReplicaRoot: dc=example,dc=com
cn: pwdReplPrio
```

In this example, the key attributes are the following:

replPriorityType

Specifies the type of operation which are replicated with high priority.

replPriorityAttribute

Specifies the attribute whose changes are replicated with high priority.

nsDS5ReplicaRoot

Holds the DN of the root of the replicated suffix to which this priority rule applies.

cn

This attribute names the priority rule.

The replication priority rule entry can also hold the following attributes not shown here:

[replPriorityBaseDN\(5DSCONF\)](#)

[replPriorityBindDN\(5DSCONF\)](#)

## Consumer Side Configuration

On the consumer side, the key configuration entry is the replica configuration. On a dedicated consumer, it is also useful to see how the mapping tree entry for the suffix is configured to refer updates to the supplier.

### Consumer Replica Configuration

For a dedicated consumer, an nsDS5Replica configuration entry looks something like the following:

```
dn: cn=replica,cn=dc\=example\,dc\=com,cn=mapping tree,cn=config
nsDS5ReplicaRoot: dc=example,dc=com
nsDS5ReplicaBindDN: cn=replication manager,cn=replication,cn=config
objectClass: top
objectClass: nsDS5Replica
nsDS5Flags: 0
nsDS5ReplicaType: 2
cn: replica
nsDS5ReplicaId: 65535
nsState: //8AAAAAAAAAAAAAQ4rtPAAAAAAAAAAAAAAAAAAAAQAAAAAAAAA==
nsDS5ReplicaName: 07ed9f82-600411da-8096d729-0ba76005
dsFilterSPConfigchecksum: 0
ds5LastInitTimeStamp: 0
```

Key attributes in this example are explained in *Supplier Replica Configuration*.

A hub uses the same replica ID as a consumer, 65535.

### Referrals On Consumer

For a dedicated consumer suffix, the mapping tree configuration entry refers client applications to the supplier for write operations:

```
dn: cn=dc\=example\,dc\=com,cn=mapping tree,cn=config
objectClass: top
objectClass: extensibleObject
objectClass: nsMappingTree
nsslapd-backend: example
cn: dc=example,dc=com
numSubordinates: 1
nsslapd-referral: ldap://master.example.com:389/dc%3Dexample,dc%3Dcom
nsslapd-state: referral on update
```

Notice that the nsslapd-referral attribute refers clients to the master on host master.example.com and port 389 when they request update operations that would write to the directory. These attributes are set by the server when replication is initialized. The dedicated consumer then accepts write operations only from the supplier replica.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**

[dsconf\(1M\)](#), [person\(5DSOC\)](#), [pwpolicy\(5DSSD\)](#)

## nsDS5ReplicaTombstonePurgeInterval

Time interval between tombstone purge operations

### Description

PROPERTY	VALUE
Entry DN	cn=replica,cn= <i>suffix name</i> ,cn=mapping tree,cn=config
Valid Range	0 to maximum integer (seconds)
Default Value	300 (five minutes)
Syntax	Integer

This attribute is part of replica configuration for nsDS5Replica entries.

When this attribute is set, the server waits the number of seconds you specify after each operation to purge tombstone entries. Bear in mind that purge operations can be time consuming.

### Examples

```
nsDS5ReplicaTombstonePurgeInterval: 300
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## nsDS5ReplicaTransportInfo

Transport used for replication

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	LDAP   SSL
Default Value	N/A
Syntax	DirectoryString

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

Specifies the type of transport used for replication. When this attribute is set to LDAP, standard LDAP connections are used. When this attribute is set to SSL, LDAPS connections are used. Do not modify this attribute after it has been set.

### Examples

```
nsDS5ReplicaTransportInfo: SSL
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

---

## nsDS5ReplicaType

Role of the replica

### Description

PROPERTY	VALUE
Entry DN	cn=replica, cn= <i>suffix name</i> , cn=mapping tree, cn=config
Valid Range	0   1   2   3
Default Value	3 (master), 2 (consumer)
Syntax	Integer

This attribute is part of replica configuration for nsDS5Replica entries.

When this attribute is set, the server starts accepting client updates after waiting the number of seconds you specify.

### Examples

nsDS5ReplicaType: 3

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## nsds5replicaUpdateInProgress

Indicate whether or not a replication schedule update is in progress

### Description

PROPERTY	VALUE
Entry DN	<i>cn=Replication Agreement Name, cn=replica, cn=Suffix Name, cn=mapping tree, cn=config</i>
Valid Range	true   false
Default Value	None
Syntax	Boolean

This read-only attribute states whether or not a replication schedule update is in progress.

### Examples

```
nsds5replicaUpdateInProgress: true
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

---

## nsDS5ReplicaUpdateSchedule

When replication is scheduled

### Description

PROPERTY	VALUE
Entry DN	<i>cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	<i>hhmm-hhmm 0123456   *</i>
Default Value	*
Syntax	DirectoryString

This attribute is part of replica configuration for `nsDS5ReplicationAgreement` entries.

When set to `*`, this attribute causes the supplier to replicate as necessary. This attribute can alternatively take multiple values of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, then finishing hour in 24-hour time format, from 0000-2359, and the second specifies which days, starting with Sunday (0) to Saturday (6).

### Examples

The following setting specifies the supplier should replicate to the consumer between midnight and 4 am on Sundays, Tuesdays, Thursdays, and Saturdays:

```
nsDS5ReplicaUpdateSchedule: 0000-0400 0246
```

### See Also

[replication\(5DSCONF\)](#)

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

## nsDS5Task

---

Internal replication tasks

### Description

PROPERTY	VALUE
Entry DN	<code>cn=replica,cn=suffix name,cn=mapping tree,cn=config</code>
Valid Range	N/A
Default Value	None
Syntax	DirectoryString

This attribute is part of replica configuration for `nsDS5Replica` entries.

This attribute is reserved for internal use.

### Examples

`nsDS5Task: CL2LDIF`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

---

## nsFarmServerURL

LDAP URL for chaining farm server

### Description

The LDAP URL of the remote server. A *farm server* is contains data in one or more databases. This attribute can contain optional servers for failover, separated by spaces. For cascading chaining, this URL can point to another chained suffix.

### Entry DN

`cn=chainedSuffix,cn=chaining database, cn=plugins,cn=config`

### Valid Range

Any valid remote server LDAP URL.

### Default Value

N/A

### Syntax

DirectoryString

### Example

`nsFarmServerURL: ldap://epdiote.example.com:alternate_server:3333`

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nshoplimit

maximum hops for chaining

### Description

Specifies the maximum number of times a suffix is allowed to chain, that is, the number of times a request can be forwarded from one chained suffix to another.

#### Entry DN

`cn=chainedSuffix,cn=chaining database, cn=plugins,cn=config`

#### Valid Range

1 to an appropriate upper limit for your deployment.

#### Default Value

10

#### Syntax

Integer

#### Example

`nsHopLimit: 3`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsIndexType

type of index

### Description

This optional, multivalued attribute specifies the types of index used in Directory Server operations and the values of the attributes to be indexed. Each index type must be entered on a separate line.

#### Entry DN

cn=default indexes,cn=config,cn=ldb database,  
cn=plugins,cn=config

#### Valid Range

approx  
Approximate, sounds alike, index

browse  
Virtual list view index

eq  
Equality index

matching rule  
Matching rule index

pres  
Presence index

sub  
Substring index

#### Default Value

Not applicable

#### Syntax

DirectoryString

#### Example

nsindextype: eq

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**

[dse.ldif\(4\)](#)

---

## nsLookthroughLimit\_5dsconf

maximum number of entries checked during search

### Description

This performance-related attribute specifies the maximum number of entries that Directory Server checks when examining candidate entries in response to a search request. If you bind as Directory Manager, `unlimited` is set by default and overrides any other settings you may specify here.

Binder based resource limits work for this limit, which means that if a value for the operational attribute `nsLookThroughLimit` is present in the entry used to bind, the default limit is overridden. If you attempt to set a value that is not a number or is too big for a 64-bit signed integer, you receive an `LDAP_UNWILLING_TO_PERFORM` error message with additional error information explaining the problem.

#### Entry DN

`cn=config,cn=ldbm_database,cn=plugins,cn=config`

#### Valid Range

-1 to the maximum number of entries, where -1 is unlimited

#### Default Value

5000

#### Syntax

Integer

#### Example

`nsLookthroughLimit: 5000`

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsMatchingRule

collation order OID for international index

### Description

This optional, multivalued attribute specifies the collation order object identifier, OID, required for Directory Server to operate international indexing.

#### Entry DN

cn=default\_indexes,cn=monitor,cn=ldbm\_database,  
cn=plugins,cn=config

#### Valid Range

Any valid collation order object identifier (OID)

#### Default Value

None

#### Syntax

DirectoryString

#### Example

nsMatchingRule: 1.3.6.1.4.1.42.2.27.9.4.23.1

(For Bulgarian)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsMaxResponseDelay

maximum delay for chained response

### Description

This error detection, performance related attribute specifies the maximum period of time it can take a remote server to respond to an LDAP operation request made by a chained suffix before an error is suspected. Once this delay period has been met, the chained suffix tests the connection with the remote server.

### Entry DN

cn=config,cn=chaining database,cn=plugins,cn=config

### Valid Range

Any valid delay period in seconds.

### Default Value

60 seconds

### Syntax

Integer

### Example

nsMaxResponseDelay: 60

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsMaxTestResponseDelay

maximum delay to test chaining response

### Description

This error detection, performance related attribute specifies the duration of the test issued by the chained suffix to check whether the remote server is responding. If a response from the remote server is not returned within this period, the chained suffix assumes the remote server is down and the connection is not used for subsequent operations.

#### Entry DN

cn=config,cn=chaining database,cn=plugins,cn=config

#### Valid Range

Any valid delay period in seconds.

#### Default Value

15 seconds

#### Syntax

Integer

#### Example

nsMaxTestResponseDelay: 15

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsMultiplexorBindDN

bind DN for chaining multiplexor

### Description

DN of the administrative entry used to communicate with the remote server. The *multiplexor* is the server that contains the chained suffix and communicates with the farm server. This bind DN cannot be the Directory Manager. If this attribute is not specified, the chained suffix binds as anonymous.

#### Entry DN

`cn=chainedSuffix,cn=chaining database, cn=plugins,cn=config`

#### Valid Range

Not applicable

#### Default Value

DN of the multiplexor.

#### Syntax

DirectoryString

#### Example

`nsMultiplexorBindDN: cn=proxy manager`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsMultiplexorCredentials

bind password for chaining multiplexor

### Description

Password for the administrative user, in plain text. If no password is provided, users can bind as anonymous. The password is encrypted in the configuration file. Please note that the example below is what you *view*, *not* what you type.

#### Entry DN

`cn=chainedSuffix,cn=chaining database, cn=plugins,cn=config`

#### Valid Range

Any valid password (that is encrypted using the DES reversible password encryption schema.)

#### Default Value

Not applicable

#### Syntax

DirectoryString

#### Example

`nsMultiplexorCredentials: {DES} 9Eko69APCJfF`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsOperationConnectionsLimit

maximum number of LDAP connections for chaining

### Description

Maximum number of LDAP connections the chained suffix establishes with the remote server.

#### Entry DN

cn=default instance config,cn=chaining database,  
cn=plugins,cn=config

#### Valid Range

1 to 20 connections

#### Default Value

10

#### Syntax

Integer

#### Example

nsoperationconnectionslimit:10

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsProxiedAuthorization

disable proxy authorization for chaining

### Description

Reserved for advanced use only, this attribute permits you to disable proxied authorization. A value of `off` means that proxied authorization is disabled, and that all binds for chained operations are executed as the user specified in `nsMultiplexorBindDN`.

#### Entry DN

`cn=default instance config,cn=chaining database,  
cn=plugins,cn=config`

#### Valid Range

`on | off`

#### Default Value

`on`

#### Syntax

`DirectoryString`

#### Example

`nsproxiedauthorization: on`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsReferralOnScopedSearch

referrals for chained searches

### Description

Controls whether referrals are returned for searches with scope of one level or subtree. When nsReferralOnScopedSearch is set to on, Directory Server returning referrals for such searches, instead of chaining the searches, allowing clients that can handle referrals to access the appropriate directory directly.

#### Entry DN

cn=default instance config,cn=chaining database,  
cn=plugins,cn=config

#### Valid Range

on | off

#### Default Value

off

#### Syntax

DirectoryString

#### Example

nsreferralonscopedsearch: off

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-accesscontrol

Turn access control on and off

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	on off
Default Value	on
Syntax	DirectoryString

This attribute turns access control on and off. If this attribute has a value `off`, any valid bind attempt including an anonymous bind results in full access to all information stored in Directory Server.

---

---

**Note:** Do not set this attribute to `off` unless you are told to do so by technical support personnel.

---

---

### Examples

```
nsslapd-accesscontrol: on
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-accesslog

Specify the path and filename of the access | audit | error log

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	Any valid file name
Default Value	See description that follows.
Syntax	DirectoryString

These attributes specify the path and filename of the log used to record each database access. Default values are:

```
install-path/logs/access
install-path/logs/audit
install-path/logs/errors
```

The following information is recorded in the access log file by default:

- IP address of the client machine that accessed the database
- Operations performed such as search, add, modify
- Result of the access such as the number of entries returned for a search

The information recorded in the error log depends on the error log level but typically contains at least the server startup and shutdown times, and the server port number.

For logging to be enabled, both of the following conditions must be met:

- The `nsslapd-*log` attribute must be set to a valid file name.
- The `nsslapd-*log-logging-enabled` attribute must be set to on.

Other configurations result in logging being disabled.

### Examples

```
nsslapd-accesslog: /local/dsInst/logs/access
nsslapd-auditlog: /local/dsInst/logs/audit
nsslapd-errorlog: /local/dsInst/logs/errors
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Stable

---

## nsslapd-accesslog-level

Control what is logged to the access, audit, or error log

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	See the description that follows.
Default Value	256
Syntax	Integer

This attribute specifies the access log levels. Log levels can be added together to provide you with the exact type of logging you require. For example, 516 (4 + 512) obtains the internal access operation, entry access, and referral logging. The following levels are supported:

**0**

No access logging

**4**

Logging for internal access operations

**256**

Logging for access to an entry

**512**

Logging for access to an entry and referrals

**131072**

Precise timing of operation duration. This gives microsecond resolution for the elapsed time item in the access log.

### Examples

```
nsslapd-accesslog-level: 256
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

---

## nsslapd-accesslog-list

Provide a list of log files used in access, audit, or error log rotation.

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	Not applicable
Default Value	None
Syntax	DirectoryString

This attribute provides a list of log files used in access, audit, or error log rotation. This attribute is read only and cannot be set.

### Examples

```
nsslapd-accesslog-list:accesslog2,accesslog3
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-accesslog-logbuffering

Determines whether the server writes access log entries directly to disk

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	on off
Default Value	on
Syntax	DirectoryString

When this attribute is set to `off`, the server writes all access log entries directly to disk.

### Examples

```
nsslapd-accesslog-logbuffering: off
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

---

## nsslapd-accesslog-logexpirationtime

Specify the maximum age that an access, audit, or error log file is allowed to reach before it is deleted

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	1 to the maximum 32-bit integer value (2147483647)
Default Value	1
Syntax	Integer

Specifies the maximum age that an access, audit, or error log file is allowed to reach before it is deleted. This attribute supplies only the number of units. The units are provided by the `nsslapd-accesslog-logexpirationtimeunit`, `nsslapd-auditlog-logexpirationtimeunit`, or `nsslapd-errorlog-logexpirationtimeunit` attribute.

### Examples

```
nsslapd-accesslog-logexpirationtime: 2
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-accesslog-logexpirationtimeunit

Determines the unit of the log expiration time

### Description

Property	Value
Entry DN	cn=config
Valid Range	month   week   day
Default Value	month
Syntax	DirectoryString

Specifies the unit for the `nsslapd-accesslog-logexpirationtime`, `nsslapd-auditlog-logexpirationtime`, or `nsslapd-errorlog-logexpirationtime` attribute. If the unit is unknown by the server, the log will never expire.

### Examples

```
nsslapd-accesslog-logexpirationtimeunit: day
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

---

## nsslapd-accesslog-logging-enabled

Enable or disable access, audit, or error logging

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	on off
Default Value	Access logging on, Audit logging off
Syntax	DirectoryString

This attribute is used in conjunction with the `nsslapd-accesslog`, `nsslapd-auditlog`, or `nsslapd-errorlog` attribute to disable and enable access, audit, or error logging. The `nsslapd-accesslog`, `nsslapd-auditlog`, or `nsslapd-errorlog` attributes specify the path and filename of the access, audit, and error logs, respectively.

For logging to be enabled, the `nsslapd-accesslog-logging-enabled`, `nsslapd-auditlog-logging-enabled`, or `nsslapd-errorlog-logging-enabled` attribute must be switched to on, and the respective `nsslapd-accesslog`, `nsslapd-auditlog`, or `nsslapd-errorlog` attribute must have a valid path and filename.

For information about the combinations of values for these attributes, see the `nsslapd-accesslog`, `nsslapd-auditlog`, or `nsslapd-errorlog` man page.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-accesslog-logmaxdiskspace

Specify the maximum amount of disk space in megabytes that the access, audit or error logs are allowed to consume

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	-1   1 to the maximum 32-bit integer value (2147483647). A value of -1 means that the disk space allowed for the log is unlimited in size.
Default Value	Access logs 500, audit logs and error logs 100
Syntax	Integer

Specifies the maximum amount of disk space in megabytes that the access, audit or error logs are allowed to consume. If this value is exceeded, the oldest access, audit or error log is deleted.

When setting the maximum disk space, consider the total number of log files that can be created due to log file rotation. As there are three different log files – access log, audit log, and error log – maintained by Directory Server, each of which consume disk space. Compare these considerations to the total amount of disk space that you want to be used by the each log.

### Examples

```
nsslapd-accesslog-logmaxdiskspace: 200
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

---

## nsslapd-accesslog-logminfreediskspace

Specify the minimum amount of free disk space in megabytes that is allowed before an access, audit, or error log is deleted

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	1 to the maximum 32-bit integer value (2147483647)
Default Value	5
Syntax	Integer

Specifies the minimum amount of free disk space in megabytes that is allowed before an access, audit, or error log is deleted. When the amount of free disk space falls below the value specified by this attribute, the oldest access, audit, or error log is deleted until enough disk space is freed to satisfy this attribute.

### Examples

```
nsslapd-accesslog-logminfreediskspace: 4
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-accesslog-logrotationtime

Specify the time interval, the time of the day, and the minimum file size for rotation of the access log, audit log, or error log

### SYNOPSIS

```
nsslapd-accesslog-logrotationtime:
  {time-interval} [time-of-day | *] [min-file-size | *]
```

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	See description that follows.
Default Value	1 * *
Syntax	DirectoryString

This attribute specifies the time interval, the time of the day, and the minimum file size for access, audit, or error rotation. The unit of the time interval is specified by the `nsslapd-accesslog-logrotationtimeunit`, `nsslapd-auditlog-logrotationtimeunit`, or `nsslapd-errorlog-logrotationtimeunit` attribute.

The valid range for this attribute is as follows.

- *time-interval*  
Time interval at which the log is rotated. The unit of the time interval is given by the `nsslapd-auditlog-logrotationtimeunit` attribute.
- *time-of-day*  
Time of the day, on a 24-hour clock, at which the log is rotated.  
The value `*` means that no time of day is specified.
- *min-file-size*  
Minimum file size in kilobytes at which the log file is rotated. The log file is rotated if the file size is greater than the specified number of kilobytes.  
The value `*` means that no minimum file size is specified.

This attribute must be used in conjunction with the `nsslapd-accesslog-logrotationtimeunit`, `nsslapd-auditlog-logrotationtimeunit`, or `nsslapd-errorlog-logrotationtimeunit` attribute.

## Examples

### Example 1 To Rotate the Access Log at 11:30 pm Every Day Regardless of the Size of the Log File

To specify when the access log is rotated, the `nsslapd-accesslog-logrotationtime` and the `nsslapd-accesslog-logrotationtimeunit` attributes must be set.

To rotate the log daily, the `nsslapd-accesslog-logrotationtimeunit` must be set as follows:

```
nsslapd-accesslog-logrotationtimeunit: day
```

To rotate the log at 11:30 pm daily, the `nsslapd-accesslog-logrotationtime` must be set as follows:

```
nsslapd-accesslog-logrotationtime: 1 2330
```

The *min-file-size* is not specified, therefore, the log is rotated irrespective of the file size.

### Example 2 To Rotate the Error Log at 11:30 pm Every Day if the File Size is Greater Than 10 KB

To specify when the error log is rotated, the `nsslapd-errorlog-logrotationtime` and the `nsslapd-errorlog-logrotationtimeunit` attributes must be set.

To rotate the log daily, the `nsslapd-accesslog-logrotationtimeunit` must be set as follows:

```
nsslapd-accesslog-logrotationtimeunit: day
```

To rotate the log at 11:30 pm daily if the file size is greater than 10 KB, the `nsslapd-accesslog-logrotationtime` must be set as follows:

```
nsslapd-accesslog-logrotationtime: 1 2330 10
```

### Example 3 To Rotate the Error Log at Any Time if the File Size is Greater Than 10 KB

To specify when the error log is rotated, the `nsslapd-errorlog-logrotationtime` and the `nsslapd-errorlog-logrotationtimeunit` attributes must be set.

To rotate the log every minute if the file size is greater than 10 KB, the `nsslapd-errorlog-logrotationtimeunit` attribute must be set as follows:

```
nsslapd-accesslog-logrotationtimeunit: Minute
```

To rotate the log when the file size is greater than 10 KB, the `nsslapd-errorlog-logrotationtime` must be set as follows:

```
nsslapd-errorlog-logrotationtime: 1 * 10
```

The *time-of-day* is specified as `*`, therefore, no specific time of day is specified.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Unstable

---

## nsslapd-accesslog-logrotationtimeunit

Specify the unit for the `time-interval` part of the `nsslapd-access|audit|errorlog-logrotationtime` attribute

### Description

PROPERTY	VALUE
Entry DN	<code>cn=config</code>
Valid Range	<code>Month   Week   Day   Hour   Minute</code>
Default Value	<code>Day</code>
Syntax	<code>DirectoryString</code>

Specifies the unit for the `time-interval` part of the `nsslapd-access|audit|errorlog-logrotationtime` attribute.

This attribute must be used in conjunction with the `nsslapd-access|audit|errorlog-logrotationtime` attribute.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	<code>SUNWdsee7</code>
Stability Level	<code>Unstable</code>

## nsslapd-accesslog-maxlogsize

Specify the maximum size of the access, audit, or error log in megabytes

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	-1   1 to the maximum 32-bit integer value (2147483647). A value of -1 means the log file is unlimited in size.
Default Value	100
Syntax	Integer

This attribute specifies the maximum size of the access, audit, or error log in megabytes. When this value is reached, the log is rotated.

If the `nsslapd-accesslog-maxlogsperdir`, `nsslapd-auditlog-maxlogsperdir`, or `nsslapd-errorlog-maxlogsperdir` attribute is set to 1, the server ignores the respective `nsslapd-accesslog-maxlogsize`, `nsslapd-auditlog-maxlogsize`, or `nsslapd-errorlog-maxlogsize` attribute.

When you set a maximum log size, consider the total number of log files that can be created due to log file rotation. Also, remember that there are three different log files (access log, audit log, and error log) maintained by Directory Server, each of which will consume disk space. Compare these considerations to the total amount of disk space that you want to be used by the log.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-accesslog-maxlogspendir

Specify the total number of access, audit, or error logs that can be contained in the access, audit, or error logs directory

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	1 to the maximum 32-bit integer value (2147483647)
Default Value	10
Syntax	Integer

This attribute specifies the total number of access, audit, or error logs that can be contained in the respective directory.

Each time the access log is rotated, a new log file is created. When the number of files contained in the access log directory exceeds the value stored on this attribute, the oldest version of the log file is deleted. The same scenario is true for audit logs and error logs.

If you set this value to 1, the server will not rotate the log and it will grow indefinitely.

If the value for this attribute is higher than 1, check the `nsslapd-accesslog-logrotationtime`, `nsslapd-auditlog-logrotationtime`, or `nsslapd-errorlog-logrotationtime` attribute to establish whether or not log rotation is specified.

If the `nsslapd-accesslog-logrotationtime`, `nsslapd-auditlog-logrotationtime`, or `nsslapd-errorlog-logrotationtime` attribute has a value of -1, there is no rotation of the respective log.

For more information, refer to the `nsslapd-accesslog-logrotationtime`, `nsslapd-auditlog-logrotationtime`, or `nsslapd-errorlog-logrotationtime` man page.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-accesslog-permissions

Specify the permissions for the log files

### Synopsis

```
nsslapd-accesslog-permissions: permissions
```

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	See description that follows.
Default Value	600
Syntax	UNIX style octal permissions. Not supported on Windows platforms.

This attribute specifies the permissions for the log file.

Valid range is 001 to 777.

The permission 000 is not allowed because the server might have trouble starting for non-root users.

On Windows platforms, this attribute is ignored and a warning message is logged.

### Examples

#### Example 1 To Set the Access Log Permissions to 644

```
nsslapd-accesslog-permissions: 644
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

---

## nsslapd-allidsthreshold

Maximum number of values per index key in an index list

### Description

This attribute defines a threshold to limit the length of an index list. The threshold is called the index list threshold. If the number of entries in the list for a particular key exceeds the index list threshold, an unindexed search is performed.

The value of the `nsslapd-allidsthreshold` attribute can be configured globally for a Directory Server instance, or can be configured for a suffix, or can be configured for an index type. If the value of the `nsslapd-allidsthreshold` attribute is configured globally for a suffix, it can then be changed for a specific index.

You must rebuild all indexes after you change the `nsslapd-allidsthreshold` attribute.

### Entry DN

`cn=config,cn=ldbm database,cn=plugins,cn=config`

### Valid Range

#### 0

The `nsslapd-allidsthreshold` attribute is not used. The global configured value is used.

#### <2000

Values less than 2000 are rounded up to 2000.

#### >2000

The value is the minimum guaranteed value. Because of internal mechanisms, the real value can be slightly more than the specified value.

#### -1

No limit

### Default Value

4000

### Syntax

Integer

### Error Messages

`LDAP_UNWILLING_TO_PERFORM` means you have set a value that is not a number or the value is too big for a 64-bit signed integer. Additional error information is provided to explain the problem.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**

[dse.ldif\(4\)](#)

---

## nsslapd-attribute-name-exceptions

allow non-standard characters in attribute names

### Description

Allows non-standard characters in attribute names to be used for backward compatibility with older servers.

#### Entry DN

`cn=config`

#### Valid Range

`on | off`

#### Default Value

`off`

#### Syntax

DirectoryString

#### Example

`nsslapd-attribute-name-exceptions: on`

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-auditlog

Specify the path and filename of the access | audit | error log

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	Any valid file name
Default Value	See description that follows.
Syntax	DirectoryString

These attributes specify the path and filename of the log used to record each database access. Default values are:

```
install-path/logs/access
install-path/logs/audit
install-path/logs/errors
```

The following information is recorded in the access log file by default:

- IP address of the client machine that accessed the database
- Operations performed such as search, add, modify
- Result of the access such as the number of entries returned for a search

The information recorded in the error log depends on the error log level but typically contains at least the server startup and shutdown times, and the server port number.

For logging to be enabled, both of the following conditions must be met:

- The `nsslapd-*log` attribute must be set to a valid file name.
- The `nsslapd-*log-logging-enabled` attribute must be set to `on`.

Other configurations result in logging being disabled.

### Examples

```
nsslapd-accesslog: /local/dsInst/logs/access
nsslapd-auditlog: /local/dsInst/logs/audit
nsslapd-errorlog: /local/dsInst/logs/errors
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Stable

---

## nsslapd-auditlog-level

Control what is logged to the access, audit, or error log

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	See the description that follows.
Default Value	256
Syntax	Integer

This attribute specifies the access log levels. Log levels can be added together to provide you with the exact type of logging you require. For example, 516 (4 + 512) obtains the internal access operation, entry access, and referral logging. The following levels are supported:

**0**

No access logging

**4**

Logging for internal access operations

**256**

Logging for access to an entry

**512**

Logging for access to an entry and referrals

**131072**

Precise timing of operation duration. This gives microsecond resolution for the elapsed time item in the access log.

### Examples

```
nsslapd-accesslog-level: 256
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-auditlog-list

Provide a list of log files used in access, audit, or error log rotation.

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	Not applicable
Default Value	None
Syntax	DirectoryString

This attribute provides a list of log files used in access, audit, or error log rotation. This attribute is read only and cannot be set.

### Examples

```
nsslapd-accesslog-list:accesslog2,accesslog3
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

---

## nsslapd-auditlog-logbuffering

Determines whether the server writes access log entries directly to disk

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	on off
Default Value	on
Syntax	DirectoryString

When this attribute is set to `off`, the server writes all access log entries directly to disk.

### Examples

```
nsslapd-accesslog-logbuffering: off
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-auditlog-logexpirationtime

Specify the maximum age that an access, audit, or error log file is allowed to reach before it is deleted

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	1 to the maximum 32-bit integer value (2147483647)
Default Value	1
Syntax	Integer

Specifies the maximum age that an access, audit, or error log file is allowed to reach before it is deleted. This attribute supplies only the number of units. The units are provided by the `nsslapd-accesslog-logexpirationtimeunit`, `nsslapd-auditlog-logexpirationtimeunit`, or `nsslapd-errorlog-logexpirationtimeunit` attribute.

### Examples

```
nsslapd-accesslog-logexpirationtime: 2
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

---

## nsslapd-auditlog-logexpirationtimeunit

Determines the unit of the log expiration time

### Description

Property	Value
Entry DN	cn=config
Valid Range	month   week   day
Default Value	month
Syntax	DirectoryString

Specifies the unit for the `nsslapd-accesslog-logexpirationtime`, `nsslapd-auditlog-logexpirationtime`, or `nsslapd-errorlog-logexpirationtime` attribute. If the unit is unknown by the server, the log will never expire.

### Examples

```
nsslapd-accesslog-logexpirationtimeunit: day
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-auditlog-logging-enabled

Enable or disable access, audit, or error logging

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	on off
Default Value	Access logging on, Audit logging off
Syntax	DirectoryString

This attribute is used in conjunction with the `nsslapd-accesslog`, `nsslapd-auditlog`, or `nsslapd-errorlog` attribute to disable and enable access, audit, or error logging. The `nsslapd-accesslog`, `nsslapd-auditlog`, or `nsslapd-errorlog` attributes specify the path and filename of the access, audit, and error logs, respectively.

For logging to be enabled, the `nsslapd-accesslog-logging-enabled`, `nsslapd-auditlog-logging-enabled`, or `nsslapd-errorlog-logging-enabled` attribute must be switched to on, and the respective `nsslapd-accesslog`, `nsslapd-auditlog`, or `nsslapd-errorlog` attribute must have a valid path and filename.

For information about the combinations of values for these attributes, see the `nsslapd-accesslog`, `nsslapd-auditlog`, or `nsslapd-errorlog` man page.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-auditlog-logmaxdiskspace

Specify the maximum amount of disk space in megabytes that the access, audit or error logs are allowed to consume

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	-1   1 to the maximum 32-bit integer value (2147483647). A value of -1 means that the disk space allowed for the log is unlimited in size.
Default Value	Access logs 500, audit logs and error logs 100
Syntax	Integer

Specifies the maximum amount of disk space in megabytes that the access, audit or error logs are allowed to consume. If this value is exceeded, the oldest access, audit or error log is deleted.

When setting the maximum disk space, consider the total number of log files that can be created due to log file rotation. As there are three different log files – access log, audit log, and error log – maintained by Directory Server, each of which consume disk space. Compare these considerations to the total amount of disk space that you want to be used by the each log.

### Examples

```
nsslapd-accesslog-logmaxdiskspace: 200
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-auditlog-logminfreediskspace

Specify the minimum amount of free disk space in megabytes that is allowed before an access, audit, or error log is deleted

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	1 to the maximum 32-bit integer value (2147483647)
Default Value	5
Syntax	Integer

Specifies the minimum amount of free disk space in megabytes that is allowed before an access, audit, or error log is deleted. When the amount of free disk space falls below the value specified by this attribute, the oldest access, audit, or error log is deleted until enough disk space is freed to satisfy this attribute.

### Examples

```
nsslapd-accesslog-logminfreediskspace: 4
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-auditlog-logrotationtime

Specify the time interval, the time of the day, and the minimum file size for rotation of the access log, audit log, or error log

### SYNOPSIS

```
nsslapd-accesslog-logrotationtime:
{time-interval} [time-of-day | *] [min-file-size | *]
```

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	See description that follows.
Default Value	1 * *
Syntax	DirectoryString

This attribute specifies the time interval, the time of the day, and the minimum file size for access, audit, or error rotation. The unit of the time interval is specified by the `nsslapd-accesslog-logrotationtimeunit`, `nsslapd-auditlog-logrotationtimeunit`, or `nsslapd-errorlog-logrotationtimeunit` attribute.

The valid range for this attribute is as follows.

- *time-interval*  
Time interval at which the log is rotated. The unit of the time interval is given by the `nsslapd-auditlog-logrotationtimeunit` attribute.
- *time-of-day*  
Time of the day, on a 24-hour clock, at which the log is rotated.  
The value `*` means that no time of day is specified.
- *min-file-size*  
Minimum file size in kilobytes at which the log file is rotated. The log file is rotated if the file size is greater than the specified number of kilobytes.  
The value `*` means that no minimum file size is specified.

This attribute must be used in conjunction with the `nsslapd-accesslog-logrotationtimeunit`, `nsslapd-auditlog-logrotationtimeunit`, or `nsslapd-errorlog-logrotationtimeunit` attribute.

## Examples

### **Example 1 To Rotate the Access Log at 11:30 pm Every Day Regardless of the Size of the Log File**

To specify when the access log is rotated, the `nsslapd-accesslog-logrotationtime` and the `nsslapd-accesslog-logrotationtimeunit` attributes must be set.

To rotate the log daily, the `nsslapd-accesslog-logrotationtimeunit` must be set as follows:

```
nsslapd-accesslog-logrotationtimeunit: day
```

To rotate the log at 11:30 pm daily, the `nsslapd-accesslog-logrotationtime` must be set as follows:

```
nsslapd-accesslog-logrotationtime: 1 2330
```

The *min-file-size* is not specified, therefore, the log is rotated irrespective of the file size.

### **Example 2 To Rotate the Error Log at 11:30 pm Every Day if the File Size is Greater Than 10 KB**

To specify when the error log is rotated, the `nsslapd-errorlog-logrotationtime` and the `nsslapd-errorlog-logrotationtimeunit` attributes must be set.

To rotate the log daily, the `nsslapd-accesslog-logrotationtimeunit` must be set as follows:

```
nsslapd-accesslog-logrotationtimeunit: day
```

To rotate the log at 11:30 pm daily if the file size is greater than 10 KB, the `nsslapd-accesslog-logrotationtime` must be set as follows:

```
nsslapd-accesslog-logrotationtime: 1 2330 10
```

### **Example 3 To Rotate the Error Log at Any Time if the File Size is Greater Than 10 KB**

To specify when the error log is rotated, the `nsslapd-errorlog-logrotationtime` and the `nsslapd-errorlog-logrotationtimeunit` attributes must be set.

To rotate the log every minute if the file size is greater than 10 KB, the `nsslapd-errorlog-logrotationtimeunit` attribute must be set as follows:

```
nsslapd-accesslog-logrotationtimeunit: Minute
```

To rotate the log when the file size is greater than 10 KB, the `nsslapd-errorlog-logrotationtime` must be set as follows:

```
nsslapd-errorlog-logrotationtime: 1 * 10
```

The *time-of-day* is specified as `*`, therefore, no specific time of day is specified.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

---

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-auditlog-logrotationtimeunit

Specify the unit for the `time-interval` part of the `nsslapd-access|audit|errorlog-logrotationtime` attribute

### Description

PROPERTY	VALUE
Entry DN	<code>cn=config</code>
Valid Range	<code>Month   Week   Day   Hour   Minute</code>
Default Value	<code>Day</code>
Syntax	<code>DirectoryString</code>

Specifies the unit for the `time-interval` part of the `nsslapd-access|audit|errorlog-logrotationtime` attribute.

This attribute must be used in conjunction with the `nsslapd-access|audit|errorlog-logrotationtime` attribute.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	<code>SUNWdsee7</code>
Stability Level	<code>Unstable</code>

## nsslapd-auditlog-maxlogsize

Specify the maximum size of the access, audit, or error log in megabytes

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	-1   1 to the maximum 32-bit integer value (2147483647). A value of -1 means the log file is unlimited in size.
Default Value	100
Syntax	Integer

This attribute specifies the maximum size of the access, audit, or error log in megabytes. When this value is reached, the log is rotated.

If the `nsslapd-accesslog-maxlogsperdir`, `nsslapd-auditlog-maxlogsperdir`, or `nsslapd-errorlog-maxlogsperdir` attribute is set to 1, the server ignores the respective `nsslapd-accesslog-maxlogsize`, `nsslapd-auditlog-maxlogsize`, or `nsslapd-errorlog-maxlogsize` attribute.

When you set a maximum log size, consider the total number of log files that can be created due to log file rotation. Also, remember that there are three different log files (access log, audit log, and error log) maintained by Directory Server, each of which will consume disk space. Compare these considerations to the total amount of disk space that you want to be used by the log.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-auditlog-maxlogsperdir

Specify the total number of access, audit, or error logs that can be contained in the access, audit, or error logs directory

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	1 to the maximum 32-bit integer value (2147483647)
Default Value	10
Syntax	Integer

This attribute specifies the total number of access, audit, or error logs that can be contained in the respective directory.

Each time the access log is rotated, a new log file is created. When the number of files contained in the access log directory exceeds the value stored on this attribute, the oldest version of the log file is deleted. The same scenario is true for audit logs and error logs.

If you set this value to 1, the server will not rotate the log and it will grow indefinitely.

If the value for this attribute is higher than 1, check the `nsslapd-accesslog-logrotationtime`, `nsslapd-auditlog-logrotationtime`, or `nsslapd-errorlog-logrotationtime` attribute to establish whether or not log rotation is specified.

If the `nsslapd-accesslog-logrotationtime`, `nsslapd-auditlog-logrotationtime`, or `nsslapd-errorlog-logrotationtime` attribute has a value of -1, there is no rotation of the respective log.

For more information, refer to the `nsslapd-accesslog-logrotationtime`, `nsslapd-auditlog-logrotationtime`, or `nsslapd-errorlog-logrotationtime` man page.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

---

## nsslapd-auditlog-permissions

Specify the permissions for the log files

### Synopsis

```
nsslapd-accesslog-permissions: permissions
```

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	See description that follows.
Default Value	600
Syntax	UNIX style octal permissions. Not supported on Windows platforms.

This attribute specifies the permissions for the log file.

Valid range is 001 to 777.

The permission 000 is not allowed because the server might have trouble starting for non-root users.

On Windows platforms, this attribute is ignored and a warning message is logged.

### Examples

#### Example 1 To Set the Access Log Permissions to 644

```
nsslapd-accesslog-permissions: 644
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-backend

suffix used to process requests

### Description

Gives the name of the suffix or chained suffix used to process requests. This attribute can be multivalued if you are using a custom distribution plug-in, with one suffix name per value. In this case, you must also specify the `nsslapd-distribution-plugin` and `nsslapd-distribution-funct` attributes.

---

---

**Note:** Use Directory Proxy Server, rather than a Directory Server plug-in, for distribution.

---

---

This attribute is required when the value of the `nsslapd-state` attribute is set to `backend`, or to `referral` on update.

#### Entry DN

`cn="suffixName",cn=mapping tree,cn=config`

#### Valid Range

Any valid partition name.

#### Default Value

None

#### Syntax

DirectoryString

#### Example

`nsslapd-backend: example`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-berbufsize

initial BER buffer size

### Description

This attribute defines the initial size in bytes of the buffer used to handle BER values.

In some cases where searches retrieving very large static groups, the default buffer size may cause slow performance due to the number of memory reallocation requests.

#### Entry DN

cn=config

#### Valid Range

0 - nsslapd-maxbersize, in bytes

A value of 0 indicates that the default value should be used.

#### Default Value

1024

#### Syntax

Integer

#### Example

nsslapd-berbufsize: 16384

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-cachememsize

cache memory size

### Description

Specifies the entry cache size in terms of the available memory space. Limiting cache size in terms of memory occupied is the simplest method. If you attempt to set a value that is not an integer or is too big for a 64-bit unsigned integer, or a 32-bit unsigned integer for 32-bit installations, you receive an `LDAP_UNWILLING_TO_PERFORM` error message with additional error information explaining the problem.

#### Entry DN

`cn=dbName, cn=ldbm database, cn=plugins, cn=config`

#### Valid Range

200 KB to  $2^{64}-1$  Bytes (200 KB to  $2^{32}-1$  Bytes for 32-bit installations)

#### Default Value

10 485 760 (20Mb)

#### Syntax

Integer

#### Example

`nsslapd-cachememsize:10`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-cachesize

cache size

### Description

Specifies the entry cache size in terms of the number of entries it can hold. Note that it is simpler to limit the cache by memory size only using the `nsslapd-cachememsize` attribute. If you attempt to set a value that is not an integer or is too big for a 64-bit unsigned integer, or a 32-bit unsigned integer for 32-bit installations, you receive an `LDAP_UNWILLING_TO_PERFORM` error message with additional error information explaining the problem.

#### Entry DN

`cn=dbName, cn=ldbm database, cn=plugins, cn=config`

#### Valid Range

1 to 2,147,483,647 (or -1 which means unlimited) entries

#### Default Value

-1

#### Syntax

Integer

#### Example

`nsslapd-cachesize: -1`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-certmap-basedn

certificate map search base

### Description

This attribute can be used when client authentication is performed using SSL certificates in order to avoid limitation of the security subsystem certificate mapping, configured in `certmap.conf`.

Depending on the `certmap.conf` configuration, the certificate mapping may be done using a directory subtree search based at the root DN. Note that if the search is based at the root DN, then the `nsslapd-certmap-basedn` attribute may force the search to be based at some entry other than the root.

#### Entry DN

`cn=config`

#### Valid Range

The DN of an entry in the directory

#### Default Value

Not applicable

#### Syntax

DN

#### Example

`nsslapd-certmap-basedn: ou=people,dc=example,dc=com`

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-changelogdir

changelog path

### Description

This required attribute specifies the name of the directory in which the change log is created. Whenever a change log configuration entry is created it must contain a valid directory or the operation will be rejected.

---

**Note:** For performance reasons, it is recommended that you store this database on a different physical disk from other databases.

If you change this value after enabling replication, the old changelog is deleted and a new changelog is created. Therefore, you should not change the value of this attribute after replication has been enabled and consumers initialized.

---

### Entry DNs

cn=Retro Changelog Plugin,cn=plugins,cn=config

### Valid Range

Any valid path to the directory storing the change log

### Default Value

None

### Syntax

DirectoryString

### Example

nsslapd-changelogdir: /local/fastdisk/changelog

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-changelogmaxage

maximum changelog age

### Description

Specifies the maximum age of any entry in the change log. The change log contains a record for each directory modification and is used when synchronizing consumer servers. Each record contains a timestamp. Any record with a timestamp that is older than the value specified in this attribute will be removed. If this attribute is absent, there is no age limit on change log records.

#### Entry DNs

cn=Retro Changelog Plugin,cn=plugins,cn=config

#### Valid Range

0 (meaning that entries are not removed according to their age) to maximum integer (2147483647)

#### Default Value

0

#### Syntax

DirectoryString *IntegerTimeunit*

Here, *Timeunit* is s for seconds, m for minutes, h for hours, d for days, w for weeks.

#### Example

nsslapd-changelogmaxage: 30d

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-changelogmaxentries

maximum number of changelog records

### Description

Specifies the maximum number of records the change log may contain. If this attribute is absent, there is no maximum number of records the change log can contain.

#### Entry DNs

`cn=Retro Changelog Plugin,cn=plugins,cn=config`

#### Valid Range

0 (no limit to the number of entries) to the maximum 32 bit integer value (2147483647).

#### Default Value

0

#### Syntax

Integer

#### Example

`nsslapd-changelogmaxentries: 0`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-config

DN of the server configuration

### Description

This read-only attribute is the configuration DN.

**Entry DN**

cn=config

**Valid Range**

Any valid config DN.

**Default Value**

cn=config

**Syntax**

DirectoryString

**Example**

nsslapd-config: cn=config

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-dbcachesize

database cache size

### Description

This performance tuning related attribute specifies database cache size. Note that this is neither the index cache nor the entry cache. If you activate automatic cache resizing, you override this attribute, by replacing these values with its own guessed values at a later stage of the server startup.

If you attempt to set a value that is not a number or is too big for a 32-bit or 64-bit signed integer, you receive an LDAP\_UNWILLING\_TO\_PERFORM error message with additional error information explaining the problem.

---

**Note:** The actual cache used may be significantly higher than what is specified in the `nsslapd-cachememsize` and `nsslapd-dbcachesize` attributes. It is therefore recommended that you do not specify a total cache size of more than 2 GB for 32-bit servers.

---

Changes to database cache size take effect after the server has been restarted.

### Entry DN

`cn=config,cn=ldbm database,cn=plugins,cn=config`

### Valid Range

500 KB to 4 GB for 32-bit platforms and 500 KB to  $2^{64}-1$  for 64-bit platforms

### Default Value

32 MB

### Syntax

Integer

### Example

`nsslapd-dbcachesize: 100 MB`

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-db-checkpoint-interval

database checkpoint interval

### Description

The amount of time in seconds after which Directory Server sends a checkpoint record to the database transaction log. The database transaction log contains a sequential listing of all recent database operations and is used for database recovery only. A checkpoint record indicates which database operations have been physically written to the directory database. The checkpoint records are used to determine where in the database transaction log to begin recovery after a system failure. The `nsslapd-db-checkpoint-interval` attribute is absent from `dse.ldif`. To change the checkpoint interval, you add the attribute to `dse.ldif`. This attribute can be dynamically modified using `ldapmodify`.

This attribute is provided only for system modification and diagnostics. It should be changed only with the guidance of engineering staff and Professional Services. Inconsistent settings of this attribute and other configuration attributes may cause Directory Server to be unstable.

#### Entry DN

`cn=config,cn=ldbm_database,cn=plugins,cn=config`

#### Valid Range

10 to 300 seconds

#### Default Value

60

#### Syntax

Integer

#### Example

`nsslapd-db-checkpoint-interval: 120`

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-db-circular-logging

circulate through transaction logs

### Description

Specifies circular logging for the transaction log files. If this attribute is switched off, old transaction log files are not removed, and are kept renamed as old log transaction files. Turning circular logging off can severely degrade server performance. It should therefore only be modified with the guidance of Professional Services.

#### Entry DN

`cn=config,cn=ldbm database,cn=plugins,cn=config`

#### Valid Range

on | off

#### Default Value

on

#### Syntax

DirectoryString

#### Example

`nsslapd-db-circular-logging: on`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-db-durable-transactions

when to write transactions to disk

### Description

Indicates whether database transaction log entries are immediately written to the disk. The database transaction log contains a sequential listing of all recent database operations and is used for database recovery only.

With durable transactions enabled, every directory change is physically recorded in the log file and is therefore able to be recovered in the event of a system failure. However, the durable transactions feature may also slow down the performance of Directory Server. With durable transactions disabled, all transactions are logically written to the database transaction log but may not be physically written to disk immediately. If there is a system failure before a directory change is physically written to disk, that change is not recoverable.

#### Entry DN

`cn=config,cn=ldbm database,cn=plugins,cn=config`

#### Valid Range

on | off

#### Default Value

on

#### Syntax

DirectoryString

#### Example

```
nsslapd-db-durable-transactions: on
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-db-home-directory

database file location

### Description

Used to fix a situation where the operating system endlessly flushes pages. This flushing can be so excessive that performance of the entire system is severely degraded.

This situation will occur only for certain combinations of the database cache size, the size of physical memory, and kernel tuning attributes. In particular, this situation should not occur if the database cache size is less than 100 MB.

For example, if your Solaris host seems excessively slow and your database cache size is around 100 MB or more, then you can use the `iostat` utility to diagnose the problem. Use `iostat` to monitor the activity of the disk where the Directory Server database files are stored. If all of the following conditions are true, then you can use the `nsslapd-db-home-directory` attribute to specify a subdirectory of a `tempfs` type file system.

- The disk is heavily used, more than 1 MB per second of data transfer.
- Service time is long, more than 100 ms.
- There is mostly write activity.

---

**Note:** The directory referenced by the `nsslapd-db-home-directory` attribute must be a subdirectory of a file system of type `tempfs`, such as `/tmp`.

If you have multiple Directory Server instances on the same machine, their `nsslapd-db-home-directory` attributes must be configured with different directories. Failure to do so will result in the databases for both directories becoming corrupted.

Finally, use of this attribute causes internal Directory Server database files to be moved to the directory referenced by the attribute. It is possible, but unlikely, that the server will no longer start after the files have been moved because not enough memory can be committed. This is a symptom of an overly large database cache size being configured for your server. If this happens, reduce the size of your database cache size to a value where the server will start again.

---

### Entry DN

`cn=config,cn=ldbm database,cn=plugins,cn=config`

### Valid Range

Any valid directory name in a `tempfs` file system, such as `/tmp`.

### Default Value

Not applicable

**Syntax**

DirectoryString

**Example**

nsslapd-db-home-directory: /tmp/ds1-db

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**

[dse.ldif\(4\)](#)

---

## nsslapd-db-idl-divisor

number of blocks per database page

### Description

Specifies the index block size in terms of the number of blocks per database page. The block size is calculated by dividing the database page size by the value of this attribute. A value of 1 makes the block size exactly equal to the page size. The default value of 0 sets the block size to the page size minus an estimated allowance for internal database overhead. Before modifying the value of this attribute export all databases to LDIF. Once the modification has been made, reload the databases from LDIF.

#### Entry DN

cn=config,cn=ldbm database,cn=plugins,cn=config

#### Valid Range

0 to 8

#### Default Value

0

#### Syntax

Integer

#### Example

nsslapd-db-idl-divisor: 2

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-db-locks

number of database locks used

### Description

Specifies the number of locks that can be used by the database. Increase the value of this attribute if you observe the following error:

```
libdb: Lock table is out of available locks
```

The current number of locks being used, the number of locks configured, and the maximum number of locks reached during the life of the process can be checked using the attributes `nsslapd-db-current-locks`, `nsslapd-db-configured-locks`, and `nsslapd-db-max-locks` respectively, under the entry `cn=database,cn=monitor,cn=ldbm database,cn=plugins,cn=config`.

### Entry DN

```
cn=config,cn=ldbm database,cn=plugins,cn=config
```

### Valid Range

1 to maximum integer

### Default Value

20000

### Syntax

Integer

### Example

```
nsslapd-db-locks: 20000
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-db-logbuf-size

database log buffer size

### Description

Specifies the log information buffer size. Log information is stored in memory until the buffer fills up or the transaction commit forces the buffer to be written to disk. Larger buffer sizes can significantly increase throughput in the presence of highly concurrent applications, or transactions producing large amounts of data. The `nsslapd-db-logbuf-size` attribute is only valid if the `nsslapd-db-durable-transaction` attribute is set to on.

---

**Note:** You must be prepared to export all databases to LDIF, remove existing databases, and import all databases from LDIF when modifying this attribute.

---

### Entry DN

`cn=config,cn=ldbm database,cn=plugins,cn=config`

### Valid Range

0, 32768 to 2097152 bytes (limited by the transaction log file size, which is 10 MB by default)

0 is equivalent to 32768 bytes

### Default Value

524288 for new instances

### Syntax

Integer

### Example

`nsslapd-db-logbuf-size: 524288`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-db-logdirectory

database transaction log directory

### Description

The path to the directory containing the database transaction log. The database transaction log contains a sequential listing of all recent database operations and is used for database recovery only. By default, the database transaction log is stored in the same directory as the directory entries themselves, *instance-path/db*.

For fault-tolerance and performance reasons, you can move this log file to another physical disk. The `nsslapd-db-logdirectory` attribute is absent from `dse.ldif`. To change the location of the database transaction log, add the attribute to `dse.ldif`.

---

---

**Note:** You must be prepared to export all databases to LDIF, remove existing databases, and re-import all databases from LDIF when modifying this attribute.

---

---

### Entry DN

`cn=config,cn=ldbm database,cn=plugins,cn=config`

### Valid Range

Any valid path and directory name.

### Default Value

Not applicable

### Syntax

DirectoryString

### Example

`nsslapd-db-logdirectory: /logs/txnlog`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-db-logfile-size

maximum size of single database log file

### Description

Specifies the maximum size of a single file in the log in bytes. By default, or if the value is set to 0, a maximum size of 10 MB is used. The maximum size is an unsigned four byte value. The value of this attribute can have significant impact on performance, as it can be tuned to avoid extensive log switching in the event of heavy entries.

#### Entry DN

cn=config,cn=ldbm database,cn=plugins,cn=config

#### Valid Range

0 to unsigned four byte integer

#### Default Value

10 (MB)

#### Syntax

Integer

#### Example

nsslapd-db-logfile-size: 10

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-dbncache

split database cache

### Description

This attribute allows you to split the `ldbm` cache into equally sized separate pieces of memory. It is possible to specify caches that are large enough so that they cannot be allocated contiguously on some architectures. For example, some releases of Solaris limit the amount of memory that may be allocated contiguously by a process. If `nsslapd-dbncache` is 0 or 1, the cache will be allocated contiguously in memory. If it is greater than 1, the cache will be broken up into `ncache` equally sized separate pieces of memory.

This attribute is provided only for system modification, and diagnostics. It should be changed only with the guidance of Professional Services. Inconsistent settings of this attribute and other configuration attributes may cause Directory Server to be unstable.

#### Entry DN

`cn=config,cn=ldbm database,cn=plugins,cn=config`

#### Valid Range

Positive integer or 0

#### Default Value

0

#### Syntax

Integer

#### Example

`nsslapd-dbncache: 0`

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-db-page-size

size of database pages in bytes

### Description

Specifies the size of the pages used to hold items in the database, in bytes. Valid page sizes are 512, 1024, 2048, 4096, 8192, 16384, 32768, and 65536 bytes. If the page size is not explicitly set, Directory Server defaults to a page size of 8192 bytes. Ideally, page size is set such that entries fit in database pages without wasting space. Whether it is possible to achieve an ideal database page size depends on your entries, and on whether they are subject to change in size.

---

**Note:** You must be prepared to export all databases to LDIF, remove existing databases, and import all databases from LDIF when modifying this attribute.

---

For ZFS file systems, you may find performance is best when the file system block size is set to equal the database page size. For example, try setting both to 32K or 64K.

To change the value of `nsslapd-db-page-size`, perform the following steps.

1. Shut down the Directory Server instance using the `dsadm` command.
2. Back up the Directory Server databases to LDIF using the `dsadm export` command.
3. Change the value of the attribute in `dse.ldif`.
4. Restore the Directory Server databases from LDIF using the `dsadm import` command.
5. Restart the Directory Server instance using the `dsadm` command.

Changing this default value can have significant performance impact. If the page size is too small, it results in extensive page splitting and copying, whereas if the page size is too large, it can waste disk space.

You can find entries in the overflowed pages using the following command:

```
install-path/lib/64/ns-slapd dbtest -D instance-path -n database
```

The maximum size of an entry that can fit in a normal page is  $db-page-size/4 - 24$  (24 is the per page binary tree internal structure).

For example, in a database of 40 million entries, if the database page size is 8K, and an entry size is greater than 2024 bytes then it results in an overflowed page. If all entries in the database are larger than 2024 bytes, the 40 million overflowed pages are obtained. A search operation has to perform increased number of database input and output operations, that is, the initial block of the overflowed page and the total number of continuation blocks in the overflowed page, which in turn affects the performance.

If there are no or very few overflow pages in your database, then do not change the page size. Increasing the page size may result in more lock contention and increased input and output operations. The impact depends on the file system and its page size. If possible, matching database page size to the file system page size is the best practice.

The following list describes the characteristics of this configuration attribute.

**Entry DN**

cn=config,cn=ldbm database,cn=plugins,cn=config

**Valid Range**

512 bytes to 64 KB

**Default Value**

8192 (bytes)

**Syntax**

Integer

**Example**

nsslapd-db-page-size: 8192

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**

[dse.ldif\(4\)](#)

---

## nsslapd-db-transaction-batch-val

number of database transactions to batch before commit

### Description

Specifies how many transactions are batched before being committed. You can use this attribute to improve update performance when full transaction durability is not required. This attribute can be dynamically modified using `ldapmodify`.

If you do not define this attribute or set it to a value of 0, transaction batching will be turned off and it will be impossible to make remote modifications to this attribute via LDAP. However, setting this attribute to a value greater than 0 causes the server to delay committing transactions until the number of queued transactions is equal to the attribute value. A value greater than 0 also allows you to modify this attribute remotely via LDAP. A value of 1 for this attribute allows you to modify the attribute setting remotely via LDAP, but results in no batching behavior. A value of 1 at server startup is therefore useful for maintaining normal durability, while also allowing transaction batching to be turned on and off remotely when desired. Bear in mind that the value you choose for this attribute may require you to modify the `nsslapd-db-logbuf-size` attribute to ensure sufficient log buffer size for accommodating your batched transactions. In practice, values should be positive numbers. Values larger than 100 bring few benefits.

---

**Note:** The `nsslapd-db-transaction-batch-val` attribute is only valid if the `nsslapd-db-durable-transaction` attribute is set to on.

---

### Entry DN

`cn=config,cn=ldbm database,cn=plugins,cn=config`

### Valid Range

-2147483647 to 2147483648

### Default Value

0 (meaning turned off)

### Syntax

Integer

### Example

`nsslapd-db-transaction-batch-val: 5`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

## See Also

[dse.ldif\(4\)](#)

---

## nsslapd-db-tx-max

maximum concurrent database transactions

### Description

Specifies the maximum number of concurrent transactions that can be handled by the database. Increase the value of this attribute if you observe the following error.

Serious Error---Failed in dbleyer\_txn\_begin, err=12 (Not enough space)

#### Entry DN

cn=config,cn=ldbm database,cn=plugins,cn=config

#### Valid Range

1 to maximum integer

#### Default Value

210

#### Syntax

Integer

#### Example

nsslapd-db-tx-max: 210

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-directory

absolute path to database instance

### Description

Specifies the absolute path to the database instance. If the database instance is created manually, this attribute must be included. Once the database instance has been created, do not modify this path as any changes risk preventing the server from accessing data.

#### Entry DN

`cn=dbName, cn=ldbm database, cn=plugins, cn=config`

#### Valid Range

Any valid absolute path to the database instance.

#### Default Value

None

#### Syntax

DirectoryString

#### Example

`nsslapd-directory: /local/dsInst/db`

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-disk-full-threshold

full disk threshold to limit database updates

### Description

When the minimum free space on the disk in MB. When the available free space on any one of the disks used by a database instance falls below the value specified by this attribute, no updates are permitted and the server returns an LDAP\_UNWILLING\_TO\_PERFORM error. Updates are allowed again as soon as free space rises above the threshold.

### Entry DN

cn=config,cn=ldbm database,cn=plugins,cn=config

### Valid Range

0 to unsigned 4-byte integer

### Default Value

10

### Syntax

Integer

### Example

nsslapd-disk-full-threshold: 10

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-disk-low-threshold

low disk threshold to limit database updates

### Description

Specifies the "low" free space on the disk (in MB). When the available free space on any one of the disks used by a database instance falls below the value specified by this attribute, protocol updates on that instance are permitted only by Directory Manager.

#### Entry DN

`cn=config,cn=ldbm database,cn=plugins,cn=config`

#### Valid Range

0 to unsigned 4-byte integer

#### Default Value

100

#### Syntax

Integer

#### Example

`nsslapd-disk-low-threshold: 100`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-distribution-funct

distribution plug-in function

### Description

Specifies the name of your distribution function within the library named by `nsslapd-distribution-plugin`. This attribute is required along with `nsslapd-distribution-plugin` when you have specified more than one database in the `nsslapd-backend` attribute.

---

**Note:** Use Directory Proxy Server, rather than a Directory Server plug-in, for distribution.

---

### Entry DN

`cn="suffixName",cn=mapping tree,cn=config`

### Valid Range

The name of the distribution function.

### Default Value

None

### Syntax

DirectoryString

### Example

`nsslapd-distribution-funct: alphaNumDistrib`

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-distribution-plugin

distribution plug-in library

### Description

Specifies the full path and filename of the shared library for the custom distribution plug-in. This attribute is required along with `nsslapd-distribution-funct` when you have specified more than one suffix in the `nsslapd-backend` attribute.

---



---

**Note:** Use Directory Proxy Server, rather than a Directory Server plug-in, for distribution.

---



---

### Entry DN

`cn="suffixName",cn=mapping tree,cn=config`

### Valid Range

The full path and filename of the plug-in library.

### Default Value

None

### Syntax

DirectoryString

### Example

`nsslapd-distribution-plugin: /custom/plugins/myDistrib.so`

Once you have distributed entries, you cannot redistribute them. The following restrictions apply.

- You cannot change your distribution function once you have deployed entry distribution.
- You cannot use the `ldapmodify` command to change an entry if that would cause them to be distributed into a different database.
- You cannot replicate databases that are distributed over multiple databases.

Violating these restrictions prevents Directory Server from correctly locating and returning entries.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-dn-cachememsize

DN cache memory size

### Description

Specifies the DN cache size in terms of the available memory space.

#### Entry DN

cn=config

#### Valid Range

Integer >= 1048576 Bytes

#### Default Value

10 485 760 (10Mb)

#### Syntax

Integer

#### Multi-valued

No

#### Read-write access

RW

#### Restart needed

Yes

#### Example

nsslapd-dn-cachememsize:2097152 (2Mb)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-dn-cachesize

DN cache size

### Description

Specifies the DN cache size in terms of the number of entries it can hold. The value that can be assigned to `nsslapd-dn-cachesize` has the following impact on its behavior.

- 0 — means disabled
- -1 — means not limited by number of DN's but limited by the size specified in `nsslapd-dn-cachememsize`
- $\geq 1$  — cache is limited to the size that you specify here

#### Entry DN

`cn=config`

#### Valid Range

Integer  $\geq 1$ , 0, or -1

#### Default Value

-1

#### Syntax

Integer

#### Multi-valued

No

#### Read Write access

RW

#### Restart Needed

Yes

#### Example

```
nsslapd-dn-cachesize: -1
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-ds4-compatible-schema

allow 4.x style schema definitions

### Description

Makes the schema in cn=schema compatible with 4.x versions of Directory Server.

---

**Note:** When this attribute is set to on, Directory Server can read schema from 4.x configuration files, which use syntax for attribute types and object classes that differs from the standard syntax defined by RFC 2252. As a result, when this attribute is set to on, schema cannot be modified using administrative tools, but must instead be modified manually.

---

### Entry DN

cn=config

### Valid Range

on | off

### Default Value

off

### Syntax

DirectoryString

### Example

nsslapd-ds4-compatible-schema: off

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-enquote-sup-oc

enable superior object class enquoting

### Description

Controls whether the quoting in the `objectclasses` attributes contained in the `cn=schema` entry conforms to the quoting specified by internet draft RFC 2252. By default, Directory Server does not place single quotes around the superior object class identified on the `objectclasses` attributes contained in `cn=schema`. RFC 2252 indicates that this value should not be quoted.

That is, Directory Server publishes `objectclasses` attributes in the `cn=schema` entry as follows:

```
objectclasses: ( 2.5.6.6
  NAME 'person'
  DESC 'Standard ObjectClass'
  SUP 'top'
  MUST ( objectclass $ sn $ cn )
  MAY ( aci $ description $ seealso $ telephonenumber $ userpassword ) )
```

However, RFC 2252 indicates that this attribute should be published as follows:

```
objectclasses: ( 2.5.6.6
  NAME 'person'
  DESC 'Standard ObjectClass'
  SUP top
  MUST ( objectclass $ sn $ cn )
  MAY ( aci $ description $ seealso $ telephonenumber $ userpassword ) )
```

Notice the absence of single quotes around the word `top`.

Turning this attribute on means that some LDAP clients will no longer function, as they require the schema as defined in RFC 2252.

Turning this attribute off causes Directory Server to conform to RFC 2252, but doing so may interfere with some earlier LDAP clients.

#### Entry DN

`cn=config`

#### Valid Range

`on | off`

#### Default Value

`off`

#### Syntax

DirectoryString

#### Example

```
nsslapd-enquote-sup-oc: off
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

---

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

---

**See Also**[dse.ldif\(4\)](#)

## nsslapd-errorlog

Specify the path and filename of the access | audit | error log

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	Any valid file name
Default Value	See description that follows.
Syntax	DirectoryString

These attributes specify the path and filename of the log used to record each database access. Default values are:

```
install-path/logs/access
install-path/logs/audit
install-path/logs/errors
```

The following information is recorded in the access log file by default:

- IP address of the client machine that accessed the database
- Operations performed such as search, add, modify
- Result of the access such as the number of entries returned for a search

The information recorded in the error log depends on the error log level but typically contains at least the server startup and shutdown times, and the server port number.

For logging to be enabled, both of the following conditions must be met:

- The `nsslapd-*log` attribute must be set to a valid file name.
- The `nsslapd-*log-logging-enabled` attribute must be set to `on`.

Other configurations result in logging being disabled.

### Examples

```
nsslapd-accesslog: /local/dsInst/logs/access
nsslapd-auditlog: /local/dsInst/logs/audit
nsslapd-errorlog: /local/dsInst/logs/errors
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Stable

## nsslapd-errorlog-level

Control what is logged to the access, audit, or error log

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	See the description that follows.
Default Value	256
Syntax	Integer

This attribute specifies the access log levels. Log levels can be added together to provide you with the exact type of logging you require. For example, 516 (4 + 512) obtains the internal access operation, entry access, and referral logging. The following levels are supported:

**0**

No access logging

**4**

Logging for internal access operations

**256**

Logging for access to an entry

**512**

Logging for access to an entry and referrals

**131072**

Precise timing of operation duration. This gives microsecond resolution for the elapsed time item in the access log.

### Examples

```
nsslapd-accesslog-level: 256
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-errorlog-list

Provide a list of log files used in access, audit, or error log rotation.

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	Not applicable
Default Value	None
Syntax	DirectoryString

This attribute provides a list of log files used in access, audit, or error log rotation. This attribute is read only and cannot be set.

### Examples

```
nsslapd-accesslog-list:accesslog2,accesslog3
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

---

## nsslapd-errorlog-logbuffering

Determines whether the server writes access log entries directly to disk

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	on off
Default Value	on
Syntax	DirectoryString

When this attribute is set to `off`, the server writes all access log entries directly to disk.

### Examples

```
nsslapd-accesslog-logbuffering: off
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-errorlog-logexpirationtime

Specify the maximum age that an access, audit, or error log file is allowed to reach before it is deleted

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	1 to the maximum 32-bit integer value (2147483647)
Default Value	1
Syntax	Integer

Specifies the maximum age that an access, audit, or error log file is allowed to reach before it is deleted. This attribute supplies only the number of units. The units are provided by the `nsslapd-accesslog-logexpirationtimeunit`, `nsslapd-auditlog-logexpirationtimeunit`, or `nsslapd-errorlog-logexpirationtimeunit` attribute.

### Examples

```
nsslapd-accesslog-logexpirationtime: 2
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

---

## nsslapd-errorlog-logexpirationtimeunit

Determines the unit of the log expiration time

### Description

Property	Value
Entry DN	cn=config
Valid Range	month   week   day
Default Value	month
Syntax	DirectoryString

Specifies the unit for the `nsslapd-accesslog-logexpirationtime`, `nsslapd-auditlog-logexpirationtime`, or `nsslapd-errorlog-logexpirationtime` attribute. If the unit is unknown by the server, the log will never expire.

### Examples

```
nsslapd-accesslog-logexpirationtimeunit: day
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-errorlog-logging-enabled

Enable or disable access, audit, or error logging

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	on off
Default Value	Access logging on, Audit logging off
Syntax	DirectoryString

This attribute is used in conjunction with the `nsslapd-accesslog`, `nsslapd-auditlog`, or `nsslapd-errorlog` attribute to disable and enable access, audit, or error logging. The `nsslapd-accesslog`, `nsslapd-auditlog`, or `nsslapd-errorlog` attributes specify the path and filename of the access, audit, and error logs, respectively.

For logging to be enabled, the `nsslapd-accesslog-logging-enabled`, `nsslapd-auditlog-logging-enabled`, or `nsslapd-errorlog-logging-enabled` attribute must be switched to on, and the respective `nsslapd-accesslog`, `nsslapd-auditlog`, or `nsslapd-errorlog` attribute must have a valid path and filename.

For information about the combinations of values for these attributes, see the `nsslapd-accesslog`, `nsslapd-auditlog`, or `nsslapd-errorlog` man page.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-errorlog-logmaxdiskspace

Specify the maximum amount of disk space in megabytes that the access, audit or error logs are allowed to consume

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	-1   1 to the maximum 32-bit integer value (2147483647). A value of -1 means that the disk space allowed for the log is unlimited in size.
Default Value	Access logs 500, audit logs and error logs 100
Syntax	Integer

Specifies the maximum amount of disk space in megabytes that the access, audit or error logs are allowed to consume. If this value is exceeded, the oldest access, audit or error log is deleted.

When setting the maximum disk space, consider the total number of log files that can be created due to log file rotation. As there are three different log files – access log, audit log, and error log – maintained by Directory Server, each of which consume disk space. Compare these considerations to the total amount of disk space that you want to be used by the each log.

### Examples

```
nsslapd-accesslog-logmaxdiskspace: 200
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-errorlog-logminfreediskspace

Specify the minimum amount of free disk space in megabytes that is allowed before an access, audit, or error log is deleted

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	1 to the maximum 32-bit integer value (2147483647)
Default Value	5
Syntax	Integer

Specifies the minimum amount of free disk space in megabytes that is allowed before an access, audit, or error log is deleted. When the amount of free disk space falls below the value specified by this attribute, the oldest access, audit, or error log is deleted until enough disk space is freed to satisfy this attribute.

### Examples

```
nsslapd-accesslog-logminfreediskspace: 4
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-errorlog-logrotationtime

Specify the time interval, the time of the day, and the minimum file size for rotation of the access log, audit log, or error log

### SYNOPSIS

```
nsslapd-accesslog-logrotationtime:
{time-interval} [time-of-day | *] [min-file-size | *]
```

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	See description that follows.
Default Value	1 * *
Syntax	DirectoryString

This attribute specifies the time interval, the time of the day, and the minimum file size for access, audit, or error rotation. The unit of the time interval is specified by the `nsslapd-accesslog-logrotationtimeunit`, `nsslapd-auditlog-logrotationtimeunit`, or `nsslapd-errorlog-logrotationtimeunit` attribute.

The valid range for this attribute is as follows.

- *time-interval*  
Time interval at which the log is rotated. The unit of the time interval is given by the `nsslapd-auditlog-logrotationtimeunit` attribute.
- *time-of-day*  
Time of the day, on a 24-hour clock, at which the log is rotated.  
The value `*` means that no time of day is specified.
- *min-file-size*  
Minimum file size in kilobytes at which the log file is rotated. The log file is rotated if the file size is greater than the specified number of kilobytes.  
The value `*` means that no minimum file size is specified.

This attribute must be used in conjunction with the `nsslapd-accesslog-logrotationtimeunit`, `nsslapd-auditlog-logrotationtimeunit`, or `nsslapd-errorlog-logrotationtimeunit` attribute.

## Examples

### **Example 1 To Rotate the Access Log at 11:30 pm Every Day Regardless of the Size of the Log File**

To specify when the access log is rotated, the `nsslapd-accesslog-logrotationtime` and the `nsslapd-accesslog-logrotationtimeunit` attributes must be set.

To rotate the log daily, the `nsslapd-accesslog-logrotationtimeunit` must be set as follows:

```
nsslapd-accesslog-logrotationtimeunit: day
```

To rotate the log at 11:30 pm daily, the `nsslapd-accesslog-logrotationtime` must be set as follows:

```
nsslapd-accesslog-logrotationtime: 1 2330
```

The *min-file-size* is not specified, therefore, the log is rotated irrespective of the file size.

### **Example 2 To Rotate the Error Log at 11:30 pm Every Day if the File Size is Greater Than 10 KB**

To specify when the error log is rotated, the `nsslapd-errorlog-logrotationtime` and the `nsslapd-errorlog-logrotationtimeunit` attributes must be set.

To rotate the log daily, the `nsslapd-accesslog-logrotationtimeunit` must be set as follows:

```
nsslapd-accesslog-logrotationtimeunit: day
```

To rotate the log at 11:30 pm daily if the file size is greater than 10 KB, the `nsslapd-accesslog-logrotationtime` must be set as follows:

```
nsslapd-accesslog-logrotationtime: 1 2330 10
```

### **Example 3 To Rotate the Error Log at Any Time if the File Size is Greater Than 10 KB**

To specify when the error log is rotated, the `nsslapd-errorlog-logrotationtime` and the `nsslapd-errorlog-logrotationtimeunit` attributes must be set.

To rotate the log every minute if the file size is greater than 10 KB, the `nsslapd-errorlog-logrotationtimeunit` attribute must be set as follows:

```
nsslapd-accesslog-logrotationtimeunit: Minute
```

To rotate the log when the file size is greater than 10 KB, the `nsslapd-errorlog-logrotationtime` must be set as follows:

```
nsslapd-errorlog-logrotationtime: 1 * 10
```

The *time-of-day* is specified as `*`, therefore, no specific time of day is specified.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-errorlog-logrotationtimeunit

Specify the unit for the `time-interval` part of the `nsslapd-access|audit|errorlog-logrotationtime` attribute

### Description

PROPERTY	VALUE
Entry DN	<code>cn=config</code>
Valid Range	<code>Month   Week   Day   Hour   Minute</code>
Default Value	<code>Day</code>
Syntax	<code>DirectoryString</code>

Specifies the unit for the `time-interval` part of the `nsslapd-access|audit|errorlog-logrotationtime` attribute.

This attribute must be used in conjunction with the `nsslapd-access|audit|errorlog-logrotationtime` attribute.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	<code>SUNWdsee7</code>
Stability Level	<code>Unstable</code>

## nsslapd-errorlog-maxlogsize

Specify the maximum size of the access, audit, or error log in megabytes

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	-1   1 to the maximum 32-bit integer value (2147483647). A value of -1 means the log file is unlimited in size.
Default Value	100
Syntax	Integer

This attribute specifies the maximum size of the access, audit, or error log in megabytes. When this value is reached, the log is rotated.

If the `nsslapd-accesslog-maxlogsperdir`, `nsslapd-auditlog-maxlogsperdir`, or `nsslapd-errorlog-maxlogsperdir` attribute is set to 1, the server ignores the respective `nsslapd-accesslog-maxlogsize`, `nsslapd-auditlog-maxlogsize`, or `nsslapd-errorlog-maxlogsize` attribute.

When you set a maximum log size, consider the total number of log files that can be created due to log file rotation. Also, remember that there are three different log files (access log, audit log, and error log) maintained by Directory Server, each of which will consume disk space. Compare these considerations to the total amount of disk space that you want to be used by the log.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-errorlog-maxlogspedir

Specify the total number of access, audit, or error logs that can be contained in the access, audit, or error logs directory

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	1 to the maximum 32-bit integer value (2147483647)
Default Value	10
Syntax	Integer

This attribute specifies the total number of access, audit, or error logs that can be contained in the respective directory.

Each time the access log is rotated, a new log file is created. When the number of files contained in the access log directory exceeds the value stored on this attribute, the oldest version of the log file is deleted. The same scenario is true for audit logs and error logs.

If you set this value to 1, the server will not rotate the log and it will grow indefinitely.

If the value for this attribute is higher than 1, check the `nsslapd-accesslog-logrotationtime`, `nsslapd-auditlog-logrotationtime`, or `nsslapd-errorlog-logrotationtime` attribute to establish whether or not log rotation is specified.

If the `nsslapd-accesslog-logrotationtime`, `nsslapd-auditlog-logrotationtime`, or `nsslapd-errorlog-logrotationtime` attribute has a value of -1, there is no rotation of the respective log.

For more information, refer to the `nsslapd-accesslog-logrotationtime`, `nsslapd-auditlog-logrotationtime`, or `nsslapd-errorlog-logrotationtime` man page.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

---

## nsslapd-errorlog-permissions

Specify the permissions for the log files

### Synopsis

```
nsslapd-accesslog-permissions: permissions
```

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	See description that follows.
Default Value	600
Syntax	UNIX style octal permissions. Not supported on Windows platforms.

This attribute specifies the permissions for the log file.

Valid range is 001 to 777.

The permission 000 is not allowed because the server might have trouble starting for non-root users.

On Windows platforms, this attribute is ignored and a warning message is logged.

### Examples

#### Example 1 To Set the Access Log Permissions to 644

```
nsslapd-accesslog-permissions: 644
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-exclude-from-export

attributes excluded during database export

### Description

Specifies a list of attributes that are excluded when the database is exported.

**Entry DN**

`cn=config,cn=ldbm database,cn=plugins,cn=config`

**Valid Range**

N/A

**Default Value**

`entrydn entryid dncomp parentid numSubordinates`

**Syntax**

DirectoryString

**Example**

`nsslapd-exclude-from-export: entrydn entryid`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-groupevalnestlevel

level of access control nesting for group evaluations

### Description

Specifies the number of levels of nesting that the access control system will perform for group evaluation.

**Entry DN**

cn=config

**Valid Range**

0 to the maximum 64-bit integer value

**Default Value**

0

**Syntax**

Integer

**Example**

nsslapd-groupevalnestlevel: 5

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-groupevalszelimit

maximum number of static group members for ACI evaluation.

### Description

Defines the maximum number of members that a static group (including members of its sub-groups) can have for ACI evaluation.

#### Entry DN

cn=config

#### Valid Range

0 to the maximum 64-bit integer value

A value of -1 means infinite.

#### Default Value

5000

#### Syntax

Integer

#### Example

```
nsslapd-groupevalszelimit: 5000
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-idletimeout

idle timeout

### Description

Specifies the amount of time in seconds after which an idle LDAP client connection is closed by the server. A value of 0 indicates that the server will never close idle connections.

#### Entry DN

cn=config

#### Valid Range

0 to the maximum 32-bit integer value (2147483647)

#### Default Value

0

#### Syntax

Integer

#### Example

```
nsslapd-IdleTimeout: 0
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-import-cachesize

database cache size for import

### Description

This performance tuning related attribute determines the size of the database cache used in the bulk import process. By setting this attribute value so that the maximum available system physical memory is used for the database cache during bulk importing, you can optimize bulk import speed. If you attempt to set a value that is not a number or is too big for a 32-bit signed integer, you receive an LDAP\_UNWILLING\_TO\_PERFORM error message with additional error information explaining the problem.

---

**Note:** A cache is created for each load that occurs. For example, if the user sets the `nsslapd-import-cachesize` attribute to 1 GB, then 1 GB is used when loading one database, 2 GB is used when loading 2 databases, and so forth.

Ensure that you have sufficient physical memory to prevent swapping from occurring, as this results in performance degradation.

---

### Entry DN

`cn=config,cn=ldbm database,cn=plugins,cn=config`

### Valid Range

20 MB to 4 GB for 32-bit platforms and 20 MB to  $2^{64}-1$  for 64-bit platforms

### Default Value

64 MB

### Syntax

Integer

### Example

`nsslapd-import-cachesize: 209715200`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-infolog-area

Specify the component for which logging information should be provided.

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	See description that follows.
Default Value	0
Syntax	Integer

Specifies the component for which logging information should be provided. Each component is identified as an area, whose value is a decimal translation of the hex values in `slapi-plugin.h`. The valid range includes the following values:

#### 0

Default logging area, used for critical errors and other messages that are always written to the error log, for example server startup messages. Messages at this level are always included in the error log regardless of the `nsslapd-infolog-level` setting.

#### 1

Trace function calls. Logs a message when the server enters and exits a function.

#### 4

Search arguments processing.

#### 8

Connection management

#### 16

Print out packets sent/received

#### 32

Search filter processing

#### 64

Config file processing

#### 128

Access control list processing

#### 512

LDBM processing.

#### 2048

Log LDIF entry parsing debugging

#### 4096

Housekeeping thread debugging

**8192**

Replication debugging

**32768**

Database cache debugging.

**65536**

Server plug-in debugging. An entry is written to the log file when a server plug-in calls `slapi_log_info_ex()`.

The log area is additive. For example, to enable logging on search filter processing (32) and Config file processing (64), you would set this attribute to 96 (32+64).

**Examples**

```
nsslapd-infolog-area: 4096
```

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Unstable

---

## nsslapd-infolog-level

Specify the level of logging information that should be returned for the server component defined by the `nsslapd-infolog-area` attribute

### Description

PROPERTY	VALUE
Entry DN	<code>cn=config</code>
Valid Range	0   1
Default Value	0
Syntax	Integer

Specifies the level of logging information that should be returned for the server component defined by the `nsslapd-infolog-area` attribute. A value of 0 means that only default logging information is returned for the selected area. Setting this attribute to 1 enables additional logging information to be returned for the selected area.

### Examples

```
nsslapd-infolog-level: 1
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Unstable

## nsslapd-instancedir

instance path

### Description

Specifies the full path to the directory where this server instance is installed, by default the *instance-path* given at installation time. Do *not* change this value after installation.

#### Entry DN

cn=config

#### Valid Range

Any valid file path.

#### Default Value

*instance-path*

#### Syntax

DirectoryString

#### Example

```
nsslapd-instancedir: /local/dsInst
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-ioblocktimeout

IO block time out

### Description

Specifies the amount of time in milliseconds after which the connection to a stalled LDAP client is closed. An LDAP client is considered to be stalled when it has not made any I/O progress for read or write operations.

#### Entry DN

cn=config

#### Valid Range

0 to the maximum 32-bit integer value (2147483647)

#### Default Value

30000

#### Syntax

Integer

#### Example

```
nsslapd-ioblocktimeout: 1800000
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-lastmod

track modification time

### Description

Specifies whether Directory Server maintains the modification attributes for Directory Server entries. These attributes include the following.

- `modifiersname`, which is the distinguished name of the person who last modified the entry.
- `modifytimestamp`, which is the timestamp, in GMT format, for when the entry was last modified.
- `creatorsname`, which is the distinguished name of the person who initially created the entry.
- `createtimestamp`, which is the timestamp for when the entry was created in GMT format.

### Entry DN

`cn=config`

### Valid Range

`on | off`

### Default Value

`on`

### Syntax

`DirectoryString`

### Example

```
nsslapd-lastmod: off
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-listenBacklog

maximum number of pending connections

### Description

Allows you to configure the maximum number of pending connections on a socket used by Directory Server. This configuration value is passed as the backlog parameter to the `listen()` call on Solaris systems for example.

#### Entry DN

`cn=config`

#### Valid Range

0 to the maximum `int` for the system

#### Default Value

128

#### Syntax

Integer

#### Example

`nsslapd-listenBacklog:1024`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-listenhost

listen to IP address

### Description

Allows multiple Directory Server instances to run on a multi-homed machine, and makes it possible to limit listening to one or more interfaces of a multi-homed machine. Provide the host name or host names corresponding to the IP interface or interfaces you want to specify as values for this attribute. Directory Server responds only to requests sent to the interface or interfaces corresponding to the host name or host names specified. This prevents other programs from using the same port as Directory Server on the specified interfaces.

#### Entry DN

cn=config

#### Valid Range

Any host name or host names

#### Default Value

Not applicable

#### Syntax

DirectoryString

#### Example

nsslapd-listenhost: *host\_name*

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-localhost

local host system name

### Description

This read-only attribute specifies the host system on which Directory Server runs.

#### Entry DN

cn=config

#### Valid Range

Any fully qualified hostname.

#### Default Value

Hostname of installed machine.

#### Syntax

DirectoryString

#### Example

```
nsslapd-localhost: myServer.example.com
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-localuser

---

local user name

### Description

Specifies the user under which Directory Server runs. The group under which the user runs is derived from this attribute, by examining the groups that the user is a member of. Should the user change, all the files in the installation directory must be owned by this user.

#### Entry DN

cn=config

#### Valid Range

Any valid user on the local system.

#### Default Value

To run as the same user who started Directory Server.

#### Syntax

DirectoryString

#### Example

nsslapd-localuser: nobody

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-maxbersize

maximum message size

### Description

Defines the maximum size in bytes allowed for an incoming message. This limits the size of LDAP requests that can be handled by Directory Server. Limiting the size of requests prevents some kinds of denial of service attacks.

The limit applies to the total size of the LDAP request. For example, if the request is to add an entry, and the entry in the request is larger than two megabytes, then the add request is denied. Care should be taken when changing this attribute.

#### Entry DN

cn=config

#### Valid Range

0 - 2 GB (2,147,483,647 bytes), where a value of 0 indicates that the default value should be used.

#### Default Value

2097152

#### Syntax

Integer

#### Example

nsslapd-maxbersize: 2097152

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-maxconnections

maximum number of connections

### Description

This attribute limits the number of simultaneous connections the server can manage. The value of this attribute is not set by default. If it is not set manually, its implicit value is the maximum number of file descriptors a process can open on the system.

You can use this attribute to limit the amount of memory used by Directory Server. Directory Server allocates  $n * 512$  bytes of data, where  $n$  is equal to the value of `nsslapd-maxconnections`, if set, or to the maximum number of file descriptors a process can open on the system.

For example, on Solaris 9 systems, the maximum number of file descriptors is 64000. If `nsslapd-maxconnections` is not set, Directory Server allocates 35 MB of data, which may cause problems for some deployments. Setting `nsslapd-maxconnections` to a suitable value can help to alleviate this problem.

### Entry DN

`cn=config`

### Valid Range

`nsslapd-reservedescriptors + 1` to `maxdescriptors`.

If the `maxdescriptors` attribute is not set, the maximum value of `nsslapd-maxconnections` is the maximum number of file descriptors a process can open on the system.

### Default Value

N/A

### Syntax

Integer

### Example

```
nsslapd-maxconnections: 4096
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-maxdescriptors

maximum file descriptors

### Description

This attribute sets the maximum, platform-dependent number of file descriptors that Directory Server will try to use. A file descriptor is used whenever a client connects to the server. It is also used for some server activities such as index maintenance. The number of available file descriptors for TCP/IP connections is the total for the `nsslapd-maxdescriptors` attribute minus the number of file descriptors used by the server for non-client connections, such as index management and managing replication, as specified in the `nsslapd-reservedescriptors` attribute.

The number that you specify here should not be greater than the total number of file descriptors that your operating system allows the `ns-slapd` process to use. This number will differ depending on your operating system. Some operating systems allow you to configure the number of file descriptors available to a process. Refer to your operating system documentation for details on file descriptor limits and configuration. It is worth noting that the included `idsktune` program can be used to suggest changes to the system kernel or TCP/IP tuning attributes, including increasing the number of file descriptors if necessary. You should consider increasing the value on this attribute if Directory Server is refusing connections because it is out of file descriptors. When this occurs, the following message is written to the Directory Server errors log file:

```
Not listening for new connections -- too many fds open
```

---

---

**Note:** UNIX shells usually have configurable limits on the number of file descriptors. Refer to your operating system documentation for further information regarding `limit` and `ulimit` as these limits can often cause problems.

This parameter is not applicable on Windows.

---

---

### Entry DN

`cn=config`

### Valid Range

1 to 65535

### Default Value

Maximum number of file descriptors allowed for a process

### Syntax

Integer

### Example

```
nsslapd-maxdescriptors: 8192
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**

[dse.ldif\(4\)](#)

---

## nsslapd-maxpsearch

maximum number of persistent searches

### Description

Defines the maximum number of persistent searches that can be performed on Directory Server. The persistent search mechanism provides an active channel through which entries that change, and information about the changes that occur, can be communicated. Because each persistent search operation uses one thread, limiting the number of simultaneous persistent searches prevents certain kinds of denial of service attacks.

#### Entry DN

cn=config

#### Valid Range

1 to maximum thread number

#### Default Value

30

#### Syntax

Integer

#### Example

nsslapd-maxpsearch: 30

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-maxthreadsperconn

maximum threads per connection

### Description

Defines the maximum number of threads that a connection should use. For normal operations where a client binds and performs only one or two operations before unbinding, you should use the default value. For situations where a client binds and simultaneously issues many requests, you should increase this value to allow each connection enough resources to perform all the operations.

#### Entry DN

cn=config

#### Valid Range

1 to maximum thread number

#### Default Value

5

#### Syntax

Integer

#### Example

nsslapd-maxthreadsperconn: 5

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-mode

database index file permissions

### Description

Specifies the permissions used for newly created index files.

#### Entry DN

`cn=config,cn=ldbm database,cn=plugins,cn=config`

#### Valid Range

Any four-digit octal number. However, mode 0600 is recommended. This allows read and write access for the owner of the index files, which is the server user, and no access for other users.

#### Default Value

0600

#### Syntax

Integer

#### Example

`nsslapd-mode: 0600`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-nagle

delay sending responses

### Description

When the value of this attribute is `off`, the `TCP_NODELAY` option is set so that LDAP responses, such as entries or result messages, are sent back to a client immediately. When the attribute is turned on, default TCP behavior applies. That is, the sending of data is delayed, in the hope that this will enable additional data to be grouped into one packet of the underlying network MTU size, which is typically 1500 bytes for Ethernet.

#### Entry DN

`cn=config`

#### Valid range

`on` | `off`

#### Default value

`off`

#### Syntax

DirectoryString

#### Example

`nsslapd-nagle: off`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-plugin

Directory Server plug-in legacy configuration

### Description

The `nsslapd-plugin` attribute on `cn=config` is multi-valued, read-only attribute lists the syntaxes and matching rules loaded by the server. This manual page covers server plug-in configuration, rather than the `nsslapd-plugin` attribute.

This manual page provides an overview of legacy configuration information for server plug-ins. This manual page covers the individual plug-in configuration entry attributes. Also, this manual page covers the plug-ins provided with Directory Server, including configurable options, configurable arguments, default setting, dependencies, general performance related information, and further reading.

---



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**Note:** In most circumstances, you configure plug-in functionality using the `dsconf(1M)` command. See [plugin\(5DSCONF\)](#) for a list of configurable properties.

---



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### ATTRIBUTES FOR PLUG-IN CONFIGURATION ENTRIES

The following list covers each plug-in configuration entry attribute.

#### **nsslapd-plugin-depends-on-named**

This is a multivalued attribute, used to ensure that plug-ins are called by the server in the correct order. It takes a value that corresponds to the `cn` value of a plug-in. The plug-in whose `cn` value matches one of the values below it is started by the server prior to this plug-in. If the plug-in does not exist, the server fails to start.

**Entry DN**

`cn=pluginName,cn=plugins, cn=config`

**Valid Range**

Plug-in name

**Default Value**

None

**Syntax**

DirectoryString

**Example**

`nsslapd-plugin-depends-on-named: Class of Service`

#### **nsslapd-plugin-depends-on-type**

This is a multivalued attribute, used to ensure that plug-ins are called by the server in the correct order. It takes a value that corresponds to the type of a plug-in, contained in the attribute `nsslapd-pluginType`, and requires that plug-ins of that type are started before the present plug-in.

**Entry DN**

`cn=pluginName,cn=plugins, cn=config`

**Valid Range**

Plug-in type

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-plugin-depends-on-type: database

**nsslapd-pluginDescription**

Provides a description of the plug-in.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any DirectoryString

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginDescription: acl access check plug-in

**nsslapd-pluginEnabled**

Specifies whether or not the plug-in is enabled. This attribute can be changed over protocol, but will only take effect when the server is next restarted.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

on | off

**Default Value**

on

**Syntax**

DirectoryString

**Example**

nsslapd-pluginEnabled: on

**nsslapd-pluginId**

Specifies the plug-in ID.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in ID.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginId: chaining database

nsslapd-pluginInitfunc

Specifies the plug-in function to be initiated.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in function.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginInitfunc: NS7bitAttr\_Init

nsslapd-pluginPath

Specifies the full path to the plug-in.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid path

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginPath: /opt/SUNWdsee7/lib/sparcv9/uid-plugin.so

nsslapd-pluginType

Specifies the plug-in type.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in type.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginType: preoperation

**nsslapd-pluginVendor**

Specifies the vendor of the plug-in.

**Entry DN**cn=*pluginName*, cn=plugins, cn=config**Valid Range**

Any approved plug-in vendor.

**Default Value**

Sun Microsystems, Inc.

**Syntax**

DirectoryString

**Example**

nsslapd-pluginVendor: Sun Microsystems, Inc.

**nsslapd-pluginVersion**

Specifies the plug-in version.

**Entry DN**cn=*pluginName*, cn=plugins, cn=config**Valid Range**

Any valid plug-in version.

**Default Value**

Product version

**Syntax**

DirectoryString

**Example**

nsslapd-pluginVersion: 11.1.1.5.0

**7-BIT CHECK PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

7-Bit Check (NS7bitAttr)

**DN of Configuration Entry**

cn=7-bit check, cn=plugins, cn=config

**Description**

Checks certain attributes are seven-bit clean.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

List of attributes, `uid mail userpassword`, followed by a comma, and then by the suffix or suffixes on which the check is to occur.

**Dependencies**

None

**Performance Related Information**

None

**Further Information**

If your Directory Server uses non-ASCII characters such as Japanese and other languages for some attributes, remove those attributes from the list of attributes checked by this plug-in.

When adding or modifying an attribute value checked by this plug-in, and the new value violates the seven-bit check, the client receives a `LDAP_CONSTRAINT_VIOLATION (19)` return code, and a message such as the following: `Value of attribute attr contains extended (8-bit) characters: value`

**ACL PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ACL Plugin

**DN of Configuration Entry**

`cn=ACL Plugin,cn=plugins,cn=config`

**Description**

ACL access check plug-in

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**ACL PREOPERATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ACL preoperation

**DN of Configuration Entry**

cn=ACL\_preoperation,cn=plugins,cn=config

**Description**

ACL access check plug-in.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

Database

**Performance Related Information**

Leave this plug-in running at all times.

**BINARY SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Binary Syntax

**DN of Configuration Entry**

cn=Binary\_Syntax,cn=plugins,cn=config

**Description**

Syntax for handling binary data.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**BOOLEAN SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Boolean Syntax

**DN of Configuration Entry**

cn=Boolean\_Syntax,cn=plugins,cn=config

**Description**

Syntax for handling booleans.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CASE EXACT STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Case Exact String Syntax

**DN of Configuration Entry**

cn=Case Exact String Syntax,cn=plugins,cn=config

**Description**

Syntax for handling case-sensitive strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CASE IGNORE STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Case Ignore String Syntax

**DN of Configuration Entry**

cn=Case Ignore String Syntax,cn=plugins,cn=config

**Description**

Syntax for handling case-insensitive strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CHAINING DATABASE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Chaining Database

**DN of Configuration Entry**

cn=Chaining database,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CLASS OF SERVICE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Class of Service

**DN of Configuration Entry**

cn=Class of Service,cn=plugins,cn=config

**Description**

Allows for sharing of attributes between entries.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

Set the `nsslapd-pluginarg0` attribute to:

- 0 (default) to enable fast lookup of classic CoS templates
- 1 to disable fast lookup for classic CoS template selection
- 2 to disable checks for ambiguous pointer and classic CoS definitions

Ambiguous definitions result when more than one value could be returned for the same attribute of the same entry. When checking remains enabled, Directory Server logs an informational message upon encountering such an ambiguity, provided you have set the log level to allow plug-ins to log informational messages.

- 3 to disable both

Restart Directory Server for modifications to take effect.

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**COUNTRY STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Country String Syntax

**DN of Configuration Entry**

`cn=Country String Syntax, cn=plugins, cn=config`

**Description**

Syntax for handling countries.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**DISTINGUISHED NAME SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Distinguished Name Syntax

**DN of Configuration Entry**

cn=Distinguished Name Syntax,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**DSML FRONTEND SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Frontend

**DN of Configuration Entry**

cn=DSMLv2-SOAP-HTTP,cn=frontends,cn=plugins, cn=config

**Description**

Enables you to access the directory using DSML v2 over SOAP/HTTP.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

ds-hdsml-soapschemalocation

ds-hdsml-dsmlschemalocation

**Dependencies**

None

**Performance Related Information**

None

**GENERALIZED TIME SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Generalized Time Syntax

**DN of Configuration Entry**

cn=Generalized Time Syntax,cn=plugins,cn=config

**Description**

Syntax for dealing with dates, times, and time zones.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Further Information**

The Generalized Time String consists of the four digit year, two digit month (for example, 01 for January), two digit day, two digit hour, two digit minute, two digit second, an optional decimal part of a second and a time zone indication. We strongly recommend that you use the Z time zone indication (Greenwich Mean Time).

**INTEGER SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Integer Syntax

**DN of Configuration Entry**

cn=Integer Syntax,cn=plugins,cn=config

**Description**

Syntax for handling integers.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**INTERNATIONALIZATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Internationalization Plugin

**DN of Configuration Entry**

cn=Internationalization Plugin,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None. In contrast to previous versions of Directory Server, the collation orders and locales used by the internationalization plug-in are now stored in the configuration.

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**LDBM DATABASE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ldbm database plug-in

**DN of Configuration Entry**

cn=ldbm database plug-in,cn=plugins,cn=config

**Description**

Implements local databases.

**Configurable Options**

None

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**MULTIMASTER REPLICATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Multimaster Replication Plugin

**DN of Configuration Entry**

`cn=Multimaster Replication plugin,cn=plugins, cn=config`

**Description**

Enables replication between two Directory Server suffixes.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

database

**Performance Related Information**

None

**Further Information**

You can turn this plug-in off if you have only one server, which will never replicate.

**OCTET STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Octet String Syntax

**DN of Configuration Entry**

`cn=Octet String Syntax,cn=plugins,cn=config`

**Description**

Syntax for handling octet strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CLEAR PASSWORD STORAGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

CLEAR

**DN of Configuration Entry**

cn=CLEAR,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

CLEAR password storage scheme used for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CRYPT PASSWORD STORAGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

CRYPT

**DN of Configuration Entry**

cn=CRYPT,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

CRYPT password storage scheme used for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**NS-MTA-MD5 PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

NS-MTA-MD5

**DN of Configuration Entry**

cn=NS-MTA-MD5,cn>Password Storage Schemes, cn=plugins,cn=config

**Description**

NS-MTA-MD5 password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Further Information**

You can no longer choose to encrypt passwords using the NS-MTA-MD5 password storage scheme. The storage scheme is still present, but for backward compatibility only. The data in your directory still contains passwords encrypted with the NS-MTA-MD5 password storage scheme.

**RMCE PASSWORD STORAGE SCHEME PLUG-IN**

This password storage scheme plug-in is used for example by the administration framework and is reserved for internal use.

**SHA PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

SHA

**DN of Configuration Entry**

cn=SHA,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

SHA password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

If there are no passwords encrypted using the SHA password storage scheme, you may turn this plug-in off. If you want to encrypt your password with the SHA password storage scheme, choose SSHA instead. SSHA is a far more secure option.

**SSHA PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

SSHA

**DN of Configuration Entry**`cn=SSHA,cn>Password Storage Schemes,cn=plugins,cn=config`**Description**

SSHA password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**STRONG PASSWORD CHECK PLUG-IN**

When Directory Server is configured to check password quality, and this plug-in is enabled, the plug-in checks the following each time a password is added or modified.

- Clear text password values contain the classes of characters specified by the configuration.
- Clear text password values do not contain any sequence of four characters present in the dictionary file specified by the configuration.

Hashed password values such as

`{SSHA}0Ri1g2yq1H3GTZcuRQ4uS22syCQLBKAU2ypLSw==` are not checked.

Consider the following aspects of this plug-in.

#### **Plug-In Name**

Strong Password Checking plug-in

#### **DN of Configuration Entry**

`cn=Strong Password Check,cn=plugins,cn=config`

#### **Configurable options and arguments**

`on` | `off`

`nsslapd-pluginarg0`, which takes an integer representing a mask of values representing the character classes that must be present in a valid password. Set `nsslapd-pluginarg0` to one of or a sum of the following values, not counting the special values 16 and 17.

- 1 means the password must contain special characters.
- 2 means the password must contain numeric characters.
- 4 means the password must contain upper case characters.
- 8 means the password must contain lower case characters.
- 16 is a special value meaning at least three of the four character classes.
- 17 is a special value meaning at least two of the four character classes.

The default setting is 15.

`nsslapd-pluginarg1`, which takes the absolute file system path to an ASCII dictionary file. If the argument is missing, the dictionary check is skipped. The plug-in does not initialize and Directory Server does not start if the value of this attribute is invalid or refers to an inaccessible file.

#### **Default settings**

`off`

#### **Dependencies**

Default password file,  
`install-path/resources/plugins/words-english-big.txt`

## **POSTAL ADDRESS STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

#### **Plug-In Name**

Postal Address Syntax

#### **DN of Configuration Entry**

`cn=Postal Address Syntax,cn=plugins,cn=config`

#### **Description**

Syntax used for handling postal addresses.

#### **Configurable Options**

`on` | `off`

#### **Default Setting**

`on`

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**PTA PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Pass Through Authentication

**DN of Configuration Entry**

`cn=Pass Through Authentication,cn=plugins, cn=config`

**Description**

Enables pass-through authentication, the mechanism that allows one directory to consult another to authenticate bind requests.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

The LDAP URL to the configuration directory.

`nsslapd-pluginarg0: ldap://config.example.com/o=example`

**Dependencies**

None

**REFERENTIAL INTEGRITY POSTOPERATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Referential Integrity Postoperation

**DN of Configuration Entry**

`cn=Referential Integrity Postoperation, cn=plugins,cn=config`

**Description**

Enables the server to ensure referential integrity.

All attributes in all databases that are used by the referential integrity plug-in must be indexed. The indexes need to be created in the configuration of all the databases.

When the retro change log is enabled, the `cn=changelog` suffix must be indexed.

**Configurable Options**

All configuration and on | off

**Default Setting**

off

**Configurable Arguments**

When enabled, the post operation Referential Integrity plug-in performs integrity updates on the `member`, `uniquemember`, `owner`, and `seeAlso` attributes immediately after a delete or rename operation. You can reconfigure the plug-in to perform integrity checks on all other attributes.

The following arguments are configurable:

1. (`nsslapd-pluginarg0`) Check for referential integrity
  - 1 = no check for referential integrity
  - 0 = check for referential integrity is performed immediately
  - positive integer = request for referential integrity is queued and processed at a later stage. This positive integer serves as a wake-up call for the thread to process the request, at intervals corresponding to the integer specified.
2. (`nsslapd-pluginarg1`) Log file for storing the change, for example `/local/dsInst/logs/referint`
3. (`nsslapd-pluginarg2`) Reserved for future use.
4. (Other `nsslapd-pluginarg*` attributes) Attribute names to be checked for referential integrity.

**Dependencies**

database type

**Tuning Recommendations**

Do the following when you use the referential integrity plug-in in a multi-master replication environment:

- Enable the referential integrity plug-in on all servers containing master replicas
- Enable the referential integrity plug-in with the same configuration on every master

Set the first argument to a positive value, such as 10, meaning ten seconds, to ensure that work performed by this plug-in happens asynchronously, rather than synchronously.

When enabling the plug-in, also create equality indexes for all attributes configured for use with the plug-in. The plug-in uses such indexes when searching for entries to update. Without equality indexes for the attributes it uses, the plug-in must perform costly unindexed searches that have negative impact on performance.

**RETRO CHANGE LOG PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Retro Changelog Plugin

**DN of Configuration Entry**

```
cn=Retro Changelog Plugin,cn=plugins,cn=config
```

**Description**

Used by LDAP clients for maintaining application compatibility with Directory Server 4.x versions.

Maintains a log of all changes occurring in Directory Server. The retro change log offers the same functionality as the changelog in the 4.x versions of Directory Server.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

The following arguments can be configured for the retro change log plug-in:

- `nsslapd-pluginarg0`: `-ignore_attributes` configures the retro change log plug-in to ignore attributes specified by the following `nsslapd-pluginarg`. This argument is configured by default.
- `nsslapd-pluginarg1`: `copyingFrom` specifies a list of attributes to be ignored by the preceding `nsslapd-pluginarg`. This argument is configured by default.
- `nsslapd-pluginarg2`: `suffixes="suffix1","suffix2"` configures the retro change log to record updates to specified suffixes only
- `nsslapd-pluginarg3`: `deletedEntryAttributes=attribute1,attribute2` configures the retro change log to record specified attributes of an entry when that entry is deleted

**Dependencies**

None

**Performance Related Information**

May slow down Directory Server performance.

**Example Configuration**

```
dn: cn=Retro Changelog Plugin,cn=plugins,cn=config
objectClass: top
objectClass: nsSlapdPlugin
objectClass: ds-signedPlugin
objectClass: extensibleObject
cn: Retro Changelog Plugin
nsslapd-pluginPath: /opt/SUNWdsee7/lib/sparcv9/retrocl-plugin.so
nsslapd-pluginInitfunc: retrocl_plugin_init
nsslapd-pluginType: object
nsslapd-plugin-depends-on-type: database
nsslapd-pluginarg0: -ignore_attributes
nsslapd-pluginarg1: copyingFrom
nsslapd-pluginarg2: suffixes="ou=people","dc=example","dc=com"
nsslapd-pluginarg3: deletedEntryAttributes="objectclass","employeenumber"
nsslapd-changelogdir: /local/dsInst/db/changelog
nsslapd-pluginEnabled: on
nsslapd-pluginId: retrocl
nsslapd-pluginVersion: 11.1.1.5.0
nsslapd-pluginVendor: Sun Microsystems, Inc.
nsslapd-pluginDescription: Retrocl Plugin
ds-pluginSignatureState: valid signature
```

**ROLES PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Roles Plugin

**DN of Configuration Entry**

cn=Roles Plugin,cn=plugins,cn=config

**Description**

Enables the use of roles in Directory Server.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

State Change Plugin

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**STATE CHANGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

State Change Plugin

**DN of Configuration Entry**

cn=State Change Plugin,cn=plugins,cn=config

**Description**

State change notification service plug-in for detecting updates, such as configuration changes, and triggering callbacks when updates happen.

This plug-in is used internally by the roles plug-in.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**SUBTREE ENTRY COUNTER PLUG-INS**

Consider the following aspects of this plug-in.

**Plug-In Name**Subtree Entry Counter For *ObjectClass*

**DN of Configuration Entry**

cn=Subtree Entry Counter for *ObjectClass*,cn=plugins, cn=config

**Description**

Maintain a count of entries with a particular object class. The following plug-ins are provided.

- Subtree entry counter for departments in domains
- Subtree entry counter for domains within a domain
- Subtree entry counter for mail lists
- Subtree entry counter for nested departments
- Subtree entry counter for total domains
- Subtree entry counter for users

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

These plug-ins are provided for use with Messaging Server only, and are disabled by default. Leave these plug-ins disabled unless your Messaging Server requires them.

**Counter Attributes Maintained**

`nsNumDepts`

Either the number of departments within a domain, or the number of departments within a department (nested departments), depending on the DN of the entry.

`nsNumDomains`

Either the number of total domains, or the number of domains within a domain or nested domain, depending on the DN of the entry.

`nsNumMailLists`

Number of mail lists.

**TELEPHONE SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Telephone Syntax

**DN of Configuration Entry**

cn=Telephone Syntax,cn=plugins,cn=config

**Description**

Syntax for handling telephone numbers.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**UID UNIQUENESS PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

UID Uniqueness

**DN of Configuration Entry**

cn=UID Uniqueness,cn=plugins,cn=config

**Description**

Checks that the values of specified attributes are unique each time a modification occurs on an entry.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

You may configure this plug-in in either of two different ways.

1. Specify attributes that must be unique for a series of one or more subtrees identified by DNs. For example, to specify that `employeeNumber` and `uid` attribute values must be unique across both `o=org1,dc=example,dc=com` and `o=org2,dc=example,dc=com`, configure the arguments in the configuration entry as follows:

```
nsslapd-pluginarg0: employeeNumber
nsslapd-pluginarg1: uid
nsslapd-pluginarg2: o=org1,dc=example,dc=com
nsslapd-pluginarg3: o=org2,dc=example,dc=com
```

2. You specify attributes that must be unique inside congruent subtrees, optionally only on entries of a specified object class. For example, to specify that `employeeNumber` and `uid` attribute values must be unique in either `o=org1,dc=example,dc=com` or `o=org2,dc=example,dc=com`, but only on entries of the `inetOrgPerson` object class, configure the arguments in the configuration entry as follows:

```
nsslapd-pluginarg0: employeeNumber
nsslapd-pluginarg1: uid
```

```
nsslapd-pluginarg2: MarkerObjectClass="organization"
RequiredObjectClass="inetOrgPerson"
```

**Dependencies**

database type

**Performance Related Information**

Directory Server provides the UID Uniqueness plug-in by default. To ensure unique values for other attributes, you can create instances of the UID Uniqueness plug-in for those attributes.

The UID Uniqueness plug-in may slow down Directory Server performance.

**URI PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

URI Syntax

**DN of Configuration Entry**

cn=URI Syntax, cn=plugins, cn=config

**Description**

Syntax for handling URIs (Unique Resource Identifiers) including URLs (Unique Resource Locators.)

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**

[dse.ldif\(4\)](#)

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## nsslapd-plugin-depends-on-named

Directory Server plug-in legacy configuration

### Description

The `nsslapd-plugin` attribute on `cn=config` is multi-valued, read-only attribute lists the syntaxes and matching rules loaded by the server. This manual page covers server plug-in configuration, rather than the `nsslapd-plugin` attribute.

This manual page provides an overview of legacy configuration information for server plug-ins. This manual page covers the individual plug-in configuration entry attributes. Also, this manual page covers the plug-ins provided with Directory Server, including configurable options, configurable arguments, default setting, dependencies, general performance related information, and further reading.

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**Note:** In most circumstances, you configure plug-in functionality using the `dsconf(1M)` command. See `plugin(5DSCONF)` for a list of configurable properties.

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### ATTRIBUTES FOR PLUG-IN CONFIGURATION ENTRIES

The following list covers each plug-in configuration entry attribute.

#### **nsslapd-plugin-depends-on-named**

This is a multivalued attribute, used to ensure that plug-ins are called by the server in the correct order. It takes a value that corresponds to the `cn` value of a plug-in. The plug-in whose `cn` value matches one of the values below it is started by the server prior to this plug-in. If the plug-in does not exist, the server fails to start.

**Entry DN**

`cn=pluginName,cn=plugins, cn=config`

**Valid Range**

Plug-in name

**Default Value**

None

**Syntax**

DirectoryString

**Example**

`nsslapd-plugin-depends-on-named: Class of Service`

#### **nsslapd-plugin-depends-on-type**

This is a multivalued attribute, used to ensure that plug-ins are called by the server in the correct order. It takes a value that corresponds to the type of a plug-in, contained in the attribute `nsslapd-pluginType`, and requires that plug-ins of that type are started before the present plug-in.

**Entry DN**

`cn=pluginName,cn=plugins, cn=config`

**Valid Range**

Plug-in type

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-plugin-depends-on-type: database

**nsslapd-pluginDescription**

Provides a description of the plug-in.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any DirectoryString

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginDescription: acl access check plug-in

**nsslapd-pluginEnabled**

Specifies whether or not the plug-in is enabled. This attribute can be changed over protocol, but will only take effect when the server is next restarted.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

on | off

**Default Value**

on

**Syntax**

DirectoryString

**Example**

nsslapd-pluginEnabled: on

**nsslapd-pluginId**

Specifies the plug-in ID.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in ID.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginId: chaining database

nsslapd-pluginInitfunc

Specifies the plug-in function to be initiated.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in function.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginInitfunc: NS7bitAttr\_Init

nsslapd-pluginPath

Specifies the full path to the plug-in.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid path

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginPath: /opt/SUNWdsee7/lib/sparcv9/uid-plugin.so

nsslapd-pluginType

Specifies the plug-in type.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in type.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginType: preoperation

**nsslapd-pluginVendor**

Specifies the vendor of the plug-in.

**Entry DN**

cn=*pluginName*, cn=plugins, cn=config

**Valid Range**

Any approved plug-in vendor.

**Default Value**

Sun Microsystems, Inc.

**Syntax**

DirectoryString

**Example**

nsslapd-pluginVendor: Sun Microsystems, Inc.

**nsslapd-pluginVersion**

Specifies the plug-in version.

**Entry DN**

cn=*pluginName*, cn=plugins, cn=config

**Valid Range**

Any valid plug-in version.

**Default Value**

Product version

**Syntax**

DirectoryString

**Example**

nsslapd-pluginVersion: 11.1.1.5.0

**7-BIT CHECK PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

7-Bit Check (NS7bitAttr)

**DN of Configuration Entry**

cn=7-bit check, cn=plugins, cn=config

**Description**

Checks certain attributes are seven-bit clean.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

List of attributes, `uid mail userpassword`, followed by a comma, and then by the suffix or suffixes on which the check is to occur.

**Dependencies**

None

**Performance Related Information**

None

**Further Information**

If your Directory Server uses non-ASCII characters such as Japanese and other languages for some attributes, remove those attributes from the list of attributes checked by this plug-in.

When adding or modifying an attribute value checked by this plug-in, and the new value violates the seven-bit check, the client receives a `LDAP_CONSTRAINT_VIOLATION (19)` return code, and a message such as the following: `Value of attribute attr contains extended (8-bit) characters: value`

**ACL PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ACL Plugin

**DN of Configuration Entry**

```
cn=ACL Plugin,cn=plugins,cn=config
```

**Description**

ACL access check plug-in

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**ACL PREOPERATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ACL preoperation

**DN of Configuration Entry**

cn=ACL\_preoperation,cn=plugins,cn=config

**Description**

ACL access check plug-in.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

Database

**Performance Related Information**

Leave this plug-in running at all times.

**BINARY SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Binary Syntax

**DN of Configuration Entry**

cn=Binary\_Syntax,cn=plugins,cn=config

**Description**

Syntax for handling binary data.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**BOOLEAN SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Boolean Syntax

**DN of Configuration Entry**

cn=Boolean\_Syntax,cn=plugins,cn=config

**Description**

Syntax for handling booleans.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CASE EXACT STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Case Exact String Syntax

**DN of Configuration Entry**

cn=Case Exact String Syntax,cn=plugins,cn=config

**Description**

Syntax for handling case-sensitive strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CASE IGNORE STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Case Ignore String Syntax

**DN of Configuration Entry**

cn=Case Ignore String Syntax,cn=plugins,cn=config

**Description**

Syntax for handling case-insensitive strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CHAINING DATABASE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Chaining Database

**DN of Configuration Entry**

cn=Chaining database,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CLASS OF SERVICE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Class of Service

**DN of Configuration Entry**

cn=Class of Service,cn=plugins,cn=config

**Description**

Allows for sharing of attributes between entries.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

Set the `nsslapd-pluginarg0` attribute to:

- 0 (default) to enable fast lookup of classic CoS templates
- 1 to disable fast lookup for classic CoS template selection
- 2 to disable checks for ambiguous pointer and classic CoS definitions

Ambiguous definitions result when more than one value could be returned for the same attribute of the same entry. When checking remains enabled, Directory Server logs an informational message upon encountering such an ambiguity, provided you have set the log level to allow plug-ins to log informational messages.

- 3 to disable both

Restart Directory Server for modifications to take effect.

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**COUNTRY STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Country String Syntax

**DN of Configuration Entry**

`cn=Country String Syntax,cn=plugins,cn=config`

**Description**

Syntax for handling countries.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**DISTINGUISHED NAME SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Distinguished Name Syntax

**DN of Configuration Entry**

cn=Distinguished Name Syntax,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**DSML FRONTEND SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Frontend

**DN of Configuration Entry**

cn=DSMLv2-SOAP-HTTP,cn=frontends,cn=plugins, cn=config

**Description**

Enables you to access the directory using DSML v2 over SOAP/HTTP.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

ds-hdsml-soapschemalocation

ds-hdsml-dsmlschemalocation

**Dependencies**

None

**Performance Related Information**

None

**GENERALIZED TIME SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Generalized Time Syntax

**DN of Configuration Entry**

cn=Generalized Time Syntax,cn=plugins,cn=config

**Description**

Syntax for dealing with dates, times, and time zones.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Further Information**

The Generalized Time String consists of the four digit year, two digit month (for example, 01 for January), two digit day, two digit hour, two digit minute, two digit second, an optional decimal part of a second and a time zone indication. We strongly recommend that you use the Z time zone indication (Greenwich Mean Time).

**INTEGER SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Integer Syntax

**DN of Configuration Entry**

cn=Integer Syntax,cn=plugins,cn=config

**Description**

Syntax for handling integers.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**INTERNATIONALIZATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Internationalization Plugin

**DN of Configuration Entry**

cn=Internationalization Plugin,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None. In contrast to previous versions of Directory Server, the collation orders and locales used by the internationalization plug-in are now stored in the configuration.

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**LDBM DATABASE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ldbm database plug-in

**DN of Configuration Entry**

cn=ldbm database plug-in,cn=plugins,cn=config

**Description**

Implements local databases.

**Configurable Options**

None

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**MULTIMASTER REPLICATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Multimaster Replication Plugin

**DN of Configuration Entry**

`cn=Multimaster Replication plugin,cn=plugins, cn=config`

**Description**

Enables replication between two Directory Server suffixes.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

database

**Performance Related Information**

None

**Further Information**

You can turn this plug-in off if you have only one server, which will never replicate.

**OCTET STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Octet String Syntax

**DN of Configuration Entry**

`cn=Octet String Syntax,cn=plugins,cn=config`

**Description**

Syntax for handling octet strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CLEAR PASSWORD STORAGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

CLEAR

**DN of Configuration Entry**

cn=CLEAR,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

CLEAR password storage scheme used for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CRYPT PASSWORD STORAGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

CRYPT

**DN of Configuration Entry**

cn=CRYPT,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

CRYPT password storage scheme used for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**NS-MTA-MD5 PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

NS-MTA-MD5

**DN of Configuration Entry**

cn=NS-MTA-MD5,cn>Password Storage Schemes, cn=plugins,cn=config

**Description**

NS-MTA-MD5 password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Further Information**

You can no longer choose to encrypt passwords using the NS-MTA-MD5 password storage scheme. The storage scheme is still present, but for backward compatibility only. The data in your directory still contains passwords encrypted with the NS-MTA-MD5 password storage scheme.

**RMCE PASSWORD STORAGE SCHEME PLUG-IN**

This password storage scheme plug-in is used for example by the administration framework and is reserved for internal use.

**SHA PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

SHA

**DN of Configuration Entry**

cn=SHA,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

SHA password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

If there are no passwords encrypted using the SHA password storage scheme, you may turn this plug-in off. If you want to encrypt your password with the SHA password storage scheme, choose SSHA instead. SSHA is a far more secure option.

**SSHA PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

SSHA

**DN of Configuration Entry**

cn=SSHA,cn&gt;Password Storage Schemes,cn=plugins,cn=config

**Description**

SSHA password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**STRONG PASSWORD CHECK PLUG-IN**

When Directory Server is configured to check password quality, and this plug-in is enabled, the plug-in checks the following each time a password is added or modified.

- Clear text password values contain the classes of characters specified by the configuration.
- Clear text password values do not contain any sequence of four characters present in the dictionary file specified by the configuration.

Hashed password values such as

{SSHA}0Ri1g2yq1H3GTZcuRQ4uS22syCQLBKAU2ypLSw== are not checked.

Consider the following aspects of this plug-in.

#### **Plug-In Name**

Strong Password Checking plug-in

#### **DN of Configuration Entry**

`cn=Strong Password Check,cn=plugins,cn=config`

#### **Configurable options and arguments**

on | off

`nsslapd-pluginarg0`, which takes an integer representing a mask of values representing the character classes that must be present in a valid password. Set `nsslapd-pluginarg0` to one of or a sum of the following values, not counting the special values 16 and 17.

- 1 means the password must contain special characters.
- 2 means the password must contain numeric characters.
- 4 means the password must contain upper case characters.
- 8 means the password must contain lower case characters.
- 16 is a special value meaning at least three of the four character classes.
- 17 is a special value meaning at least two of the four character classes.

The default setting is 15.

`nsslapd-pluginarg1`, which takes the absolute file system path to an ASCII dictionary file. If the argument is missing, the dictionary check is skipped. The plug-in does not initialize and Directory Server does not start if the value of this attribute is invalid or refers to an inaccessible file.

#### **Default settings**

off

#### **Dependencies**

Default password file,  
`install-path/resources/plugins/words-english-big.txt`

## **POSTAL ADDRESS STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

#### **Plug-In Name**

Postal Address Syntax

#### **DN of Configuration Entry**

`cn=Postal Address Syntax,cn=plugins,cn=config`

#### **Description**

Syntax used for handling postal addresses.

#### **Configurable Options**

on | off

#### **Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**PTA PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Pass Through Authentication

**DN of Configuration Entry**

`cn=Pass Through Authentication,cn=plugins, cn=config`

**Description**

Enables pass-through authentication, the mechanism that allows one directory to consult another to authenticate bind requests.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

The LDAP URL to the configuration directory.

`nsslapd-pluginarg0: ldap://config.example.com/o=example`

**Dependencies**

None

**REFERENTIAL INTEGRITY POSTOPERATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Referential Integrity Postoperation

**DN of Configuration Entry**

`cn=Referential Integrity Postoperation, cn=plugins,cn=config`

**Description**

Enables the server to ensure referential integrity.

All attributes in all databases that are used by the referential integrity plug-in must be indexed. The indexes need to be created in the configuration of all the databases.

When the retro change log is enabled, the `cn=changelog` suffix must be indexed.

**Configurable Options**

All configuration and on | off

**Default Setting**

off

**Configurable Arguments**

When enabled, the post operation Referential Integrity plug-in performs integrity updates on the `member`, `uniquemember`, `owner`, and `seeAlso` attributes immediately after a delete or rename operation. You can reconfigure the plug-in to perform integrity checks on all other attributes.

The following arguments are configurable:

1. (`nsslapd-pluginarg0`) Check for referential integrity
  - 1 = no check for referential integrity
  - 0 = check for referential integrity is performed immediately
  - positive integer = request for referential integrity is queued and processed at a later stage. This positive integer serves as a wake-up call for the thread to process the request, at intervals corresponding to the integer specified.
2. (`nsslapd-pluginarg1`) Log file for storing the change, for example `/local/dsInst/logs/referint`
3. (`nsslapd-pluginarg2`) Reserved for future use.
4. (Other `nsslapd-pluginarg*` attributes) Attribute names to be checked for referential integrity.

**Dependencies**

database type

**Tuning Recommendations**

Do the following when you use the referential integrity plug-in in a multi-master replication environment:

- Enable the referential integrity plug-in on all servers containing master replicas
- Enable the referential integrity plug-in with the same configuration on every master

Set the first argument to a positive value, such as 10, meaning ten seconds, to ensure that work performed by this plug-in happens asynchronously, rather than synchronously.

When enabling the plug-in, also create equality indexes for all attributes configured for use with the plug-in. The plug-in uses such indexes when searching for entries to update. Without equality indexes for the attributes it uses, the plug-in must perform costly unindexed searches that have negative impact on performance.

**RETRO CHANGE LOG PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Retro Changelog Plugin

**DN of Configuration Entry**

```
cn=Retro Changelog Plugin,cn=plugins,cn=config
```

**Description**

Used by LDAP clients for maintaining application compatibility with Directory Server 4.x versions.

Maintains a log of all changes occurring in Directory Server. The retro change log offers the same functionality as the changelog in the 4.x versions of Directory Server.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

The following arguments can be configured for the retro change log plug-in:

- `nsslapd-pluginarg0`: `-ignore_attributes` configures the retro change log plug-in to ignore attributes specified by the following `nsslapd-pluginarg`. This argument is configured by default.
- `nsslapd-pluginarg1`: `copyingFrom` specifies a list of attributes to be ignored by the preceding `nsslapd-pluginarg`. This argument is configured by default.
- `nsslapd-pluginarg2`: `suffixes="suffix1","suffix2"` configures the retro change log to record updates to specified suffixes only
- `nsslapd-pluginarg3`: `deletedEntryAttributes=attribute1,attribute2` configures the retro change log to record specified attributes of an entry when that entry is deleted

**Dependencies**

None

**Performance Related Information**

May slow down Directory Server performance.

**Example Configuration**

```
dn: cn=Retro Changelog Plugin,cn=plugins,cn=config
objectClass: top
objectClass: nsSlapdPlugin
objectClass: ds-signedPlugin
objectClass: extensibleObject
cn: Retro Changelog Plugin
nsslapd-pluginPath: /opt/SUNWdsee7/lib/sparcv9/retrocl-plugin.so
nsslapd-pluginInitfunc: retrocl_plugin_init
nsslapd-pluginType: object
nsslapd-plugin-depends-on-type: database
nsslapd-pluginarg0: -ignore_attributes
nsslapd-pluginarg1: copyingFrom
nsslapd-pluginarg2: suffixes="ou=people","dc=example","dc=com"
nsslapd-pluginarg3: deletedEntryAttributes="objectclass","employeenumber"
nsslapd-changelogdir: /local/dsInst/db/changelog
nsslapd-pluginEnabled: on
nsslapd-pluginId: retrocl
nsslapd-pluginVersion: 11.1.1.5.0
nsslapd-pluginVendor: Sun Microsystems, Inc.
nsslapd-pluginDescription: Retrocl Plugin
ds-pluginSignatureState: valid signature
```

**ROLES PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Roles Plugin

**DN of Configuration Entry**

cn=Roles Plugin,cn=plugins,cn=config

**Description**

Enables the use of roles in Directory Server.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

State Change Plugin

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**STATE CHANGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

State Change Plugin

**DN of Configuration Entry**

cn=State Change Plugin,cn=plugins,cn=config

**Description**

State change notification service plug-in for detecting updates, such as configuration changes, and triggering callbacks when updates happen.

This plug-in is used internally by the roles plug-in.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**SUBTREE ENTRY COUNTER PLUG-INS**

Consider the following aspects of this plug-in.

**Plug-In Name**Subtree Entry Counter For *ObjectClass*

**DN of Configuration Entry**

cn=Subtree Entry Counter for *ObjectClass*,cn=plugins, cn=config

**Description**

Maintain a count of entries with a particular object class. The following plug-ins are provided.

- Subtree entry counter for departments in domains
- Subtree entry counter for domains within a domain
- Subtree entry counter for mail lists
- Subtree entry counter for nested departments
- Subtree entry counter for total domains
- Subtree entry counter for users

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

These plug-ins are provided for use with Messaging Server only, and are disabled by default. Leave these plug-ins disabled unless your Messaging Server requires them.

**Counter Attributes Maintained**

*nsNumDepts*

Either the number of departments within a domain, or the number of departments within a department (nested departments), depending on the DN of the entry.

*nsNumDomains*

Either the number of total domains, or the number of domains within a domain or nested domain, depending on the DN of the entry.

*nsNumMailLists*

Number of mail lists.

**TELEPHONE SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Telephone Syntax

**DN of Configuration Entry**

cn=Telephone Syntax,cn=plugins,cn=config

**Description**

Syntax for handling telephone numbers.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**UID UNIQUENESS PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

UID Uniqueness

**DN of Configuration Entry**

cn=UID Uniqueness,cn=plugins,cn=config

**Description**

Checks that the values of specified attributes are unique each time a modification occurs on an entry.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

You may configure this plug-in in either of two different ways.

1. Specify attributes that must be unique for a series of one or more subtrees identified by DNs. For example, to specify that `employeeNumber` and `uid` attribute values must be unique across both `o=org1,dc=example,dc=com` and `o=org2,dc=example,dc=com`, configure the arguments in the configuration entry as follows:

```
nsslapd-pluginarg0: employeeNumber
nsslapd-pluginarg1: uid
nsslapd-pluginarg2: o=org1,dc=example,dc=com
nsslapd-pluginarg3: o=org2,dc=example,dc=com
```

2. You specify attributes that must be unique inside congruent subtrees, optionally only on entries of a specified object class. For example, to specify that `employeeNumber` and `uid` attribute values must be unique in either `o=org1,dc=example,dc=com` or `o=org2,dc=example,dc=com`, but only on entries of the `inetOrgPerson` object class, configure the arguments in the configuration entry as follows:

```
nsslapd-pluginarg0: employeeNumber
nsslapd-pluginarg1: uid
```

```
nsslapd-pluginarg2: MarkerObjectClass="organization"  
RequiredObjectClass="inetOrgPerson"
```

**Dependencies**

database type

**Performance Related Information**

Directory Server provides the UID Uniqueness plug-in by default. To ensure unique values for other attributes, you can create instances of the UID Uniqueness plug-in for those attributes.

The UID Uniqueness plug-in may slow down Directory Server performance.

**URI PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

URI Syntax

**DN of Configuration Entry**

cn=URI Syntax, cn=plugins, cn=config

**Description**

Syntax for handling URIs (Unique Resource Identifiers) including URLs (Unique Resource Locators.)

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**

[dse.ldif\(4\)](#)

---

## nsslapd-plugin-depends-on-type

Directory Server plug-in legacy configuration

### Description

The `nsslapd-plugin` attribute on `cn=config` is multi-valued, read-only attribute lists the syntaxes and matching rules loaded by the server. This manual page covers server plug-in configuration, rather than the `nsslapd-plugin` attribute.

This manual page provides an overview of legacy configuration information for server plug-ins. This manual page covers the individual plug-in configuration entry attributes. Also, this manual page covers the plug-ins provided with Directory Server, including configurable options, configurable arguments, default setting, dependencies, general performance related information, and further reading.

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**Note:** In most circumstances, you configure plug-in functionality using the `dsconf(1M)` command. See [plugin\(5DSCONF\)](#) for a list of configurable properties.

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### ATTRIBUTES FOR PLUG-IN CONFIGURATION ENTRIES

The following list covers each plug-in configuration entry attribute.

#### **nsslapd-plugin-depends-on-named**

This is a multivalued attribute, used to ensure that plug-ins are called by the server in the correct order. It takes a value that corresponds to the `cn` value of a plug-in. The plug-in whose `cn` value matches one of the values below it is started by the server prior to this plug-in. If the plug-in does not exist, the server fails to start.

**Entry DN**

`cn=pluginName,cn=plugins, cn=config`

**Valid Range**

Plug-in name

**Default Value**

None

**Syntax**

DirectoryString

**Example**

`nsslapd-plugin-depends-on-named: Class of Service`

#### **nsslapd-plugin-depends-on-type**

This is a multivalued attribute, used to ensure that plug-ins are called by the server in the correct order. It takes a value that corresponds to the type of a plug-in, contained in the attribute `nsslapd-pluginType`, and requires that plug-ins of that type are started before the present plug-in.

**Entry DN**

`cn=pluginName,cn=plugins, cn=config`

**Valid Range**

Plug-in type

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-plugin-depends-on-type: database

**nsslapd-pluginDescription**

Provides a description of the plug-in.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any DirectoryString

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginDescription: acl access check plug-in

**nsslapd-pluginEnabled**

Specifies whether or not the plug-in is enabled. This attribute can be changed over protocol, but will only take effect when the server is next restarted.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

on | off

**Default Value**

on

**Syntax**

DirectoryString

**Example**

nsslapd-pluginEnabled: on

**nsslapd-pluginId**

Specifies the plug-in ID.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in ID.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginId: chaining database

nsslapd-pluginInitfunc

Specifies the plug-in function to be initiated.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in function.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginInitfunc: NS7bitAttr\_Init

nsslapd-pluginPath

Specifies the full path to the plug-in.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid path

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginPath: /opt/SUNWdsee7/lib/sparcv9/uid-plugin.so

nsslapd-pluginType

Specifies the plug-in type.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in type.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginType: preoperation

**nsslapd-pluginVendor**

Specifies the vendor of the plug-in.

**Entry DN**cn=*pluginName*, cn=plugins, cn=config**Valid Range**

Any approved plug-in vendor.

**Default Value**

Sun Microsystems, Inc.

**Syntax**

DirectoryString

**Example**

nsslapd-pluginVendor: Sun Microsystems, Inc.

**nsslapd-pluginVersion**

Specifies the plug-in version.

**Entry DN**cn=*pluginName*, cn=plugins, cn=config**Valid Range**

Any valid plug-in version.

**Default Value**

Product version

**Syntax**

DirectoryString

**Example**

nsslapd-pluginVersion: 11.1.1.5.0

**7-BIT CHECK PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

7-Bit Check (NS7bitAttr)

**DN of Configuration Entry**

cn=7-bit check, cn=plugins, cn=config

**Description**

Checks certain attributes are seven-bit clean.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

List of attributes, `uid mail userpassword`, followed by a comma, and then by the suffix or suffixes on which the check is to occur.

**Dependencies**

None

**Performance Related Information**

None

**Further Information**

If your Directory Server uses non-ASCII characters such as Japanese and other languages for some attributes, remove those attributes from the list of attributes checked by this plug-in.

When adding or modifying an attribute value checked by this plug-in, and the new value violates the seven-bit check, the client receives a `LDAP_CONSTRAINT_VIOLATION (19)` return code, and a message such as the following: `Value of attribute attr contains extended (8-bit) characters: value`

**ACL PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ACL Plugin

**DN of Configuration Entry**
`cn=ACL Plugin,cn=plugins,cn=config`
**Description**

ACL access check plug-in

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**ACL PREOPERATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ACL preoperation

**DN of Configuration Entry**

cn=ACL\_preoperation,cn=plugins,cn=config

**Description**

ACL access check plug-in.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

Database

**Performance Related Information**

Leave this plug-in running at all times.

**BINARY SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Binary Syntax

**DN of Configuration Entry**

cn=Binary\_Syntax,cn=plugins,cn=config

**Description**

Syntax for handling binary data.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**BOOLEAN SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Boolean Syntax

**DN of Configuration Entry**

cn=Boolean\_Syntax,cn=plugins,cn=config

**Description**

Syntax for handling booleans.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CASE EXACT STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Case Exact String Syntax

**DN of Configuration Entry**

cn=Case Exact String Syntax,cn=plugins,cn=config

**Description**

Syntax for handling case-sensitive strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CASE IGNORE STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Case Ignore String Syntax

**DN of Configuration Entry**

cn=Case Ignore String Syntax,cn=plugins,cn=config

**Description**

Syntax for handling case-insensitive strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CHAINING DATABASE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Chaining Database

**DN of Configuration Entry**

cn=Chaining database,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CLASS OF SERVICE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Class of Service

**DN of Configuration Entry**

cn=Class of Service,cn=plugins,cn=config

**Description**

Allows for sharing of attributes between entries.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

Set the `nsslapd-pluginarg0` attribute to:

- 0 (default) to enable fast lookup of classic CoS templates
- 1 to disable fast lookup for classic CoS template selection
- 2 to disable checks for ambiguous pointer and classic CoS definitions

Ambiguous definitions result when more than one value could be returned for the same attribute of the same entry. When checking remains enabled, Directory Server logs an informational message upon encountering such an ambiguity, provided you have set the log level to allow plug-ins to log informational messages.

- 3 to disable both

Restart Directory Server for modifications to take effect.

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**COUNTRY STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Country String Syntax

**DN of Configuration Entry**

`cn=Country String Syntax, cn=plugins, cn=config`

**Description**

Syntax for handling countries.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**DISTINGUISHED NAME SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Distinguished Name Syntax

**DN of Configuration Entry**

cn=Distinguished Name Syntax,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**DSML FRONTEND SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Frontend

**DN of Configuration Entry**

cn=DSMLv2-SOAP-HTTP,cn=frontends,cn=plugins, cn=config

**Description**

Enables you to access the directory using DSML v2 over SOAP/HTTP.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

ds-hdsml-soapschemalocation

ds-hdsml-dsmlschemalocation

**Dependencies**

None

**Performance Related Information**

None

**GENERALIZED TIME SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Generalized Time Syntax

**DN of Configuration Entry**

cn=Generalized Time Syntax,cn=plugins,cn=config

**Description**

Syntax for dealing with dates, times, and time zones.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Further Information**

The Generalized Time String consists of the four digit year, two digit month (for example, 01 for January), two digit day, two digit hour, two digit minute, two digit second, an optional decimal part of a second and a time zone indication. We strongly recommend that you use the Z time zone indication (Greenwich Mean Time).

**INTEGER SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Integer Syntax

**DN of Configuration Entry**

cn=Integer Syntax,cn=plugins,cn=config

**Description**

Syntax for handling integers.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**INTERNATIONALIZATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Internationalization Plugin

**DN of Configuration Entry**

cn=Internationalization Plugin,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None. In contrast to previous versions of Directory Server, the collation orders and locales used by the internationalization plug-in are now stored in the configuration.

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**LDBM DATABASE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ldbm database plug-in

**DN of Configuration Entry**

cn=ldbm database plug-in,cn=plugins,cn=config

**Description**

Implements local databases.

**Configurable Options**

None

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**MULTIMASTER REPLICATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Multimaster Replication Plugin

**DN of Configuration Entry**

`cn=Multimaster Replication plugin,cn=plugins, cn=config`

**Description**

Enables replication between two Directory Server suffixes.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

database

**Performance Related Information**

None

**Further Information**

You can turn this plug-in off if you have only one server, which will never replicate.

**OCTET STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Octet String Syntax

**DN of Configuration Entry**

`cn=Octet String Syntax,cn=plugins,cn=config`

**Description**

Syntax for handling octet strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CLEAR PASSWORD STORAGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

CLEAR

**DN of Configuration Entry**

cn=CLEAR,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

CLEAR password storage scheme used for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CRYPT PASSWORD STORAGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

CRYPT

**DN of Configuration Entry**

cn=CRYPT,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

CRYPT password storage scheme used for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**NS-MTA-MD5 PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

NS-MTA-MD5

**DN of Configuration Entry**

cn=NS-MTA-MD5,cn>Password Storage Schemes, cn=plugins,cn=config

**Description**

NS-MTA-MD5 password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Further Information**

You can no longer choose to encrypt passwords using the NS-MTA-MD5 password storage scheme. The storage scheme is still present, but for backward compatibility only. The data in your directory still contains passwords encrypted with the NS-MTA-MD5 password storage scheme.

**RMCE PASSWORD STORAGE SCHEME PLUG-IN**

This password storage scheme plug-in is used for example by the administration framework and is reserved for internal use.

**SHA PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

SHA

**DN of Configuration Entry**

cn=SHA,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

SHA password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

If there are no passwords encrypted using the SHA password storage scheme, you may turn this plug-in off. If you want to encrypt your password with the SHA password storage scheme, choose SSHA instead. SSHA is a far more secure option.

**SSHA PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

SSHA

**DN of Configuration Entry**`cn=SSHA,cn>Password Storage Schemes,cn=plugins,cn=config`**Description**

SSHA password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**STRONG PASSWORD CHECK PLUG-IN**

When Directory Server is configured to check password quality, and this plug-in is enabled, the plug-in checks the following each time a password is added or modified.

- Clear text password values contain the classes of characters specified by the configuration.
- Clear text password values do not contain any sequence of four characters present in the dictionary file specified by the configuration.

Hashed password values such as

`{SSHA}0Ri1g2yq1H3GTZcuRQ4uS22syCQLBKAU2ypLSw==` are not checked.

Consider the following aspects of this plug-in.

**Plug-In Name**

Strong Password Checking plug-in

**DN of Configuration Entry**

cn=Strong Password Check,cn=plugins,cn=config

**Configurable options and arguments**

on | off

nsslapd-pluginarg0, which takes an integer representing a mask of values representing the character classes that must be present in a valid password. Set nsslapd-pluginarg0 to one of or a sum of the following values, not counting the special values 16 and 17.

- 1 means the password must contain special characters.
- 2 means the password must contain numeric characters.
- 4 means the password must contain upper case characters.
- 8 means the password must contain lower case characters.
- 16 is a special value meaning at least three of the four character classes.
- 17 is a special value meaning at least two of the four character classes.

The default setting is 15.

nsslapd-pluginarg1, which takes the absolute file system path to an ASCII dictionary file. If the argument is missing, the dictionary check is skipped. The plug-in does not initialize and Directory Server does not start if the value of this attribute is invalid or refers to an inaccessible file.

**Default settings**

off

**Dependencies**

Default password file,  
*install-path/resources/plugins/words-english-big.txt*

## POSTAL ADDRESS STRING SYNTAX PLUG-IN

Consider the following aspects of this plug-in.

**Plug-In Name**

Postal Address Syntax

**DN of Configuration Entry**

cn=Postal Address Syntax,cn=plugins,cn=config

**Description**

Syntax used for handling postal addresses.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**PTA PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Pass Through Authentication

**DN of Configuration Entry**

`cn=Pass Through Authentication,cn=plugins, cn=config`

**Description**

Enables pass-through authentication, the mechanism that allows one directory to consult another to authenticate bind requests.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

The LDAP URL to the configuration directory.

`nsslapd-pluginarg0: ldap://config.example.com/o=example`

**Dependencies**

None

**REFERENTIAL INTEGRITY POSTOPERATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Referential Integrity Postoperation

**DN of Configuration Entry**

`cn=Referential Integrity Postoperation, cn=plugins,cn=config`

**Description**

Enables the server to ensure referential integrity.

All attributes in all databases that are used by the referential integrity plug-in must be indexed. The indexes need to be created in the configuration of all the databases.

When the retro change log is enabled, the `cn=changelog` suffix must be indexed.

**Configurable Options**

All configuration and on | off

**Default Setting**

off

**Configurable Arguments**

When enabled, the post operation Referential Integrity plug-in performs integrity updates on the `member`, `uniquemember`, `owner`, and `seeAlso` attributes immediately after a delete or rename operation. You can reconfigure the plug-in to perform integrity checks on all other attributes.

The following arguments are configurable:

1. (`nsslapd-pluginarg0`) Check for referential integrity
  - 1 = no check for referential integrity
  - 0 = check for referential integrity is performed immediately
  - positive integer = request for referential integrity is queued and processed at a later stage. This positive integer serves as a wake-up call for the thread to process the request, at intervals corresponding to the integer specified.
2. (`nsslapd-pluginarg1`) Log file for storing the change, for example `/local/dsInst/logs/referint`
3. (`nsslapd-pluginarg2`) Reserved for future use.
4. (Other `nsslapd-pluginarg*` attributes) Attribute names to be checked for referential integrity.

**Dependencies**

database type

**Tuning Recommendations**

Do the following when you use the referential integrity plug-in in a multi-master replication environment:

- Enable the referential integrity plug-in on all servers containing master replicas
- Enable the referential integrity plug-in with the same configuration on every master

Set the first argument to a positive value, such as 10, meaning ten seconds, to ensure that work performed by this plug-in happens asynchronously, rather than synchronously.

When enabling the plug-in, also create equality indexes for all attributes configured for use with the plug-in. The plug-in uses such indexes when searching for entries to update. Without equality indexes for the attributes it uses, the plug-in must perform costly unindexed searches that have negative impact on performance.

**RETRO CHANGE LOG PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Retro Changelog Plugin

**DN of Configuration Entry**`cn=Retro Changelog Plugin,cn=plugins,cn=config`**Description**

Used by LDAP clients for maintaining application compatibility with Directory Server 4.x versions.

Maintains a log of all changes occurring in Directory Server. The retro change log offers the same functionality as the changelog in the 4.x versions of Directory Server.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

The following arguments can be configured for the retro change log plug-in:

- `nsslapd-pluginarg0`: `-ignore_attributes` configures the retro change log plug-in to ignore attributes specified by the following `nsslapd-pluginarg`. This argument is configured by default.
- `nsslapd-pluginarg1`: `copyingFrom` specifies a list of attributes to be ignored by the preceding `nsslapd-pluginarg`. This argument is configured by default.
- `nsslapd-pluginarg2`: `suffixes="suffix1","suffix2"` configures the retro change log to record updates to specified suffixes only
- `nsslapd-pluginarg3`: `deletedEntryAttributes=attribute1,attribute2` configures the retro change log to record specified attributes of an entry when that entry is deleted

**Dependencies**

None

**Performance Related Information**

May slow down Directory Server performance.

**Example Configuration**

```
dn: cn=Retro Changelog Plugin,cn=plugins,cn=config
objectClass: top
objectClass: nsSlapdPlugin
objectClass: ds-signedPlugin
objectClass: extensibleObject
cn: Retro Changelog Plugin
nsslapd-pluginPath: /opt/SUNWdsee7/lib/sparcv9/retrocl-plugin.so
nsslapd-pluginInitfunc: retrocl_plugin_init
nsslapd-pluginType: object
nsslapd-plugin-depends-on-type: database
nsslapd-pluginarg0: -ignore_attributes
nsslapd-pluginarg1: copyingFrom
nsslapd-pluginarg2: suffixes="ou=people","dc=example","dc=com"
nsslapd-pluginarg3: deletedEntryAttributes="objectclass","employeenumber"
nsslapd-changelogdir: /local/dsInst/db/changelog
nsslapd-pluginEnabled: on
nsslapd-pluginId: retrocl
nsslapd-pluginVersion: 11.1.1.5.0
nsslapd-pluginVendor: Sun Microsystems, Inc.
nsslapd-pluginDescription: Retrocl Plugin
ds-pluginSignatureState: valid signature
```

**ROLES PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Roles Plugin

**DN of Configuration Entry**

cn=Roles Plugin,cn=plugins,cn=config

**Description**

Enables the use of roles in Directory Server.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

State Change Plugin

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**STATE CHANGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

State Change Plugin

**DN of Configuration Entry**

cn=State Change Plugin,cn=plugins,cn=config

**Description**

State change notification service plug-in for detecting updates, such as configuration changes, and triggering callbacks when updates happen.

This plug-in is used internally by the roles plug-in.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**SUBTREE ENTRY COUNTER PLUG-INS**

Consider the following aspects of this plug-in.

**Plug-In Name**Subtree Entry Counter For *ObjectClass*

**DN of Configuration Entry**

cn=Subtree Entry Counter for *ObjectClass*,cn=plugins, cn=config

**Description**

Maintain a count of entries with a particular object class. The following plug-ins are provided.

- Subtree entry counter for departments in domains
- Subtree entry counter for domains within a domain
- Subtree entry counter for mail lists
- Subtree entry counter for nested departments
- Subtree entry counter for total domains
- Subtree entry counter for users

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

These plug-ins are provided for use with Messaging Server only, and are disabled by default. Leave these plug-ins disabled unless your Messaging Server requires them.

**Counter Attributes Maintained**

`nsNumDepts`

Either the number of departments within a domain, or the number of departments within a department (nested departments), depending on the DN of the entry.

`nsNumDomains`

Either the number of total domains, or the number of domains within a domain or nested domain, depending on the DN of the entry.

`nsNumMailLists`

Number of mail lists.

**TELEPHONE SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Telephone Syntax

**DN of Configuration Entry**

cn=Telephone Syntax,cn=plugins,cn=config

**Description**

Syntax for handling telephone numbers.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**UID UNIQUENESS PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

UID Uniqueness

**DN of Configuration Entry**

cn=UID Uniqueness, cn=plugins, cn=config

**Description**

Checks that the values of specified attributes are unique each time a modification occurs on an entry.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

You may configure this plug-in in either of two different ways.

1. Specify attributes that must be unique for a series of one or more subtrees identified by DNs. For example, to specify that `employeeNumber` and `uid` attribute values must be unique across both `o=org1, dc=example, dc=com` and `o=org2, dc=example, dc=com`, configure the arguments in the configuration entry as follows:

```
nsslapd-pluginarg0: employeeNumber
nsslapd-pluginarg1: uid
nsslapd-pluginarg2: o=org1, dc=example, dc=com
nsslapd-pluginarg3: o=org2, dc=example, dc=com
```

2. You specify attributes that must be unique inside congruent subtrees, optionally only on entries of a specified object class. For example, to specify that `employeeNumber` and `uid` attribute values must be unique in either `o=org1, dc=example, dc=com` or `o=org2, dc=example, dc=com`, but only on entries of the `inetOrgPerson` object class, configure the arguments in the configuration entry as follows:

```
nsslapd-pluginarg0: employeeNumber
nsslapd-pluginarg1: uid
```

```
nsslapd-pluginarg2: MarkerObjectClass="organization"  
RequiredObjectClass="inetOrgPerson"
```

**Dependencies**

database type

**Performance Related Information**

Directory Server provides the UID Uniqueness plug-in by default. To ensure unique values for other attributes, you can create instances of the UID Uniqueness plug-in for those attributes.

The UID Uniqueness plug-in may slow down Directory Server performance.

**URI PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

URI Syntax

**DN of Configuration Entry**

cn=URI Syntax, cn=plugins, cn=config

**Description**

Syntax for handling URIs (Unique Resource Identifiers) including URLs (Unique Resource Locators.)

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**

[dse.ldif\(4\)](#)

---

## nsslapd-pluginDescription

Directory Server plug-in legacy configuration

### Description

The `nsslapd-plugin` attribute on `cn=config` is multi-valued, read-only attribute lists the syntaxes and matching rules loaded by the server. This manual page covers server plug-in configuration, rather than the `nsslapd-plugin` attribute.

This manual page provides an overview of legacy configuration information for server plug-ins. This manual page covers the individual plug-in configuration entry attributes. Also, this manual page covers the plug-ins provided with Directory Server, including configurable options, configurable arguments, default setting, dependencies, general performance related information, and further reading.

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**Note:** In most circumstances, you configure plug-in functionality using the `dsconf(1M)` command. See `plugin(5DSCONF)` for a list of configurable properties.

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### ATTRIBUTES FOR PLUG-IN CONFIGURATION ENTRIES

The following list covers each plug-in configuration entry attribute.

#### **nsslapd-plugin-depends-on-named**

This is a multivalued attribute, used to ensure that plug-ins are called by the server in the correct order. It takes a value that corresponds to the `cn` value of a plug-in. The plug-in whose `cn` value matches one of the values below it is started by the server prior to this plug-in. If the plug-in does not exist, the server fails to start.

##### **Entry DN**

`cn=pluginName,cn=plugins, cn=config`

##### **Valid Range**

Plug-in name

##### **Default Value**

None

##### **Syntax**

DirectoryString

##### **Example**

`nsslapd-plugin-depends-on-named: Class of Service`

#### **nsslapd-plugin-depends-on-type**

This is a multivalued attribute, used to ensure that plug-ins are called by the server in the correct order. It takes a value that corresponds to the type of a plug-in, contained in the attribute `nsslapd-pluginType`, and requires that plug-ins of that type are started before the present plug-in.

##### **Entry DN**

`cn=pluginName,cn=plugins, cn=config`

**Valid Range**

Plug-in type

**Default Value**

None

**Syntax**

DirectoryString

**Example**

```
nsslapd-plugin-depends-on-type: database
```

**nsslapd-pluginDescription**

Provides a description of the plug-in.

**Entry DN**

```
cn=pluginName, cn=plugins, cn=config
```

**Valid Range**

Any DirectoryString

**Default Value**

None

**Syntax**

DirectoryString

**Example**

```
nsslapd-pluginDescription: acl access check plug-in
```

**nsslapd-pluginEnabled**

Specifies whether or not the plug-in is enabled. This attribute can be changed over protocol, but will only take effect when the server is next restarted.

**Entry DN**

```
cn=pluginName, cn=plugins, cn=config
```

**Valid Range**

on | off

**Default Value**

on

**Syntax**

DirectoryString

**Example**

```
nsslapd-pluginEnabled: on
```

**nsslapd-pluginId**

Specifies the plug-in ID.

**Entry DN**

```
cn=pluginName, cn=plugins, cn=config
```

**Valid Range**

Any valid plug-in ID.

**Default Value**

None

**Syntax**

DirectoryString

**Example**`nsslapd-pluginId: chaining database``nsslapd-pluginInitfunc`

Specifies the plug-in function to be initiated.

**Entry DN**`cn=pluginName, cn=plugins, cn=config`**Valid Range**

Any valid plug-in function.

**Default Value**

None

**Syntax**

DirectoryString

**Example**`nsslapd-pluginInitfunc: NS7bitAttr_Init``nsslapd-pluginPath`

Specifies the full path to the plug-in.

**Entry DN**`cn=pluginName, cn=plugins, cn=config`**Valid Range**

Any valid path

**Default Value**

None

**Syntax**

DirectoryString

**Example**`nsslapd-pluginPath: /opt/SUNWdsee7/lib/sparcv9/uid-plugin.so``nsslapd-pluginType`

Specifies the plug-in type.

**Entry DN**`cn=pluginName, cn=plugins, cn=config`**Valid Range**

Any valid plug-in type.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginType: preoperation

**nsslapd-pluginVendor**

Specifies the vendor of the plug-in.

**Entry DN**cn=*pluginName*, cn=plugins, cn=config**Valid Range**

Any approved plug-in vendor.

**Default Value**

Sun Microsystems, Inc.

**Syntax**

DirectoryString

**Example**

nsslapd-pluginVendor: Sun Microsystems, Inc.

**nsslapd-pluginVersion**

Specifies the plug-in version.

**Entry DN**cn=*pluginName*, cn=plugins, cn=config**Valid Range**

Any valid plug-in version.

**Default Value**

Product version

**Syntax**

DirectoryString

**Example**

nsslapd-pluginVersion: 11.1.1.5.0

**7-BIT CHECK PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

7-Bit Check (NS7bitAttr)

**DN of Configuration Entry**

cn=7-bit check, cn=plugins, cn=config

**Description**

Checks certain attributes are seven-bit clean.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

List of attributes, `uid mail userpassword`, followed by a comma, and then by the suffix or suffixes on which the check is to occur.

**Dependencies**

None

**Performance Related Information**

None

**Further Information**

If your Directory Server uses non-ASCII characters such as Japanese and other languages for some attributes, remove those attributes from the list of attributes checked by this plug-in.

When adding or modifying an attribute value checked by this plug-in, and the new value violates the seven-bit check, the client receives a `LDAP_CONSTRAINT_VIOLATION (19)` return code, and a message such as the following: `Value of attribute attr contains extended (8-bit) characters: value`

**ACL PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ACL Plugin

**DN of Configuration Entry**
`cn=ACL Plugin,cn=plugins,cn=config`
**Description**

ACL access check plug-in

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**ACL PREOPERATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ACL preoperation

**DN of Configuration Entry**

cn=ACL\_preoperation,cn=plugins,cn=config

**Description**

ACL access check plug-in.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

Database

**Performance Related Information**

Leave this plug-in running at all times.

**BINARY SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Binary Syntax

**DN of Configuration Entry**

cn=Binary\_Syntax,cn=plugins,cn=config

**Description**

Syntax for handling binary data.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**BOOLEAN SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Boolean Syntax

**DN of Configuration Entry**

cn=Boolean\_Syntax,cn=plugins,cn=config

**Description**

Syntax for handling booleans.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CASE EXACT STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Case Exact String Syntax

**DN of Configuration Entry**

cn=Case Exact String Syntax,cn=plugins,cn=config

**Description**

Syntax for handling case-sensitive strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CASE IGNORE STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Case Ignore String Syntax

**DN of Configuration Entry**

cn=Case Ignore String Syntax,cn=plugins,cn=config

**Description**

Syntax for handling case-insensitive strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CHAINING DATABASE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Chaining Database

**DN of Configuration Entry**

cn=Chaining database,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CLASS OF SERVICE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Class of Service

**DN of Configuration Entry**

cn=Class of Service,cn=plugins,cn=config

**Description**

Allows for sharing of attributes between entries.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

Set the `nsslapd-pluginarg0` attribute to:

- 0 (default) to enable fast lookup of classic CoS templates
- 1 to disable fast lookup for classic CoS template selection
- 2 to disable checks for ambiguous pointer and classic CoS definitions

Ambiguous definitions result when more than one value could be returned for the same attribute of the same entry. When checking remains enabled, Directory Server logs an informational message upon encountering such an ambiguity, provided you have set the log level to allow plug-ins to log informational messages.

- 3 to disable both

Restart Directory Server for modifications to take effect.

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**COUNTRY STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Country String Syntax

**DN of Configuration Entry**

`cn=Country String Syntax,cn=plugins,cn=config`

**Description**

Syntax for handling countries.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**DISTINGUISHED NAME SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Distinguished Name Syntax

**DN of Configuration Entry**

cn=Distinguished Name Syntax,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**DSML FRONTEND SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Frontend

**DN of Configuration Entry**

cn=DSMLv2-SOAP-HTTP,cn=frontends,cn=plugins, cn=config

**Description**

Enables you to access the directory using DSML v2 over SOAP/HTTP.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

ds-hdsml-soapschemalocation

ds-hdsml-dsmlschemalocation

**Dependencies**

None

**Performance Related Information**

None

**GENERALIZED TIME SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Generalized Time Syntax

**DN of Configuration Entry**

cn=Generalized Time Syntax,cn=plugins,cn=config

**Description**

Syntax for dealing with dates, times, and time zones.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Further Information**

The Generalized Time String consists of the four digit year, two digit month (for example, 01 for January), two digit day, two digit hour, two digit minute, two digit second, an optional decimal part of a second and a time zone indication. We strongly recommend that you use the Z time zone indication (Greenwich Mean Time).

**INTEGER SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Integer Syntax

**DN of Configuration Entry**

cn=Integer Syntax,cn=plugins,cn=config

**Description**

Syntax for handling integers.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**INTERNATIONALIZATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Internationalization Plugin

**DN of Configuration Entry**

cn=Internationalization Plugin,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None. In contrast to previous versions of Directory Server, the collation orders and locales used by the internationalization plug-in are now stored in the configuration.

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**LDBM DATABASE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ldbm database plug-in

**DN of Configuration Entry**

cn=ldbm database plug-in,cn=plugins,cn=config

**Description**

Implements local databases.

**Configurable Options**

None

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**MULTIMASTER REPLICATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Multimaster Replication Plugin

**DN of Configuration Entry**

`cn=Multimaster Replication plugin,cn=plugins, cn=config`

**Description**

Enables replication between two Directory Server suffixes.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

database

**Performance Related Information**

None

**Further Information**

You can turn this plug-in off if you have only one server, which will never replicate.

**OCTET STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Octet String Syntax

**DN of Configuration Entry**

`cn=Octet String Syntax,cn=plugins,cn=config`

**Description**

Syntax for handling octet strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CLEAR PASSWORD STORAGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

CLEAR

**DN of Configuration Entry**

cn=CLEAR,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

CLEAR password storage scheme used for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CRYPT PASSWORD STORAGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

CRYPT

**DN of Configuration Entry**

cn=CRYPT,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

CRYPT password storage scheme used for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**NS-MTA-MD5 PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

NS-MTA-MD5

**DN of Configuration Entry**

cn=NS-MTA-MD5,cn>Password Storage Schemes, cn=plugins,cn=config

**Description**

NS-MTA-MD5 password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Further Information**

You can no longer choose to encrypt passwords using the NS-MTA-MD5 password storage scheme. The storage scheme is still present, but for backward compatibility only. The data in your directory still contains passwords encrypted with the NS-MTA-MD5 password storage scheme.

**RMCE PASSWORD STORAGE SCHEME PLUG-IN**

This password storage scheme plug-in is used for example by the administration framework and is reserved for internal use.

**SHA PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

SHA

**DN of Configuration Entry**

cn=SHA,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

SHA password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

If there are no passwords encrypted using the SHA password storage scheme, you may turn this plug-in off. If you want to encrypt your password with the SHA password storage scheme, choose SSHA instead. SSHA is a far more secure option.

**SSHA PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

SSHA

**DN of Configuration Entry**`cn=SSHA,cn>Password Storage Schemes,cn=plugins,cn=config`**Description**

SSHA password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**STRONG PASSWORD CHECK PLUG-IN**

When Directory Server is configured to check password quality, and this plug-in is enabled, the plug-in checks the following each time a password is added or modified.

- Clear text password values contain the classes of characters specified by the configuration.
- Clear text password values do not contain any sequence of four characters present in the dictionary file specified by the configuration.

Hashed password values such as

`{SSHA}0Ri1g2yq1H3GTZcuRQ4uS22syCQLBKAU2ypLSw==` are not checked.

Consider the following aspects of this plug-in.

### Plug-In Name

Strong Password Checking plug-in

### DN of Configuration Entry

`cn=Strong Password Check,cn=plugins,cn=config`

### Configurable options and arguments

on | off

`nsslapd-pluginarg0`, which takes an integer representing a mask of values representing the character classes that must be present in a valid password. Set `nsslapd-pluginarg0` to one of or a sum of the following values, not counting the special values 16 and 17.

- 1 means the password must contain special characters.
- 2 means the password must contain numeric characters.
- 4 means the password must contain upper case characters.
- 8 means the password must contain lower case characters.
- 16 is a special value meaning at least three of the four character classes.
- 17 is a special value meaning at least two of the four character classes.

The default setting is 15.

`nsslapd-pluginarg1`, which takes the absolute file system path to an ASCII dictionary file. If the argument is missing, the dictionary check is skipped. The plug-in does not initialize and Directory Server does not start if the value of this attribute is invalid or refers to an inaccessible file.

### Default settings

off

### Dependencies

Default password file,  
`install-path/resources/plugins/words-english-big.txt`

## POSTAL ADDRESS STRING SYNTAX PLUG-IN

Consider the following aspects of this plug-in.

### Plug-In Name

Postal Address Syntax

### DN of Configuration Entry

`cn=Postal Address Syntax,cn=plugins,cn=config`

### Description

Syntax used for handling postal addresses.

### Configurable Options

on | off

### Default Setting

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**PTA PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Pass Through Authentication

**DN of Configuration Entry**

`cn=Pass Through Authentication,cn=plugins, cn=config`

**Description**

Enables pass-through authentication, the mechanism that allows one directory to consult another to authenticate bind requests.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

The LDAP URL to the configuration directory.

`nsslapd-pluginarg0: ldap://config.example.com/o=example`

**Dependencies**

None

**REFERENTIAL INTEGRITY POSTOPERATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Referential Integrity Postoperation

**DN of Configuration Entry**

`cn=Referential Integrity Postoperation, cn=plugins,cn=config`

**Description**

Enables the server to ensure referential integrity.

All attributes in all databases that are used by the referential integrity plug-in must be indexed. The indexes need to be created in the configuration of all the databases.

When the retro change log is enabled, the `cn=changelog` suffix must be indexed.

**Configurable Options**

All configuration and on | off

**Default Setting**

off

**Configurable Arguments**

When enabled, the post operation Referential Integrity plug-in performs integrity updates on the `member`, `uniquemember`, `owner`, and `seeAlso` attributes immediately after a delete or rename operation. You can reconfigure the plug-in to perform integrity checks on all other attributes.

The following arguments are configurable:

1. (`nsslapd-pluginarg0`) Check for referential integrity
  - 1 = no check for referential integrity
  - 0 = check for referential integrity is performed immediately
  - positive integer = request for referential integrity is queued and processed at a later stage. This positive integer serves as a wake-up call for the thread to process the request, at intervals corresponding to the integer specified.
2. (`nsslapd-pluginarg1`) Log file for storing the change, for example `/local/dsInst/logs/referint`
3. (`nsslapd-pluginarg2`) Reserved for future use.
4. (Other `nsslapd-pluginarg*` attributes) Attribute names to be checked for referential integrity.

**Dependencies**

database type

**Tuning Recommendations**

Do the following when you use the referential integrity plug-in in a multi-master replication environment:

- Enable the referential integrity plug-in on all servers containing master replicas
- Enable the referential integrity plug-in with the same configuration on every master

Set the first argument to a positive value, such as 10, meaning ten seconds, to ensure that work performed by this plug-in happens asynchronously, rather than synchronously.

When enabling the plug-in, also create equality indexes for all attributes configured for use with the plug-in. The plug-in uses such indexes when searching for entries to update. Without equality indexes for the attributes it uses, the plug-in must perform costly unindexed searches that have negative impact on performance.

**RETRO CHANGE LOG PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Retro Changelog Plugin

**DN of Configuration Entry**

cn=Retro Changelog Plugin,cn=plugins,cn=config

**Description**

Used by LDAP clients for maintaining application compatibility with Directory Server 4.x versions.

Maintains a log of all changes occurring in Directory Server. The retro change log offers the same functionality as the changelog in the 4.x versions of Directory Server.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

The following arguments can be configured for the retro change log plug-in:

- `nsslapd-pluginarg0`: `-ignore_attributes` configures the retro change log plug-in to ignore attributes specified by the following `nsslapd-pluginarg`. This argument is configured by default.
- `nsslapd-pluginarg1`: `copyingFrom` specifies a list of attributes to be ignored by the preceding `nsslapd-pluginarg`. This argument is configured by default.
- `nsslapd-pluginarg2`: `suffixes="suffix1", "suffix2"` configures the retro change log to record updates to specified suffixes only
- `nsslapd-pluginarg3`: `deletedEntryAttributes=attribute1, attribute2` configures the retro change log to record specified attributes of an entry when that entry is deleted

**Dependencies**

None

**Performance Related Information**

May slow down Directory Server performance.

**Example Configuration**

```
dn: cn=Retro Changelog Plugin,cn=plugins,cn=config
objectClass: top
objectClass: nsSlapdPlugin
objectClass: ds-signedPlugin
objectClass: extensibleObject
cn: Retro Changelog Plugin
nsslapd-pluginPath: /opt/SUNWdsee7/lib/sparcv9/retrocl-plugin.so
nsslapd-pluginInitfunc: retrocl_plugin_init
nsslapd-pluginType: object
nsslapd-plugin-depends-on-type: database
nsslapd-pluginarg0: -ignore_attributes
nsslapd-pluginarg1: copyingFrom
nsslapd-pluginarg2: suffixes="ou=people", "dc=example", "dc=com"
nsslapd-pluginarg3: deletedEntryAttributes="objectclass", "employeenumber"
nsslapd-changelogdir: /local/dsInst/db/changelog
nsslapd-pluginEnabled: on
nsslapd-pluginId: retrocl
nsslapd-pluginVersion: 11.1.1.5.0
nsslapd-pluginVendor: Sun Microsystems, Inc.
nsslapd-pluginDescription: Retrocl Plugin
ds-pluginSignatureState: valid signature
```

**ROLES PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Roles Plugin

**DN of Configuration Entry**

cn=Roles Plugin,cn=plugins,cn=config

**Description**

Enables the use of roles in Directory Server.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

State Change Plugin

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**STATE CHANGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

State Change Plugin

**DN of Configuration Entry**

cn=State Change Plugin,cn=plugins,cn=config

**Description**

State change notification service plug-in for detecting updates, such as configuration changes, and triggering callbacks when updates happen.

This plug-in is used internally by the roles plug-in.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**SUBTREE ENTRY COUNTER PLUG-INS**

Consider the following aspects of this plug-in.

**Plug-In Name**Subtree Entry Counter For *ObjectClass*

**DN of Configuration Entry**

cn=Subtree Entry Counter for *ObjectClass*, cn=plugins, cn=config

**Description**

Maintain a count of entries with a particular object class. The following plug-ins are provided.

- Subtree entry counter for departments in domains
- Subtree entry counter for domains within a domain
- Subtree entry counter for mail lists
- Subtree entry counter for nested departments
- Subtree entry counter for total domains
- Subtree entry counter for users

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

These plug-ins are provided for use with Messaging Server only, and are disabled by default. Leave these plug-ins disabled unless your Messaging Server requires them.

**Counter Attributes Maintained**

*nsNumDepts*

Either the number of departments within a domain, or the number of departments within a department (nested departments), depending on the DN of the entry.

*nsNumDomains*

Either the number of total domains, or the number of domains within a domain or nested domain, depending on the DN of the entry.

*nsNumMailLists*

Number of mail lists.

**TELEPHONE SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Telephone Syntax

**DN of Configuration Entry**

cn=Telephone Syntax, cn=plugins, cn=config

**Description**

Syntax for handling telephone numbers.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**UID UNIQUENESS PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

UID Uniqueness

**DN of Configuration Entry**

cn=UID Uniqueness,cn=plugins,cn=config

**Description**

Checks that the values of specified attributes are unique each time a modification occurs on an entry.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

You may configure this plug-in in either of two different ways.

1. Specify attributes that must be unique for a series of one or more subtrees identified by DNs. For example, to specify that `employeeNumber` and `uid` attribute values must be unique across both `o=org1,dc=example,dc=com` and `o=org2,dc=example,dc=com`, configure the arguments in the configuration entry as follows:

```
nsslapd-pluginarg0: employeeNumber
nsslapd-pluginarg1: uid
nsslapd-pluginarg2: o=org1,dc=example,dc=com
nsslapd-pluginarg3: o=org2,dc=example,dc=com
```

2. You specify attributes that must be unique inside congruent subtrees, optionally only on entries of a specified object class. For example, to specify that `employeeNumber` and `uid` attribute values must be unique in either `o=org1,dc=example,dc=com` or `o=org2,dc=example,dc=com`, but only on entries of the `inetOrgPerson` object class, configure the arguments in the configuration entry as follows:

```
nsslapd-pluginarg0: employeeNumber
nsslapd-pluginarg1: uid
```

```
nsslapd-pluginarg2: MarkerObjectClass="organization"  
RequiredObjectClass="inetOrgPerson"
```

**Dependencies**

database type

**Performance Related Information**

Directory Server provides the UID Uniqueness plug-in by default. To ensure unique values for other attributes, you can create instances of the UID Uniqueness plug-in for those attributes.

The UID Uniqueness plug-in may slow down Directory Server performance.

**URI PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

URI Syntax

**DN of Configuration Entry**

cn=URI Syntax, cn=plugins, cn=config

**Description**

Syntax for handling URIs (Unique Resource Identifiers) including URLs (Unique Resource Locators.)

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**

[dse.ldif\(4\)](#)

---

## nsslapd-pluginEnabled

Directory Server plug-in legacy configuration

### Description

The `nsslapd-plugin` attribute on `cn=config` is multi-valued, read-only attribute lists the syntaxes and matching rules loaded by the server. This manual page covers server plug-in configuration, rather than the `nsslapd-plugin` attribute.

This manual page provides an overview of legacy configuration information for server plug-ins. This manual page covers the individual plug-in configuration entry attributes. Also, this manual page covers the plug-ins provided with Directory Server, including configurable options, configurable arguments, default setting, dependencies, general performance related information, and further reading.

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**Note:** In most circumstances, you configure plug-in functionality using the `dsconf(1M)` command. See [plugin\(5DSCONF\)](#) for a list of configurable properties.

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### ATTRIBUTES FOR PLUG-IN CONFIGURATION ENTRIES

The following list covers each plug-in configuration entry attribute.

#### **nsslapd-plugin-depends-on-named**

This is a multivalued attribute, used to ensure that plug-ins are called by the server in the correct order. It takes a value that corresponds to the `cn` value of a plug-in. The plug-in whose `cn` value matches one of the values below it is started by the server prior to this plug-in. If the plug-in does not exist, the server fails to start.

**Entry DN**

`cn=pluginName,cn=plugins, cn=config`

**Valid Range**

Plug-in name

**Default Value**

None

**Syntax**

DirectoryString

**Example**

`nsslapd-plugin-depends-on-named: Class of Service`

#### **nsslapd-plugin-depends-on-type**

This is a multivalued attribute, used to ensure that plug-ins are called by the server in the correct order. It takes a value that corresponds to the type of a plug-in, contained in the attribute `nsslapd-pluginType`, and requires that plug-ins of that type are started before the present plug-in.

**Entry DN**

`cn=pluginName,cn=plugins, cn=config`

**Valid Range**

Plug-in type

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-plugin-depends-on-type: database

**nsslapd-pluginDescription**

Provides a description of the plug-in.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any DirectoryString

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginDescription: acl access check plug-in

**nsslapd-pluginEnabled**

Specifies whether or not the plug-in is enabled. This attribute can be changed over protocol, but will only take effect when the server is next restarted.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

on | off

**Default Value**

on

**Syntax**

DirectoryString

**Example**

nsslapd-pluginEnabled: on

**nsslapd-pluginId**

Specifies the plug-in ID.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in ID.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginId: chaining database

nsslapd-pluginInitfunc

Specifies the plug-in function to be initiated.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in function.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginInitfunc: NS7bitAttr\_Init

nsslapd-pluginPath

Specifies the full path to the plug-in.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid path

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginPath: /opt/SUNWdsee7/lib/sparcv9/uid-plugin.so

nsslapd-pluginType

Specifies the plug-in type.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in type.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginType: preoperation

**nsslapd-pluginVendor**

Specifies the vendor of the plug-in.

**Entry DN**cn=*pluginName*, cn=plugins, cn=config**Valid Range**

Any approved plug-in vendor.

**Default Value**

Sun Microsystems, Inc.

**Syntax**

DirectoryString

**Example**

nsslapd-pluginVendor: Sun Microsystems, Inc.

**nsslapd-pluginVersion**

Specifies the plug-in version.

**Entry DN**cn=*pluginName*, cn=plugins, cn=config**Valid Range**

Any valid plug-in version.

**Default Value**

Product version

**Syntax**

DirectoryString

**Example**

nsslapd-pluginVersion: 11.1.1.5.0

**7-BIT CHECK PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

7-Bit Check (NS7bitAttr)

**DN of Configuration Entry**

cn=7-bit check, cn=plugins, cn=config

**Description**

Checks certain attributes are seven-bit clean.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

List of attributes, `uid mail userpassword`, followed by a comma, and then by the suffix or suffixes on which the check is to occur.

**Dependencies**

None

**Performance Related Information**

None

**Further Information**

If your Directory Server uses non-ASCII characters such as Japanese and other languages for some attributes, remove those attributes from the list of attributes checked by this plug-in.

When adding or modifying an attribute value checked by this plug-in, and the new value violates the seven-bit check, the client receives a `LDAP_CONSTRAINT_VIOLATION (19)` return code, and a message such as the following: `Value of attribute attr contains extended (8-bit) characters: value`

**ACL PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ACL Plugin

**DN of Configuration Entry**

`cn=ACL Plugin,cn=plugins,cn=config`

**Description**

ACL access check plug-in

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**ACL PREOPERATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ACL preoperation

**DN of Configuration Entry**

cn=ACL\_preoperation,cn=plugins,cn=config

**Description**

ACL access check plug-in.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

Database

**Performance Related Information**

Leave this plug-in running at all times.

**BINARY SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Binary Syntax

**DN of Configuration Entry**

cn=Binary\_Syntax,cn=plugins,cn=config

**Description**

Syntax for handling binary data.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**BOOLEAN SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Boolean Syntax

**DN of Configuration Entry**

cn=Boolean\_Syntax,cn=plugins,cn=config

**Description**

Syntax for handling booleans.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CASE EXACT STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Case Exact String Syntax

**DN of Configuration Entry**

cn=Case Exact String Syntax,cn=plugins,cn=config

**Description**

Syntax for handling case-sensitive strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CASE IGNORE STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Case Ignore String Syntax

**DN of Configuration Entry**

cn=Case Ignore String Syntax,cn=plugins,cn=config

**Description**

Syntax for handling case-insensitive strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CHAINING DATABASE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Chaining Database

**DN of Configuration Entry**

cn=Chaining database,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CLASS OF SERVICE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Class of Service

**DN of Configuration Entry**

cn=Class of Service,cn=plugins,cn=config

**Description**

Allows for sharing of attributes between entries.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

Set the `nsslapd-pluginarg0` attribute to:

- 0 (default) to enable fast lookup of classic CoS templates
- 1 to disable fast lookup for classic CoS template selection
- 2 to disable checks for ambiguous pointer and classic CoS definitions

Ambiguous definitions result when more than one value could be returned for the same attribute of the same entry. When checking remains enabled, Directory Server logs an informational message upon encountering such an ambiguity, provided you have set the log level to allow plug-ins to log informational messages.

- 3 to disable both

Restart Directory Server for modifications to take effect.

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**COUNTRY STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Country String Syntax

**DN of Configuration Entry**

`cn=Country String Syntax,cn=plugins,cn=config`

**Description**

Syntax for handling countries.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**DISTINGUISHED NAME SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Distinguished Name Syntax

**DN of Configuration Entry**

cn=Distinguished Name Syntax,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**DSML FRONTEND SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Frontend

**DN of Configuration Entry**

cn=DSMLv2-SOAP-HTTP,cn=frontends,cn=plugins, cn=config

**Description**

Enables you to access the directory using DSML v2 over SOAP/HTTP.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

ds-hdsml-soapschemalocation

ds-hdsml-dsmlschemalocation

**Dependencies**

None

**Performance Related Information**

None

**GENERALIZED TIME SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Generalized Time Syntax

**DN of Configuration Entry**

cn=Generalized Time Syntax,cn=plugins,cn=config

**Description**

Syntax for dealing with dates, times, and time zones.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Further Information**

The Generalized Time String consists of the four digit year, two digit month (for example, 01 for January), two digit day, two digit hour, two digit minute, two digit second, an optional decimal part of a second and a time zone indication. We strongly recommend that you use the Z time zone indication (Greenwich Mean Time).

**INTEGER SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Integer Syntax

**DN of Configuration Entry**

cn=Integer Syntax,cn=plugins,cn=config

**Description**

Syntax for handling integers.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**INTERNATIONALIZATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Internationalization Plugin

**DN of Configuration Entry**

cn=Internationalization Plugin,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None. In contrast to previous versions of Directory Server, the collation orders and locales used by the internationalization plug-in are now stored in the configuration.

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**LDBM DATABASE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ldbm database plug-in

**DN of Configuration Entry**

cn=ldbm database plug-in,cn=plugins,cn=config

**Description**

Implements local databases.

**Configurable Options**

None

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**MULTIMASTER REPLICATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Multimaster Replication Plugin

**DN of Configuration Entry**

`cn=Multimaster Replication plugin,cn=plugins, cn=config`

**Description**

Enables replication between two Directory Server suffixes.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

database

**Performance Related Information**

None

**Further Information**

You can turn this plug-in off if you have only one server, which will never replicate.

**OCTET STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Octet String Syntax

**DN of Configuration Entry**

`cn=Octet String Syntax,cn=plugins,cn=config`

**Description**

Syntax for handling octet strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CLEAR PASSWORD STORAGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

CLEAR

**DN of Configuration Entry**

cn=CLEAR,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

CLEAR password storage scheme used for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CRYPT PASSWORD STORAGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

CRYPT

**DN of Configuration Entry**

cn=CRYPT,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

CRYPT password storage scheme used for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**NS-MTA-MD5 PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

NS-MTA-MD5

**DN of Configuration Entry**

cn=NS-MTA-MD5,cn>Password Storage Schemes, cn=plugins,cn=config

**Description**

NS-MTA-MD5 password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Further Information**

You can no longer choose to encrypt passwords using the NS-MTA-MD5 password storage scheme. The storage scheme is still present, but for backward compatibility only. The data in your directory still contains passwords encrypted with the NS-MTA-MD5 password storage scheme.

**RMCE PASSWORD STORAGE SCHEME PLUG-IN**

This password storage scheme plug-in is used for example by the administration framework and is reserved for internal use.

**SHA PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

SHA

**DN of Configuration Entry**

cn=SHA,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

SHA password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

If there are no passwords encrypted using the SHA password storage scheme, you may turn this plug-in off. If you want to encrypt your password with the SHA password storage scheme, choose SSHA instead. SSHA is a far more secure option.

**SSHA PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

SSHA

**DN of Configuration Entry**`cn=SSHA,cn>Password Storage Schemes,cn=plugins,cn=config`**Description**

SSHA password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**STRONG PASSWORD CHECK PLUG-IN**

When Directory Server is configured to check password quality, and this plug-in is enabled, the plug-in checks the following each time a password is added or modified.

- Clear text password values contain the classes of characters specified by the configuration.
- Clear text password values do not contain any sequence of four characters present in the dictionary file specified by the configuration.

Hashed password values such as

`{SSHA}0Ri1g2yq1H3GTZcuRQ4uS22syCQLBKAU2ypLSw==` are not checked.

Consider the following aspects of this plug-in.

#### Plug-In Name

Strong Password Checking plug-in

#### DN of Configuration Entry

cn=Strong Password Check,cn=plugins,cn=config

#### Configurable options and arguments

on | off

nsslapd-pluginarg0, which takes an integer representing a mask of values representing the character classes that must be present in a valid password. Set nsslapd-pluginarg0 to one of or a sum of the following values, not counting the special values 16 and 17.

- 1 means the password must contain special characters.
- 2 means the password must contain numeric characters.
- 4 means the password must contain upper case characters.
- 8 means the password must contain lower case characters.
- 16 is a special value meaning at least three of the four character classes.
- 17 is a special value meaning at least two of the four character classes.

The default setting is 15.

nsslapd-pluginarg1, which takes the absolute file system path to an ASCII dictionary file. If the argument is missing, the dictionary check is skipped. The plug-in does not initialize and Directory Server does not start if the value of this attribute is invalid or refers to an inaccessible file.

#### Default settings

off

#### Dependencies

Default password file,  
*install-path/resources/plugins/words-english-big.txt*

## POSTAL ADDRESS STRING SYNTAX PLUG-IN

Consider the following aspects of this plug-in.

#### Plug-In Name

Postal Address Syntax

#### DN of Configuration Entry

cn=Postal Address Syntax,cn=plugins,cn=config

#### Description

Syntax used for handling postal addresses.

#### Configurable Options

on | off

#### Default Setting

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**PTA PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Pass Through Authentication

**DN of Configuration Entry**

`cn=Pass Through Authentication,cn=plugins, cn=config`

**Description**

Enables pass-through authentication, the mechanism that allows one directory to consult another to authenticate bind requests.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

The LDAP URL to the configuration directory.

`nsslapd-pluginarg0: ldap://config.example.com/o=example`

**Dependencies**

None

**REFERENTIAL INTEGRITY POSTOPERATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Referential Integrity Postoperation

**DN of Configuration Entry**

`cn=Referential Integrity Postoperation, cn=plugins,cn=config`

**Description**

Enables the server to ensure referential integrity.

All attributes in all databases that are used by the referential integrity plug-in must be indexed. The indexes need to be created in the configuration of all the databases. When the retro change log is enabled, the `cn=changelog` suffix must be indexed.

**Configurable Options**

All configuration and on | off

**Default Setting**

off

**Configurable Arguments**

When enabled, the post operation Referential Integrity plug-in performs integrity updates on the `member`, `uniquemember`, `owner`, and `seeAlso` attributes immediately after a delete or rename operation. You can reconfigure the plug-in to perform integrity checks on all other attributes.

The following arguments are configurable:

1. (`nsslapd-pluginarg0`) Check for referential integrity
  - 1 = no check for referential integrity
  - 0 = check for referential integrity is performed immediately
  - positive integer = request for referential integrity is queued and processed at a later stage. This positive integer serves as a wake-up call for the thread to process the request, at intervals corresponding to the integer specified.
2. (`nsslapd-pluginarg1`) Log file for storing the change, for example `/local/dsInst/logs/referint`
3. (`nsslapd-pluginarg2`) Reserved for future use.
4. (Other `nsslapd-pluginarg*` attributes) Attribute names to be checked for referential integrity.

**Dependencies**

database type

**Tuning Recommendations**

Do the following when you use the referential integrity plug-in in a multi-master replication environment:

- Enable the referential integrity plug-in on all servers containing master replicas
- Enable the referential integrity plug-in with the same configuration on every master

Set the first argument to a positive value, such as 10, meaning ten seconds, to ensure that work performed by this plug-in happens asynchronously, rather than synchronously.

When enabling the plug-in, also create equality indexes for all attributes configured for use with the plug-in. The plug-in uses such indexes when searching for entries to update. Without equality indexes for the attributes it uses, the plug-in must perform costly unindexed searches that have negative impact on performance.

**RETRO CHANGE LOG PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Retro Changelog Plugin

**DN of Configuration Entry**`cn=Retro Changelog Plugin,cn=plugins,cn=config`**Description**

Used by LDAP clients for maintaining application compatibility with Directory Server 4.x versions.

Maintains a log of all changes occurring in Directory Server. The retro change log offers the same functionality as the changelog in the 4.x versions of Directory Server.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

The following arguments can be configured for the retro change log plug-in:

- `nsslapd-pluginarg0`: `-ignore_attributes` configures the retro change log plug-in to ignore attributes specified by the following `nsslapd-pluginarg`. This argument is configured by default.
- `nsslapd-pluginarg1`: `copyingFrom` specifies a list of attributes to be ignored by the preceding `nsslapd-pluginarg`. This argument is configured by default.
- `nsslapd-pluginarg2`: `suffixes="suffix1","suffix2"` configures the retro change log to record updates to specified suffixes only
- `nsslapd-pluginarg3`: `deletedEntryAttributes=attribute1,attribute2` configures the retro change log to record specified attributes of an entry when that entry is deleted

**Dependencies**

None

**Performance Related Information**

May slow down Directory Server performance.

**Example Configuration**

```
dn: cn=Retro Changelog Plugin,cn=plugins,cn=config
objectClass: top
objectClass: nsSlapdPlugin
objectClass: ds-signedPlugin
objectClass: extensibleObject
cn: Retro Changelog Plugin
nsslapd-pluginPath: /opt/SUNWdsee7/lib/sparcv9/retrocl-plugin.so
nsslapd-pluginInitfunc: retrocl_plugin_init
nsslapd-pluginType: object
nsslapd-plugin-depends-on-type: database
nsslapd-pluginarg0: -ignore_attributes
nsslapd-pluginarg1: copyingFrom
nsslapd-pluginarg2: suffixes="ou=people","dc=example","dc=com"
nsslapd-pluginarg3: deletedEntryAttributes="objectclass","employeenumber"
nsslapd-changelogdir: /local/dsInst/db/changelog
nsslapd-pluginEnabled: on
nsslapd-pluginId: retrocl
nsslapd-pluginVersion: 11.1.1.5.0
nsslapd-pluginVendor: Sun Microsystems, Inc.
nsslapd-pluginDescription: Retrocl Plugin
ds-pluginSignatureState: valid signature
```

**ROLES PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Roles Plugin

**DN of Configuration Entry**

cn=Roles Plugin,cn=plugins,cn=config

**Description**

Enables the use of roles in Directory Server.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

State Change Plugin

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**STATE CHANGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

State Change Plugin

**DN of Configuration Entry**

cn=State Change Plugin,cn=plugins,cn=config

**Description**

State change notification service plug-in for detecting updates, such as configuration changes, and triggering callbacks when updates happen.

This plug-in is used internally by the roles plug-in.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**SUBTREE ENTRY COUNTER PLUG-INS**

Consider the following aspects of this plug-in.

**Plug-In Name**Subtree Entry Counter For *ObjectClass*

**DN of Configuration Entry**

cn=Subtree Entry Counter for *ObjectClass*,cn=plugins, cn=config

**Description**

Maintain a count of entries with a particular object class. The following plug-ins are provided.

- Subtree entry counter for departments in domains
- Subtree entry counter for domains within a domain
- Subtree entry counter for mail lists
- Subtree entry counter for nested departments
- Subtree entry counter for total domains
- Subtree entry counter for users

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

These plug-ins are provided for use with Messaging Server only, and are disabled by default. Leave these plug-ins disabled unless your Messaging Server requires them.

**Counter Attributes Maintained**

*nsNumDepts*

Either the number of departments within a domain, or the number of departments within a department (nested departments), depending on the DN of the entry.

*nsNumDomains*

Either the number of total domains, or the number of domains within a domain or nested domain, depending on the DN of the entry.

*nsNumMailLists*

Number of mail lists.

**TELEPHONE SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Telephone Syntax

**DN of Configuration Entry**

cn=Telephone Syntax,cn=plugins,cn=config

**Description**

Syntax for handling telephone numbers.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**UID UNIQUENESS PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

UID Uniqueness

**DN of Configuration Entry**

cn=UID Uniqueness,cn=plugins,cn=config

**Description**

Checks that the values of specified attributes are unique each time a modification occurs on an entry.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

You may configure this plug-in in either of two different ways.

1. Specify attributes that must be unique for a series of one or more subtrees identified by DNs. For example, to specify that `employeeNumber` and `uid` attribute values must be unique across both `o=org1,dc=example,dc=com` and `o=org2,dc=example,dc=com`, configure the arguments in the configuration entry as follows:

```
nsslapd-pluginarg0: employeeNumber
nsslapd-pluginarg1: uid
nsslapd-pluginarg2: o=org1,dc=example,dc=com
nsslapd-pluginarg3: o=org2,dc=example,dc=com
```

2. You specify attributes that must be unique inside congruent subtrees, optionally only on entries of a specified object class. For example, to specify that `employeeNumber` and `uid` attribute values must be unique in either `o=org1,dc=example,dc=com` or `o=org2,dc=example,dc=com`, but only on entries of the `inetOrgPerson` object class, configure the arguments in the configuration entry as follows:

```
nsslapd-pluginarg0: employeeNumber
nsslapd-pluginarg1: uid
```

```
nsslapd-pluginarg2: MarkerObjectClass="organization"  
RequiredObjectClass="inetOrgPerson"
```

**Dependencies**

database type

**Performance Related Information**

Directory Server provides the UID Uniqueness plug-in by default. To ensure unique values for other attributes, you can create instances of the UID Uniqueness plug-in for those attributes.

The UID Uniqueness plug-in may slow down Directory Server performance.

**URI PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

URI Syntax

**DN of Configuration Entry**

cn=URI Syntax, cn=plugins, cn=config

**Description**

Syntax for handling URIs (Unique Resource Identifiers) including URLs (Unique Resource Locators.)

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**

[dse.ldif\(4\)](#)

---

## nsslapd-pluginId

Directory Server plug-in legacy configuration

### Description

The `nsslapd-plugin` attribute on `cn=config` is multi-valued, read-only attribute lists the syntaxes and matching rules loaded by the server. This manual page covers server plug-in configuration, rather than the `nsslapd-plugin` attribute.

This manual page provides an overview of legacy configuration information for server plug-ins. This manual page covers the individual plug-in configuration entry attributes. Also, this manual page covers the plug-ins provided with Directory Server, including configurable options, configurable arguments, default setting, dependencies, general performance related information, and further reading.

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**Note:** In most circumstances, you configure plug-in functionality using the `dsconf(1M)` command. See [plugin\(5DSCONF\)](#) for a list of configurable properties.

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### ATTRIBUTES FOR PLUG-IN CONFIGURATION ENTRIES

The following list covers each plug-in configuration entry attribute.

#### **nsslapd-plugin-depends-on-named**

This is a multivalued attribute, used to ensure that plug-ins are called by the server in the correct order. It takes a value that corresponds to the `cn` value of a plug-in. The plug-in whose `cn` value matches one of the values below it is started by the server prior to this plug-in. If the plug-in does not exist, the server fails to start.

**Entry DN**

`cn=pluginName,cn=plugins, cn=config`

**Valid Range**

Plug-in name

**Default Value**

None

**Syntax**

DirectoryString

**Example**

`nsslapd-plugin-depends-on-named: Class of Service`

#### **nsslapd-plugin-depends-on-type**

This is a multivalued attribute, used to ensure that plug-ins are called by the server in the correct order. It takes a value that corresponds to the type of a plug-in, contained in the attribute `nsslapd-pluginType`, and requires that plug-ins of that type are started before the present plug-in.

**Entry DN**

`cn=pluginName,cn=plugins, cn=config`

**Valid Range**

Plug-in type

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-plugin-depends-on-type: database

**nsslapd-pluginDescription**

Provides a description of the plug-in.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any DirectoryString

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginDescription: acl access check plug-in

**nsslapd-pluginEnabled**

Specifies whether or not the plug-in is enabled. This attribute can be changed over protocol, but will only take effect when the server is next restarted.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

on | off

**Default Value**

on

**Syntax**

DirectoryString

**Example**

nsslapd-pluginEnabled: on

**nsslapd-pluginId**

Specifies the plug-in ID.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in ID.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginId: chaining database

nsslapd-pluginInitfunc

Specifies the plug-in function to be initiated.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in function.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginInitfunc: NS7bitAttr\_Init

nsslapd-pluginPath

Specifies the full path to the plug-in.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid path

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginPath: /opt/SUNWdsee7/lib/sparcv9/uid-plugin.so

nsslapd-pluginType

Specifies the plug-in type.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in type.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginType: preoperation

**nsslapd-pluginVendor**

Specifies the vendor of the plug-in.

**Entry DN**cn=*pluginName*, cn=plugins, cn=config**Valid Range**

Any approved plug-in vendor.

**Default Value**

Sun Microsystems, Inc.

**Syntax**

DirectoryString

**Example**

nsslapd-pluginVendor: Sun Microsystems, Inc.

**nsslapd-pluginVersion**

Specifies the plug-in version.

**Entry DN**cn=*pluginName*, cn=plugins, cn=config**Valid Range**

Any valid plug-in version.

**Default Value**

Product version

**Syntax**

DirectoryString

**Example**

nsslapd-pluginVersion: 11.1.1.5.0

**7-BIT CHECK PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

7-Bit Check (NS7bitAttr)

**DN of Configuration Entry**

cn=7-bit check, cn=plugins, cn=config

**Description**

Checks certain attributes are seven-bit clean.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

List of attributes, `uid mail userpassword`, followed by a comma, and then by the suffix or suffixes on which the check is to occur.

**Dependencies**

None

**Performance Related Information**

None

**Further Information**

If your Directory Server uses non-ASCII characters such as Japanese and other languages for some attributes, remove those attributes from the list of attributes checked by this plug-in.

When adding or modifying an attribute value checked by this plug-in, and the new value violates the seven-bit check, the client receives a `LDAP_CONSTRAINT_VIOLATION (19)` return code, and a message such as the following: `Value of attribute attr contains extended (8-bit) characters: value`

**ACL PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ACL Plugin

**DN of Configuration Entry**

`cn=ACL Plugin,cn=plugins,cn=config`

**Description**

ACL access check plug-in

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**ACL PREOPERATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ACL preoperation

**DN of Configuration Entry**

cn=ACL\_preoperation,cn=plugins,cn=config

**Description**

ACL access check plug-in.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

Database

**Performance Related Information**

Leave this plug-in running at all times.

**BINARY SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Binary Syntax

**DN of Configuration Entry**

cn=Binary\_Syntax,cn=plugins,cn=config

**Description**

Syntax for handling binary data.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**BOOLEAN SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Boolean Syntax

**DN of Configuration Entry**

cn=Boolean\_Syntax,cn=plugins,cn=config

**Description**

Syntax for handling booleans.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CASE EXACT STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Case Exact String Syntax

**DN of Configuration Entry**

cn=Case Exact String Syntax,cn=plugins,cn=config

**Description**

Syntax for handling case-sensitive strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CASE IGNORE STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Case Ignore String Syntax

**DN of Configuration Entry**

cn=Case Ignore String Syntax,cn=plugins,cn=config

**Description**

Syntax for handling case-insensitive strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CHAINING DATABASE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Chaining Database

**DN of Configuration Entry**

cn=Chaining database,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CLASS OF SERVICE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Class of Service

**DN of Configuration Entry**

cn=Class of Service,cn=plugins,cn=config

**Description**

Allows for sharing of attributes between entries.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

Set the `nsslapd-pluginarg0` attribute to:

- 0 (default) to enable fast lookup of classic CoS templates
- 1 to disable fast lookup for classic CoS template selection
- 2 to disable checks for ambiguous pointer and classic CoS definitions

Ambiguous definitions result when more than one value could be returned for the same attribute of the same entry. When checking remains enabled, Directory Server logs an informational message upon encountering such an ambiguity, provided you have set the log level to allow plug-ins to log informational messages.

- 3 to disable both

Restart Directory Server for modifications to take effect.

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**COUNTRY STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Country String Syntax

**DN of Configuration Entry**

`cn=Country String Syntax,cn=plugins,cn=config`

**Description**

Syntax for handling countries.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**DISTINGUISHED NAME SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Distinguished Name Syntax

**DN of Configuration Entry**

cn=Distinguished Name Syntax,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**DSML FRONTEND SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Frontend

**DN of Configuration Entry**

cn=DSMLv2-SOAP-HTTP,cn=frontends,cn=plugins, cn=config

**Description**

Enables you to access the directory using DSML v2 over SOAP/HTTP.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

ds-hdsml-soapschemalocation

ds-hdsml-dsmlschemalocation

**Dependencies**

None

**Performance Related Information**

None

**GENERALIZED TIME SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Generalized Time Syntax

**DN of Configuration Entry**

cn=Generalized Time Syntax,cn=plugins,cn=config

**Description**

Syntax for dealing with dates, times, and time zones.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Further Information**

The Generalized Time String consists of the four digit year, two digit month (for example, 01 for January), two digit day, two digit hour, two digit minute, two digit second, an optional decimal part of a second and a time zone indication. We strongly recommend that you use the Z time zone indication (Greenwich Mean Time).

**INTEGER SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Integer Syntax

**DN of Configuration Entry**

cn=Integer Syntax,cn=plugins,cn=config

**Description**

Syntax for handling integers.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**INTERNATIONALIZATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Internationalization Plugin

**DN of Configuration Entry**

cn=Internationalization Plugin,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None. In contrast to previous versions of Directory Server, the collation orders and locales used by the internationalization plug-in are now stored in the configuration.

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**LDBM DATABASE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ldbm database plug-in

**DN of Configuration Entry**

cn=ldbm database plug-in,cn=plugins,cn=config

**Description**

Implements local databases.

**Configurable Options**

None

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**MULTIMASTER REPLICATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Multimaster Replication Plugin

**DN of Configuration Entry**

`cn=Multimaster Replication plugin,cn=plugins, cn=config`

**Description**

Enables replication between two Directory Server suffixes.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

database

**Performance Related Information**

None

**Further Information**

You can turn this plug-in off if you have only one server, which will never replicate.

**OCTET STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Octet String Syntax

**DN of Configuration Entry**

`cn=Octet String Syntax,cn=plugins,cn=config`

**Description**

Syntax for handling octet strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CLEAR PASSWORD STORAGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

CLEAR

**DN of Configuration Entry**

cn=CLEAR,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

CLEAR password storage scheme used for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CRYPT PASSWORD STORAGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

CRYPT

**DN of Configuration Entry**

cn=CRYPT,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

CRYPT password storage scheme used for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**NS-MTA-MD5 PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

NS-MTA-MD5

**DN of Configuration Entry**

cn=NS-MTA-MD5,cn>Password Storage Schemes, cn=plugins,cn=config

**Description**

NS-MTA-MD5 password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Further Information**

You can no longer choose to encrypt passwords using the NS-MTA-MD5 password storage scheme. The storage scheme is still present, but for backward compatibility only. The data in your directory still contains passwords encrypted with the NS-MTA-MD5 password storage scheme.

**RMCE PASSWORD STORAGE SCHEME PLUG-IN**

This password storage scheme plug-in is used for example by the administration framework and is reserved for internal use.

**SHA PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

SHA

**DN of Configuration Entry**

cn=SHA,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

SHA password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

If there are no passwords encrypted using the SHA password storage scheme, you may turn this plug-in off. If you want to encrypt your password with the SHA password storage scheme, choose SSHA instead. SSHA is a far more secure option.

**SSHA PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

SSHA

**DN of Configuration Entry**`cn=SSHA,cn>Password Storage Schemes,cn=plugins,cn=config`**Description**

SSHA password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**STRONG PASSWORD CHECK PLUG-IN**

When Directory Server is configured to check password quality, and this plug-in is enabled, the plug-in checks the following each time a password is added or modified.

- Clear text password values contain the classes of characters specified by the configuration.
- Clear text password values do not contain any sequence of four characters present in the dictionary file specified by the configuration.

Hashed password values such as

`{SSHA}0Ri1g2yq1H3GTZcuRQ4uS22syCQLBKAU2ypLSw==` are not checked.

Consider the following aspects of this plug-in.

#### Plug-In Name

Strong Password Checking plug-in

#### DN of Configuration Entry

cn=Strong Password Check,cn=plugins,cn=config

#### Configurable options and arguments

on | off

nsslapd-pluginarg0, which takes an integer representing a mask of values representing the character classes that must be present in a valid password. Set nsslapd-pluginarg0 to one of or a sum of the following values, not counting the special values 16 and 17.

- 1 means the password must contain special characters.
- 2 means the password must contain numeric characters.
- 4 means the password must contain upper case characters.
- 8 means the password must contain lower case characters.
- 16 is a special value meaning at least three of the four character classes.
- 17 is a special value meaning at least two of the four character classes.

The default setting is 15.

nsslapd-pluginarg1, which takes the absolute file system path to an ASCII dictionary file. If the argument is missing, the dictionary check is skipped. The plug-in does not initialize and Directory Server does not start if the value of this attribute is invalid or refers to an inaccessible file.

#### Default settings

off

#### Dependencies

Default password file,

*install-path/resources/plugins/words-english-big.txt*

## POSTAL ADDRESS STRING SYNTAX PLUG-IN

Consider the following aspects of this plug-in.

#### Plug-In Name

Postal Address Syntax

#### DN of Configuration Entry

cn=Postal Address Syntax,cn=plugins,cn=config

#### Description

Syntax used for handling postal addresses.

#### Configurable Options

on | off

#### Default Setting

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**PTA PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Pass Through Authentication

**DN of Configuration Entry**

`cn=Pass Through Authentication,cn=plugins, cn=config`

**Description**

Enables pass-through authentication, the mechanism that allows one directory to consult another to authenticate bind requests.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

The LDAP URL to the configuration directory.

`nsslapd-pluginarg0: ldap://config.example.com/o=example`

**Dependencies**

None

**REFERENTIAL INTEGRITY POSTOPERATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Referential Integrity Postoperation

**DN of Configuration Entry**

`cn=Referential Integrity Postoperation, cn=plugins,cn=config`

**Description**

Enables the server to ensure referential integrity.

All attributes in all databases that are used by the referential integrity plug-in must be indexed. The indexes need to be created in the configuration of all the databases.

When the retro change log is enabled, the `cn=changelog` suffix must be indexed.

**Configurable Options**

All configuration and on | off

**Default Setting**

off

**Configurable Arguments**

When enabled, the post operation Referential Integrity plug-in performs integrity updates on the `member`, `uniquemember`, `owner`, and `seeAlso` attributes immediately after a delete or rename operation. You can reconfigure the plug-in to perform integrity checks on all other attributes.

The following arguments are configurable:

1. (`nsslapd-pluginarg0`) Check for referential integrity
  - 1 = no check for referential integrity
  - 0 = check for referential integrity is performed immediately
  - positive integer = request for referential integrity is queued and processed at a later stage. This positive integer serves as a wake-up call for the thread to process the request, at intervals corresponding to the integer specified.
2. (`nsslapd-pluginarg1`) Log file for storing the change, for example `/local/dsInst/logs/referint`
3. (`nsslapd-pluginarg2`) Reserved for future use.
4. (Other `nsslapd-pluginarg*` attributes) Attribute names to be checked for referential integrity.

**Dependencies**

database type

**Tuning Recommendations**

Do the following when you use the referential integrity plug-in in a multi-master replication environment:

- Enable the referential integrity plug-in on all servers containing master replicas
- Enable the referential integrity plug-in with the same configuration on every master

Set the first argument to a positive value, such as 10, meaning ten seconds, to ensure that work performed by this plug-in happens asynchronously, rather than synchronously.

When enabling the plug-in, also create equality indexes for all attributes configured for use with the plug-in. The plug-in uses such indexes when searching for entries to update. Without equality indexes for the attributes it uses, the plug-in must perform costly unindexed searches that have negative impact on performance.

**RETRO CHANGE LOG PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Retro Changelog Plugin

**DN of Configuration Entry**`cn=Retro Changelog Plugin,cn=plugins,cn=config`**Description**

Used by LDAP clients for maintaining application compatibility with Directory Server 4.x versions.

Maintains a log of all changes occurring in Directory Server. The retro change log offers the same functionality as the changelog in the 4.x versions of Directory Server.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

The following arguments can be configured for the retro change log plug-in:

- `nsslapd-pluginarg0`: `-ignore_attributes` configures the retro change log plug-in to ignore attributes specified by the following `nsslapd-pluginarg`. This argument is configured by default.
- `nsslapd-pluginarg1`: `copyingFrom` specifies a list of attributes to be ignored by the preceding `nsslapd-pluginarg`. This argument is configured by default.
- `nsslapd-pluginarg2`: `suffixes="suffix1", "suffix2"` configures the retro change log to record updates to specified suffixes only
- `nsslapd-pluginarg3`: `deletedEntryAttributes=attribute1, attribute2` configures the retro change log to record specified attributes of an entry when that entry is deleted

**Dependencies**

None

**Performance Related Information**

May slow down Directory Server performance.

**Example Configuration**

```
dn: cn=Retro Changelog Plugin,cn=plugins,cn=config
objectClass: top
objectClass: nsSlapdPlugin
objectClass: ds-signedPlugin
objectClass: extensibleObject
cn: Retro Changelog Plugin
nsslapd-pluginPath: /opt/SUNWdsee7/lib/sparcv9/retrocl-plugin.so
nsslapd-pluginInitfunc: retrocl_plugin_init
nsslapd-pluginType: object
nsslapd-plugin-depends-on-type: database
nsslapd-pluginarg0: -ignore_attributes
nsslapd-pluginarg1: copyingFrom
nsslapd-pluginarg2: suffixes="ou=people", "dc=example", "dc=com"
nsslapd-pluginarg3: deletedEntryAttributes="objectclass", "employeenumber"
nsslapd-changelogdir: /local/dsInst/db/changelog
nsslapd-pluginEnabled: on
nsslapd-pluginId: retrocl
nsslapd-pluginVersion: 11.1.1.5.0
nsslapd-pluginVendor: Sun Microsystems, Inc.
nsslapd-pluginDescription: Retrocl Plugin
ds-pluginSignatureState: valid signature
```

**ROLES PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Roles Plugin

**DN of Configuration Entry**

cn=Roles Plugin,cn=plugins,cn=config

**Description**

Enables the use of roles in Directory Server.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

State Change Plugin

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**STATE CHANGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

State Change Plugin

**DN of Configuration Entry**

cn=State Change Plugin,cn=plugins,cn=config

**Description**

State change notification service plug-in for detecting updates, such as configuration changes, and triggering callbacks when updates happen.

This plug-in is used internally by the roles plug-in.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**SUBTREE ENTRY COUNTER PLUG-INS**

Consider the following aspects of this plug-in.

**Plug-In Name**Subtree Entry Counter For *ObjectClass*

**DN of Configuration Entry**

cn=Subtree Entry Counter for *ObjectClass*,cn=plugins, cn=config

**Description**

Maintain a count of entries with a particular object class. The following plug-ins are provided.

- Subtree entry counter for departments in domains
- Subtree entry counter for domains within a domain
- Subtree entry counter for mail lists
- Subtree entry counter for nested departments
- Subtree entry counter for total domains
- Subtree entry counter for users

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

These plug-ins are provided for use with Messaging Server only, and are disabled by default. Leave these plug-ins disabled unless your Messaging Server requires them.

**Counter Attributes Maintained**

*nsNumDepts*

Either the number of departments within a domain, or the number of departments within a department (nested departments), depending on the DN of the entry.

*nsNumDomains*

Either the number of total domains, or the number of domains within a domain or nested domain, depending on the DN of the entry.

*nsNumMailLists*

Number of mail lists.

**TELEPHONE SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Telephone Syntax

**DN of Configuration Entry**

cn=Telephone Syntax,cn=plugins,cn=config

**Description**

Syntax for handling telephone numbers.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**UID UNIQUENESS PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

UID Uniqueness

**DN of Configuration Entry**

cn=UID Uniqueness,cn=plugins,cn=config

**Description**

Checks that the values of specified attributes are unique each time a modification occurs on an entry.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

You may configure this plug-in in either of two different ways.

1. Specify attributes that must be unique for a series of one or more subtrees identified by DNs. For example, to specify that `employeeNumber` and `uid` attribute values must be unique across both `o=org1,dc=example,dc=com` and `o=org2,dc=example,dc=com`, configure the arguments in the configuration entry as follows:

```
nsslapd-pluginarg0: employeeNumber
nsslapd-pluginarg1: uid
nsslapd-pluginarg2: o=org1,dc=example,dc=com
nsslapd-pluginarg3: o=org2,dc=example,dc=com
```

2. You specify attributes that must be unique inside congruent subtrees, optionally only on entries of a specified object class. For example, to specify that `employeeNumber` and `uid` attribute values must be unique in either `o=org1,dc=example,dc=com` or `o=org2,dc=example,dc=com`, but only on entries of the `inetOrgPerson` object class, configure the arguments in the configuration entry as follows:

```
nsslapd-pluginarg0: employeeNumber
nsslapd-pluginarg1: uid
```

```
nsslapd-pluginarg2: MarkerObjectClass="organization"
RequiredObjectClass="inetOrgPerson"
```

**Dependencies**

database type

**Performance Related Information**

Directory Server provides the UID Uniqueness plug-in by default. To ensure unique values for other attributes, you can create instances of the UID Uniqueness plug-in for those attributes.

The UID Uniqueness plug-in may slow down Directory Server performance.

**URI PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

URI Syntax

**DN of Configuration Entry**

cn=URI Syntax, cn=plugins, cn=config

**Description**

Syntax for handling URIs (Unique Resource Identifiers) including URLs (Unique Resource Locators.)

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**

[dse.ldif\(4\)](#)

---

## nsslapd-pluginInitfunc

Directory Server plug-in legacy configuration

### Description

The `nsslapd-plugin` attribute on `cn=config` is multi-valued, read-only attribute lists the syntaxes and matching rules loaded by the server. This manual page covers server plug-in configuration, rather than the `nsslapd-plugin` attribute.

This manual page provides an overview of legacy configuration information for server plug-ins. This manual page covers the individual plug-in configuration entry attributes. Also, this manual page covers the plug-ins provided with Directory Server, including configurable options, configurable arguments, default setting, dependencies, general performance related information, and further reading.

---



---

**Note:** In most circumstances, you configure plug-in functionality using the `dsconf(1M)` command. See [plugin\(5DSCONF\)](#) for a list of configurable properties.

---



---

### ATTRIBUTES FOR PLUG-IN CONFIGURATION ENTRIES

The following list covers each plug-in configuration entry attribute.

#### **nsslapd-plugin-depends-on-named**

This is a multivalued attribute, used to ensure that plug-ins are called by the server in the correct order. It takes a value that corresponds to the `cn` value of a plug-in. The plug-in whose `cn` value matches one of the values below it is started by the server prior to this plug-in. If the plug-in does not exist, the server fails to start.

**Entry DN**

`cn=pluginName,cn=plugins, cn=config`

**Valid Range**

Plug-in name

**Default Value**

None

**Syntax**

DirectoryString

**Example**

`nsslapd-plugin-depends-on-named: Class of Service`

#### **nsslapd-plugin-depends-on-type**

This is a multivalued attribute, used to ensure that plug-ins are called by the server in the correct order. It takes a value that corresponds to the type of a plug-in, contained in the attribute `nsslapd-pluginType`, and requires that plug-ins of that type are started before the present plug-in.

**Entry DN**

`cn=pluginName,cn=plugins, cn=config`

**Valid Range**

Plug-in type

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-plugin-depends-on-type: database

**nsslapd-pluginDescription**

Provides a description of the plug-in.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any DirectoryString

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginDescription: acl access check plug-in

**nsslapd-pluginEnabled**

Specifies whether or not the plug-in is enabled. This attribute can be changed over protocol, but will only take effect when the server is next restarted.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

on | off

**Default Value**

on

**Syntax**

DirectoryString

**Example**

nsslapd-pluginEnabled: on

**nsslapd-pluginId**

Specifies the plug-in ID.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in ID.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginId: chaining database

nsslapd-pluginInitfunc

Specifies the plug-in function to be initiated.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in function.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginInitfunc: NS7bitAttr\_Init

nsslapd-pluginPath

Specifies the full path to the plug-in.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid path

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginPath: /opt/SUNWdsee7/lib/sparcv9/uid-plugin.so

nsslapd-pluginType

Specifies the plug-in type.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in type.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginType: preoperation

**nsslapd-pluginVendor**

Specifies the vendor of the plug-in.

**Entry DN**cn=*pluginName*, cn=plugins, cn=config**Valid Range**

Any approved plug-in vendor.

**Default Value**

Sun Microsystems, Inc.

**Syntax**

DirectoryString

**Example**

nsslapd-pluginVendor: Sun Microsystems, Inc.

**nsslapd-pluginVersion**

Specifies the plug-in version.

**Entry DN**cn=*pluginName*, cn=plugins, cn=config**Valid Range**

Any valid plug-in version.

**Default Value**

Product version

**Syntax**

DirectoryString

**Example**

nsslapd-pluginVersion: 11.1.1.5.0

**7-BIT CHECK PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

7-Bit Check (NS7bitAttr)

**DN of Configuration Entry**

cn=7-bit check, cn=plugins, cn=config

**Description**

Checks certain attributes are seven-bit clean.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

List of attributes, `uid mail userpassword`, followed by a comma, and then by the suffix or suffixes on which the check is to occur.

**Dependencies**

None

**Performance Related Information**

None

**Further Information**

If your Directory Server uses non-ASCII characters such as Japanese and other languages for some attributes, remove those attributes from the list of attributes checked by this plug-in.

When adding or modifying an attribute value checked by this plug-in, and the new value violates the seven-bit check, the client receives a `LDAP_CONSTRAINT_VIOLATION (19)` return code, and a message such as the following: `Value of attribute attr contains extended (8-bit) characters: value`

**ACL PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ACL Plugin

**DN of Configuration Entry**

`cn=ACL Plugin,cn=plugins,cn=config`

**Description**

ACL access check plug-in

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**ACL PREOPERATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ACL preoperation

**DN of Configuration Entry**

cn=ACL\_preoperation,cn=plugins,cn=config

**Description**

ACL access check plug-in.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

Database

**Performance Related Information**

Leave this plug-in running at all times.

**BINARY SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Binary Syntax

**DN of Configuration Entry**

cn=Binary\_Syntax,cn=plugins,cn=config

**Description**

Syntax for handling binary data.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**BOOLEAN SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Boolean Syntax

**DN of Configuration Entry**

cn=Boolean\_Syntax,cn=plugins,cn=config

**Description**

Syntax for handling booleans.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CASE EXACT STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Case Exact String Syntax

**DN of Configuration Entry**

cn=Case Exact String Syntax,cn=plugins,cn=config

**Description**

Syntax for handling case-sensitive strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CASE IGNORE STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Case Ignore String Syntax

**DN of Configuration Entry**

cn=Case Ignore String Syntax,cn=plugins,cn=config

**Description**

Syntax for handling case-insensitive strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CHAINING DATABASE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Chaining Database

**DN of Configuration Entry**

cn=Chaining database,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CLASS OF SERVICE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Class of Service

**DN of Configuration Entry**

cn=Class of Service,cn=plugins,cn=config

**Description**

Allows for sharing of attributes between entries.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

Set the `nsslapd-pluginarg0` attribute to:

- 0 (default) to enable fast lookup of classic CoS templates
- 1 to disable fast lookup for classic CoS template selection
- 2 to disable checks for ambiguous pointer and classic CoS definitions

Ambiguous definitions result when more than one value could be returned for the same attribute of the same entry. When checking remains enabled, Directory Server logs an informational message upon encountering such an ambiguity, provided you have set the log level to allow plug-ins to log informational messages.

- 3 to disable both

Restart Directory Server for modifications to take effect.

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**COUNTRY STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Country String Syntax

**DN of Configuration Entry**

`cn=Country String Syntax,cn=plugins,cn=config`

**Description**

Syntax for handling countries.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**DISTINGUISHED NAME SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Distinguished Name Syntax

**DN of Configuration Entry**

cn=Distinguished Name Syntax,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**DSML FRONTEND SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Frontend

**DN of Configuration Entry**

cn=DSMLv2-SOAP-HTTP,cn=frontends,cn=plugins, cn=config

**Description**

Enables you to access the directory using DSML v2 over SOAP/HTTP.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

ds-hdsml-soapschemalocation

ds-hdsml-dsmlschemalocation

**Dependencies**

None

**Performance Related Information**

None

**GENERALIZED TIME SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Generalized Time Syntax

**DN of Configuration Entry**

cn=Generalized Time Syntax,cn=plugins,cn=config

**Description**

Syntax for dealing with dates, times, and time zones.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Further Information**

The Generalized Time String consists of the four digit year, two digit month (for example, 01 for January), two digit day, two digit hour, two digit minute, two digit second, an optional decimal part of a second and a time zone indication. We strongly recommend that you use the Z time zone indication (Greenwich Mean Time).

**INTEGER SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Integer Syntax

**DN of Configuration Entry**

cn=Integer Syntax,cn=plugins,cn=config

**Description**

Syntax for handling integers.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**INTERNATIONALIZATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Internationalization Plugin

**DN of Configuration Entry**

cn=Internationalization Plugin,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None. In contrast to previous versions of Directory Server, the collation orders and locales used by the internationalization plug-in are now stored in the configuration.

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**LDBM DATABASE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ldbm database plug-in

**DN of Configuration Entry**

cn=ldbm database plug-in,cn=plugins,cn=config

**Description**

Implements local databases.

**Configurable Options**

None

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**MULTIMASTER REPLICATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Multimaster Replication Plugin

**DN of Configuration Entry**

`cn=Multimaster Replication plugin,cn=plugins, cn=config`

**Description**

Enables replication between two Directory Server suffixes.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

database

**Performance Related Information**

None

**Further Information**

You can turn this plug-in off if you have only one server, which will never replicate.

**OCTET STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Octet String Syntax

**DN of Configuration Entry**

`cn=Octet String Syntax,cn=plugins,cn=config`

**Description**

Syntax for handling octet strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CLEAR PASSWORD STORAGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

CLEAR

**DN of Configuration Entry**

cn=CLEAR,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

CLEAR password storage scheme used for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CRYPT PASSWORD STORAGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

CRYPT

**DN of Configuration Entry**

cn=CRYPT,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

CRYPT password storage scheme used for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**NS-MTA-MD5 PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

NS-MTA-MD5

**DN of Configuration Entry**

cn=NS-MTA-MD5,cn>Password Storage Schemes, cn=plugins,cn=config

**Description**

NS-MTA-MD5 password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Further Information**

You can no longer choose to encrypt passwords using the NS-MTA-MD5 password storage scheme. The storage scheme is still present, but for backward compatibility only. The data in your directory still contains passwords encrypted with the NS-MTA-MD5 password storage scheme.

**RMCE PASSWORD STORAGE SCHEME PLUG-IN**

This password storage scheme plug-in is used for example by the administration framework and is reserved for internal use.

**SHA PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

SHA

**DN of Configuration Entry**

cn=SHA,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

SHA password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

If there are no passwords encrypted using the SHA password storage scheme, you may turn this plug-in off. If you want to encrypt your password with the SHA password storage scheme, choose SSHA instead. SSHA is a far more secure option.

**SSHA PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

SSHA

**DN of Configuration Entry**`cn=SSHA,cn>Password Storage Schemes,cn=plugins,cn=config`**Description**

SSHA password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**STRONG PASSWORD CHECK PLUG-IN**

When Directory Server is configured to check password quality, and this plug-in is enabled, the plug-in checks the following each time a password is added or modified.

- Clear text password values contain the classes of characters specified by the configuration.
- Clear text password values do not contain any sequence of four characters present in the dictionary file specified by the configuration.

Hashed password values such as

`{SSHA}0Ri1g2yq1H3GTZcuRQ4uS22syCQLBKAU2ypLSw==` are not checked.

Consider the following aspects of this plug-in.

#### **Plug-In Name**

Strong Password Checking plug-in

#### **DN of Configuration Entry**

`cn=Strong Password Check,cn=plugins,cn=config`

#### **Configurable options and arguments**

on | off

`nsslapd-pluginarg0`, which takes an integer representing a mask of values representing the character classes that must be present in a valid password. Set `nsslapd-pluginarg0` to one of or a sum of the following values, not counting the special values 16 and 17.

- 1 means the password must contain special characters.
- 2 means the password must contain numeric characters.
- 4 means the password must contain upper case characters.
- 8 means the password must contain lower case characters.
- 16 is a special value meaning at least three of the four character classes.
- 17 is a special value meaning at least two of the four character classes.

The default setting is 15.

`nsslapd-pluginarg1`, which takes the absolute file system path to an ASCII dictionary file. If the argument is missing, the dictionary check is skipped. The plug-in does not initialize and Directory Server does not start if the value of this attribute is invalid or refers to an inaccessible file.

#### **Default settings**

off

#### **Dependencies**

Default password file,

`install-path/resources/plugins/words-english-big.txt`

## **POSTAL ADDRESS STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

#### **Plug-In Name**

Postal Address Syntax

#### **DN of Configuration Entry**

`cn=Postal Address Syntax,cn=plugins,cn=config`

#### **Description**

Syntax used for handling postal addresses.

#### **Configurable Options**

on | off

#### **Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**PTA PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Pass Through Authentication

**DN of Configuration Entry**

`cn=Pass Through Authentication,cn=plugins, cn=config`

**Description**

Enables pass-through authentication, the mechanism that allows one directory to consult another to authenticate bind requests.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

The LDAP URL to the configuration directory.

`nsslapd-pluginarg0: ldap://config.example.com/o=example`

**Dependencies**

None

**REFERENTIAL INTEGRITY POSTOPERATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Referential Integrity Postoperation

**DN of Configuration Entry**

`cn=Referential Integrity Postoperation, cn=plugins,cn=config`

**Description**

Enables the server to ensure referential integrity.

All attributes in all databases that are used by the referential integrity plug-in must be indexed. The indexes need to be created in the configuration of all the databases.

When the retro change log is enabled, the `cn=changelog` suffix must be indexed.

**Configurable Options**

All configuration and on | off

**Default Setting**

off

**Configurable Arguments**

When enabled, the post operation Referential Integrity plug-in performs integrity updates on the `member`, `uniquemember`, `owner`, and `seeAlso` attributes immediately after a delete or rename operation. You can reconfigure the plug-in to perform integrity checks on all other attributes.

The following arguments are configurable:

1. (`nsslapd-pluginarg0`) Check for referential integrity
  - 1 = no check for referential integrity
  - 0 = check for referential integrity is performed immediately
  - positive integer = request for referential integrity is queued and processed at a later stage. This positive integer serves as a wake-up call for the thread to process the request, at intervals corresponding to the integer specified.
2. (`nsslapd-pluginarg1`) Log file for storing the change, for example `/local/dsInst/logs/referint`
3. (`nsslapd-pluginarg2`) Reserved for future use.
4. (Other `nsslapd-pluginarg*` attributes) Attribute names to be checked for referential integrity.

**Dependencies**

database type

**Tuning Recommendations**

Do the following when you use the referential integrity plug-in in a multi-master replication environment:

- Enable the referential integrity plug-in on all servers containing master replicas
- Enable the referential integrity plug-in with the same configuration on every master

Set the first argument to a positive value, such as 10, meaning ten seconds, to ensure that work performed by this plug-in happens asynchronously, rather than synchronously.

When enabling the plug-in, also create equality indexes for all attributes configured for use with the plug-in. The plug-in uses such indexes when searching for entries to update. Without equality indexes for the attributes it uses, the plug-in must perform costly unindexed searches that have negative impact on performance.

**RETRO CHANGE LOG PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Retro Changelog Plugin

**DN of Configuration Entry**`cn=Retro Changelog Plugin,cn=plugins,cn=config`**Description**

Used by LDAP clients for maintaining application compatibility with Directory Server 4.x versions.

Maintains a log of all changes occurring in Directory Server. The retro change log offers the same functionality as the changelog in the 4.x versions of Directory Server.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

The following arguments can be configured for the retro change log plug-in:

- `nsslapd-pluginarg0`: `-ignore_attributes` configures the retro change log plug-in to ignore attributes specified by the following `nsslapd-pluginarg`. This argument is configured by default.
- `nsslapd-pluginarg1`: `copyingFrom` specifies a list of attributes to be ignored by the preceding `nsslapd-pluginarg`. This argument is configured by default.
- `nsslapd-pluginarg2`: `suffixes="suffix1","suffix2"` configures the retro change log to record updates to specified suffixes only
- `nsslapd-pluginarg3`: `deletedEntryAttributes=attribute1,attribute2` configures the retro change log to record specified attributes of an entry when that entry is deleted

**Dependencies**

None

**Performance Related Information**

May slow down Directory Server performance.

**Example Configuration**

```
dn: cn=Retro Changelog Plugin,cn=plugins,cn=config
objectClass: top
objectClass: nsSlapdPlugin
objectClass: ds-signedPlugin
objectClass: extensibleObject
cn: Retro Changelog Plugin
nsslapd-pluginPath: /opt/SUNWdsee7/lib/sparcv9/retrocl-plugin.so
nsslapd-pluginInitfunc: retrocl_plugin_init
nsslapd-pluginType: object
nsslapd-plugin-depends-on-type: database
nsslapd-pluginarg0: -ignore_attributes
nsslapd-pluginarg1: copyingFrom
nsslapd-pluginarg2: suffixes="ou=people","dc=example","dc=com"
nsslapd-pluginarg3: deletedEntryAttributes="objectclass","employeenumber"
nsslapd-changelogdir: /local/dsInst/db/changelog
nsslapd-pluginEnabled: on
nsslapd-pluginId: retrocl
nsslapd-pluginVersion: 11.1.1.5.0
nsslapd-pluginVendor: Sun Microsystems, Inc.
nsslapd-pluginDescription: Retrocl Plugin
ds-pluginSignatureState: valid signature
```

**ROLES PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Roles Plugin

**DN of Configuration Entry**

cn=Roles Plugin,cn=plugins,cn=config

**Description**

Enables the use of roles in Directory Server.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

State Change Plugin

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**STATE CHANGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

State Change Plugin

**DN of Configuration Entry**

cn=State Change Plugin,cn=plugins,cn=config

**Description**

State change notification service plug-in for detecting updates, such as configuration changes, and triggering callbacks when updates happen.

This plug-in is used internally by the roles plug-in.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**SUBTREE ENTRY COUNTER PLUG-INS**

Consider the following aspects of this plug-in.

**Plug-In Name**Subtree Entry Counter For *ObjectClass*

**DN of Configuration Entry**

cn=Subtree Entry Counter for *ObjectClass*, cn=plugins, cn=config

**Description**

Maintain a count of entries with a particular object class. The following plug-ins are provided.

- Subtree entry counter for departments in domains
- Subtree entry counter for domains within a domain
- Subtree entry counter for mail lists
- Subtree entry counter for nested departments
- Subtree entry counter for total domains
- Subtree entry counter for users

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

These plug-ins are provided for use with Messaging Server only, and are disabled by default. Leave these plug-ins disabled unless your Messaging Server requires them.

**Counter Attributes Maintained**

`nsNumDepts`

Either the number of departments within a domain, or the number of departments within a department (nested departments), depending on the DN of the entry.

`nsNumDomains`

Either the number of total domains, or the number of domains within a domain or nested domain, depending on the DN of the entry.

`nsNumMailLists`

Number of mail lists.

**TELEPHONE SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Telephone Syntax

**DN of Configuration Entry**

cn=Telephone Syntax, cn=plugins, cn=config

**Description**

Syntax for handling telephone numbers.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**UID UNIQUENESS PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

UID Uniqueness

**DN of Configuration Entry**

cn=UID Uniqueness,cn=plugins,cn=config

**Description**

Checks that the values of specified attributes are unique each time a modification occurs on an entry.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

You may configure this plug-in in either of two different ways.

1. Specify attributes that must be unique for a series of one or more subtrees identified by DNs. For example, to specify that `employeeNumber` and `uid` attribute values must be unique across both `o=org1,dc=example,dc=com` and `o=org2,dc=example,dc=com`, configure the arguments in the configuration entry as follows:

```
nsslapd-pluginarg0: employeeNumber
nsslapd-pluginarg1: uid
nsslapd-pluginarg2: o=org1,dc=example,dc=com
nsslapd-pluginarg3: o=org2,dc=example,dc=com
```

2. You specify attributes that must be unique inside congruent subtrees, optionally only on entries of a specified object class. For example, to specify that `employeeNumber` and `uid` attribute values must be unique in either `o=org1,dc=example,dc=com` or `o=org2,dc=example,dc=com`, but only on entries of the `inetOrgPerson` object class, configure the arguments in the configuration entry as follows:

```
nsslapd-pluginarg0: employeeNumber
nsslapd-pluginarg1: uid
```

```
nsslapd-pluginarg2: MarkerObjectClass="organization"
RequiredObjectClass="inetOrgPerson"
```

**Dependencies**

database type

**Performance Related Information**

Directory Server provides the UID Uniqueness plug-in by default. To ensure unique values for other attributes, you can create instances of the UID Uniqueness plug-in for those attributes.

The UID Uniqueness plug-in may slow down Directory Server performance.

**URI PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

URI Syntax

**DN of Configuration Entry**

cn=URI Syntax, cn=plugins, cn=config

**Description**

Syntax for handling URIs (Unique Resource Identifiers) including URLs (Unique Resource Locators.)

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**

[dse.ldif\(4\)](#)

---

## nsslapd-pluginPath

Directory Server plug-in legacy configuration

### Description

The `nsslapd-plugin` attribute on `cn=config` is multi-valued, read-only attribute lists the syntaxes and matching rules loaded by the server. This manual page covers server plug-in configuration, rather than the `nsslapd-plugin` attribute.

This manual page provides an overview of legacy configuration information for server plug-ins. This manual page covers the individual plug-in configuration entry attributes. Also, this manual page covers the plug-ins provided with Directory Server, including configurable options, configurable arguments, default setting, dependencies, general performance related information, and further reading.

---



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**Note:** In most circumstances, you configure plug-in functionality using the `dsconf(1M)` command. See [plugin\(5DSCONF\)](#) for a list of configurable properties.

---



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### ATTRIBUTES FOR PLUG-IN CONFIGURATION ENTRIES

The following list covers each plug-in configuration entry attribute.

#### **nsslapd-plugin-depends-on-named**

This is a multivalued attribute, used to ensure that plug-ins are called by the server in the correct order. It takes a value that corresponds to the `cn` value of a plug-in. The plug-in whose `cn` value matches one of the values below it is started by the server prior to this plug-in. If the plug-in does not exist, the server fails to start.

**Entry DN**

`cn=pluginName,cn=plugins, cn=config`

**Valid Range**

Plug-in name

**Default Value**

None

**Syntax**

DirectoryString

**Example**

`nsslapd-plugin-depends-on-named: Class of Service`

#### **nsslapd-plugin-depends-on-type**

This is a multivalued attribute, used to ensure that plug-ins are called by the server in the correct order. It takes a value that corresponds to the type of a plug-in, contained in the attribute `nsslapd-pluginType`, and requires that plug-ins of that type are started before the present plug-in.

**Entry DN**

`cn=pluginName,cn=plugins, cn=config`

**Valid Range**

Plug-in type

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-plugin-depends-on-type: database

**nsslapd-pluginDescription**

Provides a description of the plug-in.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any DirectoryString

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginDescription: acl access check plug-in

**nsslapd-pluginEnabled**

Specifies whether or not the plug-in is enabled. This attribute can be changed over protocol, but will only take effect when the server is next restarted.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

on | off

**Default Value**

on

**Syntax**

DirectoryString

**Example**

nsslapd-pluginEnabled: on

**nsslapd-pluginId**

Specifies the plug-in ID.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in ID.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginId: chaining database

nsslapd-pluginInitfunc

Specifies the plug-in function to be initiated.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in function.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginInitfunc: NS7bitAttr\_Init

nsslapd-pluginPath

Specifies the full path to the plug-in.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid path

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginPath: /opt/SUNWdsee7/lib/sparcv9/uid-plugin.so

nsslapd-pluginType

Specifies the plug-in type.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in type.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginType: preoperation

**nsslapd-pluginVendor**

Specifies the vendor of the plug-in.

**Entry DN**cn=*pluginName*, cn=plugins, cn=config**Valid Range**

Any approved plug-in vendor.

**Default Value**

Sun Microsystems, Inc.

**Syntax**

DirectoryString

**Example**

nsslapd-pluginVendor: Sun Microsystems, Inc.

**nsslapd-pluginVersion**

Specifies the plug-in version.

**Entry DN**cn=*pluginName*, cn=plugins, cn=config**Valid Range**

Any valid plug-in version.

**Default Value**

Product version

**Syntax**

DirectoryString

**Example**

nsslapd-pluginVersion: 11.1.1.5.0

**7-BIT CHECK PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

7-Bit Check (NS7bitAttr)

**DN of Configuration Entry**

cn=7-bit check, cn=plugins, cn=config

**Description**

Checks certain attributes are seven-bit clean.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

List of attributes, `uid mail userpassword`, followed by a comma, and then by the suffix or suffixes on which the check is to occur.

**Dependencies**

None

**Performance Related Information**

None

**Further Information**

If your Directory Server uses non-ASCII characters such as Japanese and other languages for some attributes, remove those attributes from the list of attributes checked by this plug-in.

When adding or modifying an attribute value checked by this plug-in, and the new value violates the seven-bit check, the client receives a `LDAP_CONSTRAINT_VIOLATION (19)` return code, and a message such as the following: `Value of attribute attr contains extended (8-bit) characters: value`

**ACL PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ACL Plugin

**DN of Configuration Entry**

`cn=ACL Plugin,cn=plugins,cn=config`

**Description**

ACL access check plug-in

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**ACL PREOPERATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ACL preoperation

**DN of Configuration Entry**

cn=ACL\_preoperation,cn=plugins,cn=config

**Description**

ACL access check plug-in.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

Database

**Performance Related Information**

Leave this plug-in running at all times.

**BINARY SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Binary Syntax

**DN of Configuration Entry**

cn=Binary\_Syntax,cn=plugins,cn=config

**Description**

Syntax for handling binary data.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**BOOLEAN SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Boolean Syntax

**DN of Configuration Entry**

cn=Boolean\_Syntax,cn=plugins,cn=config

**Description**

Syntax for handling booleans.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CASE EXACT STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Case Exact String Syntax

**DN of Configuration Entry**

cn=Case Exact String Syntax,cn=plugins,cn=config

**Description**

Syntax for handling case-sensitive strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CASE IGNORE STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Case Ignore String Syntax

**DN of Configuration Entry**

cn=Case Ignore String Syntax,cn=plugins,cn=config

**Description**

Syntax for handling case-insensitive strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CHAINING DATABASE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Chaining Database

**DN of Configuration Entry**

cn=Chaining database,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CLASS OF SERVICE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Class of Service

**DN of Configuration Entry**

cn=Class of Service,cn=plugins,cn=config

**Description**

Allows for sharing of attributes between entries.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

Set the `nsslapd-pluginarg0` attribute to:

- 0 (default) to enable fast lookup of classic CoS templates
- 1 to disable fast lookup for classic CoS template selection
- 2 to disable checks for ambiguous pointer and classic CoS definitions

Ambiguous definitions result when more than one value could be returned for the same attribute of the same entry. When checking remains enabled, Directory Server logs an informational message upon encountering such an ambiguity, provided you have set the log level to allow plug-ins to log informational messages.

- 3 to disable both

Restart Directory Server for modifications to take effect.

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**COUNTRY STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Country String Syntax

**DN of Configuration Entry**

`cn=Country String Syntax, cn=plugins, cn=config`

**Description**

Syntax for handling countries.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**DISTINGUISHED NAME SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Distinguished Name Syntax

**DN of Configuration Entry**

cn=Distinguished Name Syntax,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**DSML FRONTEND SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Frontend

**DN of Configuration Entry**

cn=DSMLv2-SOAP-HTTP,cn=frontends,cn=plugins, cn=config

**Description**

Enables you to access the directory using DSML v2 over SOAP/HTTP.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

ds-hdsml-soapschemalocation

ds-hdsml-dsmlschemalocation

**Dependencies**

None

**Performance Related Information**

None

**GENERALIZED TIME SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Generalized Time Syntax

**DN of Configuration Entry**

cn=Generalized Time Syntax,cn=plugins,cn=config

**Description**

Syntax for dealing with dates, times, and time zones.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Further Information**

The Generalized Time String consists of the four digit year, two digit month (for example, 01 for January), two digit day, two digit hour, two digit minute, two digit second, an optional decimal part of a second and a time zone indication. We strongly recommend that you use the Z time zone indication (Greenwich Mean Time).

**INTEGER SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Integer Syntax

**DN of Configuration Entry**

cn=Integer Syntax,cn=plugins,cn=config

**Description**

Syntax for handling integers.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**INTERNATIONALIZATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Internationalization Plugin

**DN of Configuration Entry**

cn=Internationalization Plugin,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None. In contrast to previous versions of Directory Server, the collation orders and locales used by the internationalization plug-in are now stored in the configuration.

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**LDBM DATABASE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ldbm database plug-in

**DN of Configuration Entry**

cn=ldbm database plug-in,cn=plugins,cn=config

**Description**

Implements local databases.

**Configurable Options**

None

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**MULTIMASTER REPLICATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Multimaster Replication Plugin

**DN of Configuration Entry**

`cn=Multimaster Replication plugin,cn=plugins, cn=config`

**Description**

Enables replication between two Directory Server suffixes.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

database

**Performance Related Information**

None

**Further Information**

You can turn this plug-in off if you have only one server, which will never replicate.

**OCTET STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Octet String Syntax

**DN of Configuration Entry**

`cn=Octet String Syntax,cn=plugins,cn=config`

**Description**

Syntax for handling octet strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CLEAR PASSWORD STORAGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

CLEAR

**DN of Configuration Entry**

cn=CLEAR,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

CLEAR password storage scheme used for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CRYPT PASSWORD STORAGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

CRYPT

**DN of Configuration Entry**

cn=CRYPT,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

CRYPT password storage scheme used for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**NS-MTA-MD5 PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

NS-MTA-MD5

**DN of Configuration Entry**

cn=NS-MTA-MD5,cn>Password Storage Schemes, cn=plugins,cn=config

**Description**

NS-MTA-MD5 password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Further Information**

You can no longer choose to encrypt passwords using the NS-MTA-MD5 password storage scheme. The storage scheme is still present, but for backward compatibility only. The data in your directory still contains passwords encrypted with the NS-MTA-MD5 password storage scheme.

**RMCE PASSWORD STORAGE SCHEME PLUG-IN**

This password storage scheme plug-in is used for example by the administration framework and is reserved for internal use.

**SHA PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

SHA

**DN of Configuration Entry**

cn=SHA,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

SHA password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

If there are no passwords encrypted using the SHA password storage scheme, you may turn this plug-in off. If you want to encrypt your password with the SHA password storage scheme, choose SSHA instead. SSHA is a far more secure option.

**SSHA PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

SSHA

**DN of Configuration Entry**`cn=SSHA,cn>Password Storage Schemes,cn=plugins, cn=config`**Description**

SSHA password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**STRONG PASSWORD CHECK PLUG-IN**

When Directory Server is configured to check password quality, and this plug-in is enabled, the plug-in checks the following each time a password is added or modified.

- Clear text password values contain the classes of characters specified by the configuration.
- Clear text password values do not contain any sequence of four characters present in the dictionary file specified by the configuration.

Hashed password values such as

{SSHA}0Ri1g2yq1H3GTZcuRQ4uS22syCQLBKAU2ypLSw== are not checked.

Consider the following aspects of this plug-in.

**Plug-In Name**

Strong Password Checking plug-in

**DN of Configuration Entry**

cn=Strong Password Check,cn=plugins,cn=config

**Configurable options and arguments**

on | off

nsslapd-pluginarg0, which takes an integer representing a mask of values representing the character classes that must be present in a valid password. Set nsslapd-pluginarg0 to one of or a sum of the following values, not counting the special values 16 and 17.

- 1 means the password must contain special characters.
- 2 means the password must contain numeric characters.
- 4 means the password must contain upper case characters.
- 8 means the password must contain lower case characters.
- 16 is a special value meaning at least three of the four character classes.
- 17 is a special value meaning at least two of the four character classes.

The default setting is 15.

nsslapd-pluginarg1, which takes the absolute file system path to an ASCII dictionary file. If the argument is missing, the dictionary check is skipped. The plug-in does not initialize and Directory Server does not start if the value of this attribute is invalid or refers to an inaccessible file.

**Default settings**

off

**Dependencies**

Default password file,  
*install-path/resources/plugins/words-english-big.txt*

**POSTAL ADDRESS STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Postal Address Syntax

**DN of Configuration Entry**

cn=Postal Address Syntax,cn=plugins,cn=config

**Description**

Syntax used for handling postal addresses.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**PTA PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Pass Through Authentication

**DN of Configuration Entry**

`cn=Pass Through Authentication,cn=plugins, cn=config`

**Description**

Enables pass-through authentication, the mechanism that allows one directory to consult another to authenticate bind requests.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

The LDAP URL to the configuration directory.

`nsslapd-pluginarg0: ldap://config.example.com/o=example`

**Dependencies**

None

**REFERENTIAL INTEGRITY POSTOPERATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Referential Integrity Postoperation

**DN of Configuration Entry**

`cn=Referential Integrity Postoperation, cn=plugins,cn=config`

**Description**

Enables the server to ensure referential integrity.

All attributes in all databases that are used by the referential integrity plug-in must be indexed. The indexes need to be created in the configuration of all the databases. When the retro change log is enabled, the `cn=changelog` suffix must be indexed.

**Configurable Options**

All configuration and on | off

**Default Setting**

off

**Configurable Arguments**

When enabled, the post operation Referential Integrity plug-in performs integrity updates on the `member`, `uniquemember`, `owner`, and `seeAlso` attributes immediately after a delete or rename operation. You can reconfigure the plug-in to perform integrity checks on all other attributes.

The following arguments are configurable:

1. (`nsslapd-pluginarg0`) Check for referential integrity
  - 1 = no check for referential integrity
  - 0 = check for referential integrity is performed immediately
  - positive integer = request for referential integrity is queued and processed at a later stage. This positive integer serves as a wake-up call for the thread to process the request, at intervals corresponding to the integer specified.
2. (`nsslapd-pluginarg1`) Log file for storing the change, for example `/local/dsInst/logs/referint`
3. (`nsslapd-pluginarg2`) Reserved for future use.
4. (Other `nsslapd-pluginarg*` attributes) Attribute names to be checked for referential integrity.

**Dependencies**

database type

**Tuning Recommendations**

Do the following when you use the referential integrity plug-in in a multi-master replication environment:

- Enable the referential integrity plug-in on all servers containing master replicas
- Enable the referential integrity plug-in with the same configuration on every master

Set the first argument to a positive value, such as 10, meaning ten seconds, to ensure that work performed by this plug-in happens asynchronously, rather than synchronously.

When enabling the plug-in, also create equality indexes for all attributes configured for use with the plug-in. The plug-in uses such indexes when searching for entries to update. Without equality indexes for the attributes it uses, the plug-in must perform costly unindexed searches that have negative impact on performance.

**RETRO CHANGE LOG PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Retro Changelog Plugin

**DN of Configuration Entry**

cn=Retro Changelog Plugin,cn=plugins,cn=config

**Description**

Used by LDAP clients for maintaining application compatibility with Directory Server 4.x versions.

Maintains a log of all changes occurring in Directory Server. The retro change log offers the same functionality as the changelog in the 4.x versions of Directory Server.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

The following arguments can be configured for the retro change log plug-in:

- `nsslapd-pluginarg0`: `-ignore_attributes` configures the retro change log plug-in to ignore attributes specified by the following `nsslapd-pluginarg`. This argument is configured by default.
- `nsslapd-pluginarg1`: `copyingFrom` specifies a list of attributes to be ignored by the preceding `nsslapd-pluginarg`. This argument is configured by default.
- `nsslapd-pluginarg2`: `suffixes="suffix1", "suffix2"` configures the retro change log to record updates to specified suffixes only
- `nsslapd-pluginarg3`: `deletedEntryAttributes=attribute1, attribute2` configures the retro change log to record specified attributes of an entry when that entry is deleted

**Dependencies**

None

**Performance Related Information**

May slow down Directory Server performance.

**Example Configuration**

```
dn: cn=Retro Changelog Plugin,cn=plugins,cn=config
objectClass: top
objectClass: nsSlapdPlugin
objectClass: ds-signedPlugin
objectClass: extensibleObject
cn: Retro Changelog Plugin
nsslapd-pluginPath: /opt/SUNWdsee7/lib/sparcv9/retrocl-plugin.so
nsslapd-pluginInitfunc: retrocl_plugin_init
nsslapd-pluginType: object
nsslapd-plugin-depends-on-type: database
nsslapd-pluginarg0: -ignore_attributes
nsslapd-pluginarg1: copyingFrom
nsslapd-pluginarg2: suffixes="ou=people", "dc=example", "dc=com"
nsslapd-pluginarg3: deletedEntryAttributes="objectclass", "employeenumber"
nsslapd-changelogdir: /local/dsInst/db/changelog
nsslapd-pluginEnabled: on
nsslapd-pluginId: retrocl
nsslapd-pluginVersion: 11.1.1.5.0
nsslapd-pluginVendor: Sun Microsystems, Inc.
nsslapd-pluginDescription: Retrocl Plugin
ds-pluginSignatureState: valid signature
```

**ROLES PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Roles Plugin

**DN of Configuration Entry**

cn=Roles Plugin,cn=plugins,cn=config

**Description**

Enables the use of roles in Directory Server.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

State Change Plugin

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**STATE CHANGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

State Change Plugin

**DN of Configuration Entry**

cn=State Change Plugin,cn=plugins,cn=config

**Description**

State change notification service plug-in for detecting updates, such as configuration changes, and triggering callbacks when updates happen.

This plug-in is used internally by the roles plug-in.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**SUBTREE ENTRY COUNTER PLUG-INS**

Consider the following aspects of this plug-in.

**Plug-In Name**Subtree Entry Counter For *ObjectClass*

**DN of Configuration Entry**

cn=Subtree Entry Counter for *ObjectClass*,cn=plugins, cn=config

**Description**

Maintain a count of entries with a particular object class. The following plug-ins are provided.

- Subtree entry counter for departments in domains
- Subtree entry counter for domains within a domain
- Subtree entry counter for mail lists
- Subtree entry counter for nested departments
- Subtree entry counter for total domains
- Subtree entry counter for users

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

These plug-ins are provided for use with Messaging Server only, and are disabled by default. Leave these plug-ins disabled unless your Messaging Server requires them.

**Counter Attributes Maintained**

*nsNumDepts*

Either the number of departments within a domain, or the number of departments within a department (nested departments), depending on the DN of the entry.

*nsNumDomains*

Either the number of total domains, or the number of domains within a domain or nested domain, depending on the DN of the entry.

*nsNumMailLists*

Number of mail lists.

**TELEPHONE SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Telephone Syntax

**DN of Configuration Entry**

cn=Telephone Syntax,cn=plugins,cn=config

**Description**

Syntax for handling telephone numbers.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**UID UNIQUENESS PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

UID Uniqueness

**DN of Configuration Entry**

cn=UID Uniqueness,cn=plugins,cn=config

**Description**

Checks that the values of specified attributes are unique each time a modification occurs on an entry.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

You may configure this plug-in in either of two different ways.

1. Specify attributes that must be unique for a series of one or more subtrees identified by DNs. For example, to specify that `employeeNumber` and `uid` attribute values must be unique across both `o=org1,dc=example,dc=com` and `o=org2,dc=example,dc=com`, configure the arguments in the configuration entry as follows:

```
nsslapd-pluginarg0: employeeNumber
nsslapd-pluginarg1: uid
nsslapd-pluginarg2: o=org1,dc=example,dc=com
nsslapd-pluginarg3: o=org2,dc=example,dc=com
```

2. You specify attributes that must be unique inside congruent subtrees, optionally only on entries of a specified object class. For example, to specify that `employeeNumber` and `uid` attribute values must be unique in either `o=org1,dc=example,dc=com` or `o=org2,dc=example,dc=com`, but only on entries of the `inetOrgPerson` object class, configure the arguments in the configuration entry as follows:

```
nsslapd-pluginarg0: employeeNumber
nsslapd-pluginarg1: uid
```

```
nsslapd-pluginarg2: MarkerObjectClass="organization"  
RequiredObjectClass="inetOrgPerson"
```

**Dependencies**

database type

**Performance Related Information**

Directory Server provides the UID Uniqueness plug-in by default. To ensure unique values for other attributes, you can create instances of the UID Uniqueness plug-in for those attributes.

The UID Uniqueness plug-in may slow down Directory Server performance.

**URI PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

URI Syntax

**DN of Configuration Entry**

cn=URI Syntax, cn=plugins, cn=config

**Description**

Syntax for handling URIs (Unique Resource Identifiers) including URLs (Unique Resource Locators.)

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**

[dse.ldif\(4\)](#)

---

## nsslapd-pluginType

Directory Server plug-in legacy configuration

### Description

The `nsslapd-plugin` attribute on `cn=config` is multi-valued, read-only attribute lists the syntaxes and matching rules loaded by the server. This manual page covers server plug-in configuration, rather than the `nsslapd-plugin` attribute.

This manual page provides an overview of legacy configuration information for server plug-ins. This manual page covers the individual plug-in configuration entry attributes. Also, this manual page covers the plug-ins provided with Directory Server, including configurable options, configurable arguments, default setting, dependencies, general performance related information, and further reading.

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**Note:** In most circumstances, you configure plug-in functionality using the `dsconf(1M)` command. See [plugin\(5DSCONF\)](#) for a list of configurable properties.

---



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### ATTRIBUTES FOR PLUG-IN CONFIGURATION ENTRIES

The following list covers each plug-in configuration entry attribute.

#### **nsslapd-plugin-depends-on-named**

This is a multivalued attribute, used to ensure that plug-ins are called by the server in the correct order. It takes a value that corresponds to the `cn` value of a plug-in. The plug-in whose `cn` value matches one of the values below it is started by the server prior to this plug-in. If the plug-in does not exist, the server fails to start.

**Entry DN**

`cn=pluginName,cn=plugins, cn=config`

**Valid Range**

Plug-in name

**Default Value**

None

**Syntax**

DirectoryString

**Example**

`nsslapd-plugin-depends-on-named: Class of Service`

#### **nsslapd-plugin-depends-on-type**

This is a multivalued attribute, used to ensure that plug-ins are called by the server in the correct order. It takes a value that corresponds to the type of a plug-in, contained in the attribute `nsslapd-pluginType`, and requires that plug-ins of that type are started before the present plug-in.

**Entry DN**

`cn=pluginName,cn=plugins, cn=config`

**Valid Range**

Plug-in type

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-plugin-depends-on-type: database

**nsslapd-pluginDescription**

Provides a description of the plug-in.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any DirectoryString

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginDescription: acl access check plug-in

**nsslapd-pluginEnabled**

Specifies whether or not the plug-in is enabled. This attribute can be changed over protocol, but will only take effect when the server is next restarted.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

on | off

**Default Value**

on

**Syntax**

DirectoryString

**Example**

nsslapd-pluginEnabled: on

**nsslapd-pluginId**

Specifies the plug-in ID.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in ID.

**Default Value**

None

**Syntax**

DirectoryString

**Example**`nsslapd-pluginId: chaining database``nsslapd-pluginInitfunc`

Specifies the plug-in function to be initiated.

**Entry DN**`cn=pluginName, cn=plugins, cn=config`**Valid Range**

Any valid plug-in function.

**Default Value**

None

**Syntax**

DirectoryString

**Example**`nsslapd-pluginInitfunc: NS7bitAttr_Init``nsslapd-pluginPath`

Specifies the full path to the plug-in.

**Entry DN**`cn=pluginName, cn=plugins, cn=config`**Valid Range**

Any valid path

**Default Value**

None

**Syntax**

DirectoryString

**Example**`nsslapd-pluginPath: /opt/SUNWdsee7/lib/sparcv9/uid-plugin.so``nsslapd-pluginType`

Specifies the plug-in type.

**Entry DN**`cn=pluginName, cn=plugins, cn=config`**Valid Range**

Any valid plug-in type.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginType: preoperation

**nsslapd-pluginVendor**

Specifies the vendor of the plug-in.

**Entry DN**cn=*pluginName*, cn=plugins, cn=config**Valid Range**

Any approved plug-in vendor.

**Default Value**

Sun Microsystems, Inc.

**Syntax**

DirectoryString

**Example**

nsslapd-pluginVendor: Sun Microsystems, Inc.

**nsslapd-pluginVersion**

Specifies the plug-in version.

**Entry DN**cn=*pluginName*, cn=plugins, cn=config**Valid Range**

Any valid plug-in version.

**Default Value**

Product version

**Syntax**

DirectoryString

**Example**

nsslapd-pluginVersion: 11.1.1.5.0

**7-BIT CHECK PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

7-Bit Check (NS7bitAttr)

**DN of Configuration Entry**

cn=7-bit check, cn=plugins, cn=config

**Description**

Checks certain attributes are seven-bit clean.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

List of attributes, `uid mail userpassword`, followed by a comma, and then by the suffix or suffixes on which the check is to occur.

**Dependencies**

None

**Performance Related Information**

None

**Further Information**

If your Directory Server uses non-ASCII characters such as Japanese and other languages for some attributes, remove those attributes from the list of attributes checked by this plug-in.

When adding or modifying an attribute value checked by this plug-in, and the new value violates the seven-bit check, the client receives a `LDAP_CONSTRAINT_VIOLATION (19)` return code, and a message such as the following: `Value of attribute attr contains extended (8-bit) characters: value`

**ACL PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ACL Plugin

**DN of Configuration Entry**`cn=ACL Plugin,cn=plugins,cn=config`**Description**

ACL access check plug-in

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**ACL PREOPERATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ACL preoperation

**DN of Configuration Entry**

cn=ACL\_preoperation,cn=plugins,cn=config

**Description**

ACL access check plug-in.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

Database

**Performance Related Information**

Leave this plug-in running at all times.

**BINARY SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Binary Syntax

**DN of Configuration Entry**

cn=Binary\_Syntax,cn=plugins,cn=config

**Description**

Syntax for handling binary data.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**BOOLEAN SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Boolean Syntax

**DN of Configuration Entry**

cn=Boolean\_Syntax,cn=plugins,cn=config

**Description**

Syntax for handling booleans.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CASE EXACT STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Case Exact String Syntax

**DN of Configuration Entry**

cn=Case Exact String Syntax,cn=plugins,cn=config

**Description**

Syntax for handling case-sensitive strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CASE IGNORE STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Case Ignore String Syntax

**DN of Configuration Entry**

cn=Case Ignore String Syntax,cn=plugins,cn=config

**Description**

Syntax for handling case-insensitive strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CHAINING DATABASE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Chaining Database

**DN of Configuration Entry**

cn=Chaining database,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CLASS OF SERVICE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Class of Service

**DN of Configuration Entry**

cn=Class of Service,cn=plugins,cn=config

**Description**

Allows for sharing of attributes between entries.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

Set the `nsslapd-pluginarg0` attribute to:

- 0 (default) to enable fast lookup of classic CoS templates
- 1 to disable fast lookup for classic CoS template selection
- 2 to disable checks for ambiguous pointer and classic CoS definitions

Ambiguous definitions result when more than one value could be returned for the same attribute of the same entry. When checking remains enabled, Directory Server logs an informational message upon encountering such an ambiguity, provided you have set the log level to allow plug-ins to log informational messages.

- 3 to disable both

Restart Directory Server for modifications to take effect.

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**COUNTRY STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Country String Syntax

**DN of Configuration Entry**

`cn=Country String Syntax,cn=plugins,cn=config`

**Description**

Syntax for handling countries.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**DISTINGUISHED NAME SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Distinguished Name Syntax

**DN of Configuration Entry**

cn=Distinguished Name Syntax,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**DSML FRONTEND SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Frontend

**DN of Configuration Entry**

cn=DSMLv2-SOAP-HTTP,cn=frontends,cn=plugins, cn=config

**Description**

Enables you to access the directory using DSML v2 over SOAP/HTTP.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

ds-hdsml-soapschemalocation

ds-hdsml-dsmlschemalocation

**Dependencies**

None

**Performance Related Information**

None

**GENERALIZED TIME SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Generalized Time Syntax

**DN of Configuration Entry**

cn=Generalized Time Syntax,cn=plugins,cn=config

**Description**

Syntax for dealing with dates, times, and time zones.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Further Information**

The Generalized Time String consists of the four digit year, two digit month (for example, 01 for January), two digit day, two digit hour, two digit minute, two digit second, an optional decimal part of a second and a time zone indication. We strongly recommend that you use the Z time zone indication (Greenwich Mean Time).

**INTEGER SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Integer Syntax

**DN of Configuration Entry**

cn=Integer Syntax,cn=plugins,cn=config

**Description**

Syntax for handling integers.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**INTERNATIONALIZATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Internationalization Plugin

**DN of Configuration Entry**

cn=Internationalization Plugin,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None. In contrast to previous versions of Directory Server, the collation orders and locales used by the internationalization plug-in are now stored in the configuration.

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**LDBM DATABASE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ldbm database plug-in

**DN of Configuration Entry**

cn=ldbm database plug-in,cn=plugins,cn=config

**Description**

Implements local databases.

**Configurable Options**

None

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**MULTIMASTER REPLICATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Multimaster Replication Plugin

**DN of Configuration Entry**

`cn=Multimaster Replication plugin,cn=plugins, cn=config`

**Description**

Enables replication between two Directory Server suffixes.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

database

**Performance Related Information**

None

**Further Information**

You can turn this plug-in off if you have only one server, which will never replicate.

**OCTET STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Octet String Syntax

**DN of Configuration Entry**

`cn=Octet String Syntax,cn=plugins,cn=config`

**Description**

Syntax for handling octet strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CLEAR PASSWORD STORAGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

CLEAR

**DN of Configuration Entry**

cn=CLEAR,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

CLEAR password storage scheme used for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CRYPT PASSWORD STORAGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

CRYPT

**DN of Configuration Entry**

cn=CRYPT,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

CRYPT password storage scheme used for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**NS-MTA-MD5 PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

NS-MTA-MD5

**DN of Configuration Entry**

cn=NS-MTA-MD5,cn>Password Storage Schemes, cn=plugins,cn=config

**Description**

NS-MTA-MD5 password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Further Information**

You can no longer choose to encrypt passwords using the NS-MTA-MD5 password storage scheme. The storage scheme is still present, but for backward compatibility only. The data in your directory still contains passwords encrypted with the NS-MTA-MD5 password storage scheme.

**RMCE PASSWORD STORAGE SCHEME PLUG-IN**

This password storage scheme plug-in is used for example by the administration framework and is reserved for internal use.

**SHA PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

SHA

**DN of Configuration Entry**

cn=SHA,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

SHA password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

If there are no passwords encrypted using the SHA password storage scheme, you may turn this plug-in off. If you want to encrypt your password with the SHA password storage scheme, choose SSHA instead. SSHA is a far more secure option.

**SSHA PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

SSHA

**DN of Configuration Entry**`cn=SSHA,cn>Password Storage Schemes,cn=plugins,cn=config`**Description**

SSHA password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**STRONG PASSWORD CHECK PLUG-IN**

When Directory Server is configured to check password quality, and this plug-in is enabled, the plug-in checks the following each time a password is added or modified.

- Clear text password values contain the classes of characters specified by the configuration.
- Clear text password values do not contain any sequence of four characters present in the dictionary file specified by the configuration.

Hashed password values such as

`{SSHA}0Ri1g2yq1H3GTZcuRQ4uS22syCQLBKAU2ypLSw==` are not checked.

Consider the following aspects of this plug-in.

**Plug-In Name**

Strong Password Checking plug-in

**DN of Configuration Entry**

cn=Strong Password Check,cn=plugins,cn=config

**Configurable options and arguments**

on | off

nsslapd-pluginarg0, which takes an integer representing a mask of values representing the character classes that must be present in a valid password. Set nsslapd-pluginarg0 to one of or a sum of the following values, not counting the special values 16 and 17.

- 1 means the password must contain special characters.
- 2 means the password must contain numeric characters.
- 4 means the password must contain upper case characters.
- 8 means the password must contain lower case characters.
- 16 is a special value meaning at least three of the four character classes.
- 17 is a special value meaning at least two of the four character classes.

The default setting is 15.

nsslapd-pluginarg1, which takes the absolute file system path to an ASCII dictionary file. If the argument is missing, the dictionary check is skipped. The plug-in does not initialize and Directory Server does not start if the value of this attribute is invalid or refers to an inaccessible file.

**Default settings**

off

**Dependencies**

Default password file,

*install-path/resources/plugins/words-english-big.txt*

**POSTAL ADDRESS STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Postal Address Syntax

**DN of Configuration Entry**

cn=Postal Address Syntax,cn=plugins,cn=config

**Description**

Syntax used for handling postal addresses.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**PTA PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Pass Through Authentication

**DN of Configuration Entry**

`cn=Pass Through Authentication,cn=plugins, cn=config`

**Description**

Enables pass-through authentication, the mechanism that allows one directory to consult another to authenticate bind requests.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

The LDAP URL to the configuration directory.

`nsslapd-pluginarg0: ldap://config.example.com/o=example`

**Dependencies**

None

**REFERENTIAL INTEGRITY POSTOPERATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Referential Integrity Postoperation

**DN of Configuration Entry**

`cn=Referential Integrity Postoperation, cn=plugins,cn=config`

**Description**

Enables the server to ensure referential integrity.

All attributes in all databases that are used by the referential integrity plug-in must be indexed. The indexes need to be created in the configuration of all the databases.

When the retro change log is enabled, the `cn=changelog` suffix must be indexed.

**Configurable Options**

All configuration and on | off

**Default Setting**

off

**Configurable Arguments**

When enabled, the post operation Referential Integrity plug-in performs integrity updates on the `member`, `uniquemember`, `owner`, and `seeAlso` attributes immediately after a delete or rename operation. You can reconfigure the plug-in to perform integrity checks on all other attributes.

The following arguments are configurable:

1. (`nsslapd-pluginarg0`) Check for referential integrity
  - 1 = no check for referential integrity
  - 0 = check for referential integrity is performed immediately
  - positive integer = request for referential integrity is queued and processed at a later stage. This positive integer serves as a wake-up call for the thread to process the request, at intervals corresponding to the integer specified.
2. (`nsslapd-pluginarg1`) Log file for storing the change, for example `/local/dsInst/logs/referint`
3. (`nsslapd-pluginarg2`) Reserved for future use.
4. (Other `nsslapd-pluginarg*` attributes) Attribute names to be checked for referential integrity.

**Dependencies**

database type

**Tuning Recommendations**

Do the following when you use the referential integrity plug-in in a multi-master replication environment:

- Enable the referential integrity plug-in on all servers containing master replicas
- Enable the referential integrity plug-in with the same configuration on every master

Set the first argument to a positive value, such as 10, meaning ten seconds, to ensure that work performed by this plug-in happens asynchronously, rather than synchronously.

When enabling the plug-in, also create equality indexes for all attributes configured for use with the plug-in. The plug-in uses such indexes when searching for entries to update. Without equality indexes for the attributes it uses, the plug-in must perform costly unindexed searches that have negative impact on performance.

**RETRO CHANGE LOG PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Retro Changelog Plugin

**DN of Configuration Entry**`cn=Retro Changelog Plugin,cn=plugins,cn=config`**Description**

Used by LDAP clients for maintaining application compatibility with Directory Server 4.x versions.

Maintains a log of all changes occurring in Directory Server. The retro change log offers the same functionality as the changelog in the 4.x versions of Directory Server.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

The following arguments can be configured for the retro change log plug-in:

- `nsslapd-pluginarg0`: `-ignore_attributes` configures the retro change log plug-in to ignore attributes specified by the following `nsslapd-pluginarg`. This argument is configured by default.
- `nsslapd-pluginarg1`: `copyingFrom` specifies a list of attributes to be ignored by the preceding `nsslapd-pluginarg`. This argument is configured by default.
- `nsslapd-pluginarg2`: `suffixes="suffix1", "suffix2"` configures the retro change log to record updates to specified suffixes only
- `nsslapd-pluginarg3`: `deletedEntryAttributes=attribute1, attribute2` configures the retro change log to record specified attributes of an entry when that entry is deleted

**Dependencies**

None

**Performance Related Information**

May slow down Directory Server performance.

**Example Configuration**

```
dn: cn=Retro Changelog Plugin,cn=plugins,cn=config
objectClass: top
objectClass: nsSlapdPlugin
objectClass: ds-signedPlugin
objectClass: extensibleObject
cn: Retro Changelog Plugin
nsslapd-pluginPath: /opt/SUNWdsee7/lib/sparcv9/retrocl-plugin.so
nsslapd-pluginInitfunc: retrocl_plugin_init
nsslapd-pluginType: object
nsslapd-plugin-depends-on-type: database
nsslapd-pluginarg0: -ignore_attributes
nsslapd-pluginarg1: copyingFrom
nsslapd-pluginarg2: suffixes="ou=people", "dc=example", "dc=com"
nsslapd-pluginarg3: deletedEntryAttributes="objectclass", "employeenumber"
nsslapd-changelogdir: /local/dsInst/db/changelog
nsslapd-pluginEnabled: on
nsslapd-pluginId: retrocl
nsslapd-pluginVersion: 11.1.1.5.0
nsslapd-pluginVendor: Sun Microsystems, Inc.
nsslapd-pluginDescription: Retrocl Plugin
ds-pluginSignatureState: valid signature
```

**ROLES PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Roles Plugin

**DN of Configuration Entry**

cn=Roles Plugin,cn=plugins,cn=config

**Description**

Enables the use of roles in Directory Server.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

State Change Plugin

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**STATE CHANGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

State Change Plugin

**DN of Configuration Entry**

cn=State Change Plugin,cn=plugins,cn=config

**Description**

State change notification service plug-in for detecting updates, such as configuration changes, and triggering callbacks when updates happen.

This plug-in is used internally by the roles plug-in.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**SUBTREE ENTRY COUNTER PLUG-INS**

Consider the following aspects of this plug-in.

**Plug-In Name**Subtree Entry Counter For *ObjectClass*

**DN of Configuration Entry**

cn=Subtree Entry Counter for *ObjectClass*,cn=plugins, cn=config

**Description**

Maintain a count of entries with a particular object class. The following plug-ins are provided.

- Subtree entry counter for departments in domains
- Subtree entry counter for domains within a domain
- Subtree entry counter for mail lists
- Subtree entry counter for nested departments
- Subtree entry counter for total domains
- Subtree entry counter for users

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

These plug-ins are provided for use with Messaging Server only, and are disabled by default. Leave these plug-ins disabled unless your Messaging Server requires them.

**Counter Attributes Maintained**

`nsNumDepts`

Either the number of departments within a domain, or the number of departments within a department (nested departments), depending on the DN of the entry.

`nsNumDomains`

Either the number of total domains, or the number of domains within a domain or nested domain, depending on the DN of the entry.

`nsNumMailLists`

Number of mail lists.

**TELEPHONE SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Telephone Syntax

**DN of Configuration Entry**

cn=Telephone Syntax,cn=plugins,cn=config

**Description**

Syntax for handling telephone numbers.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**UID UNIQUENESS PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

UID Uniqueness

**DN of Configuration Entry**

cn=UID Uniqueness,cn=plugins,cn=config

**Description**

Checks that the values of specified attributes are unique each time a modification occurs on an entry.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

You may configure this plug-in in either of two different ways.

1. Specify attributes that must be unique for a series of one or more subtrees identified by DNs. For example, to specify that `employeeNumber` and `uid` attribute values must be unique across both `o=org1,dc=example,dc=com` and `o=org2,dc=example,dc=com`, configure the arguments in the configuration entry as follows:

```
nsslapd-pluginarg0: employeeNumber
nsslapd-pluginarg1: uid
nsslapd-pluginarg2: o=org1,dc=example,dc=com
nsslapd-pluginarg3: o=org2,dc=example,dc=com
```

2. You specify attributes that must be unique inside congruent subtrees, optionally only on entries of a specified object class. For example, to specify that `employeeNumber` and `uid` attribute values must be unique in either `o=org1,dc=example,dc=com` or `o=org2,dc=example,dc=com`, but only on entries of the `inetOrgPerson` object class, configure the arguments in the configuration entry as follows:

```
nsslapd-pluginarg0: employeeNumber
nsslapd-pluginarg1: uid
```

```
nsslapd-pluginarg2: MarkerObjectClass="organization"  
RequiredObjectClass="inetOrgPerson"
```

**Dependencies**

database type

**Performance Related Information**

Directory Server provides the UID Uniqueness plug-in by default. To ensure unique values for other attributes, you can create instances of the UID Uniqueness plug-in for those attributes.

The UID Uniqueness plug-in may slow down Directory Server performance.

**URI PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

URI Syntax

**DN of Configuration Entry**

cn=URI Syntax, cn=plugins, cn=config

**Description**

Syntax for handling URIs (Unique Resource Identifiers) including URLs (Unique Resource Locators.)

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**

[dse.ldif\(4\)](#)

---

## nsslapd-pluginVendor

Directory Server plug-in legacy configuration

### Description

The `nsslapd-plugin` attribute on `cn=config` is multi-valued, read-only attribute lists the syntaxes and matching rules loaded by the server. This manual page covers server plug-in configuration, rather than the `nsslapd-plugin` attribute.

This manual page provides an overview of legacy configuration information for server plug-ins. This manual page covers the individual plug-in configuration entry attributes. Also, this manual page covers the plug-ins provided with Directory Server, including configurable options, configurable arguments, default setting, dependencies, general performance related information, and further reading.

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**Note:** In most circumstances, you configure plug-in functionality using the `dsconf(1M)` command. See [plugin\(5DSCONF\)](#) for a list of configurable properties.

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### ATTRIBUTES FOR PLUG-IN CONFIGURATION ENTRIES

The following list covers each plug-in configuration entry attribute.

#### **nsslapd-plugin-depends-on-named**

This is a multivalued attribute, used to ensure that plug-ins are called by the server in the correct order. It takes a value that corresponds to the `cn` value of a plug-in. The plug-in whose `cn` value matches one of the values below it is started by the server prior to this plug-in. If the plug-in does not exist, the server fails to start.

**Entry DN**

`cn=pluginName,cn=plugins, cn=config`

**Valid Range**

Plug-in name

**Default Value**

None

**Syntax**

DirectoryString

**Example**

`nsslapd-plugin-depends-on-named: Class of Service`

#### **nsslapd-plugin-depends-on-type**

This is a multivalued attribute, used to ensure that plug-ins are called by the server in the correct order. It takes a value that corresponds to the type of a plug-in, contained in the attribute `nsslapd-pluginType`, and requires that plug-ins of that type are started before the present plug-in.

**Entry DN**

`cn=pluginName,cn=plugins, cn=config`

**Valid Range**

Plug-in type

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-plugin-depends-on-type: database

**nsslapd-pluginDescription**

Provides a description of the plug-in.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any DirectoryString

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginDescription: acl access check plug-in

**nsslapd-pluginEnabled**

Specifies whether or not the plug-in is enabled. This attribute can be changed over protocol, but will only take effect when the server is next restarted.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

on | off

**Default Value**

on

**Syntax**

DirectoryString

**Example**

nsslapd-pluginEnabled: on

**nsslapd-pluginId**

Specifies the plug-in ID.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in ID.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginId: chaining database

nsslapd-pluginInitfunc

Specifies the plug-in function to be initiated.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in function.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginInitfunc: NS7bitAttr\_Init

nsslapd-pluginPath

Specifies the full path to the plug-in.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid path

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginPath: /opt/SUNWdsee7/lib/sparcv9/uid-plugin.so

nsslapd-pluginType

Specifies the plug-in type.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in type.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginType: preoperation

**nsslapd-pluginVendor**

Specifies the vendor of the plug-in.

**Entry DN**cn=*pluginName*, cn=plugins, cn=config**Valid Range**

Any approved plug-in vendor.

**Default Value**

Sun Microsystems, Inc.

**Syntax**

DirectoryString

**Example**

nsslapd-pluginVendor: Sun Microsystems, Inc.

**nsslapd-pluginVersion**

Specifies the plug-in version.

**Entry DN**cn=*pluginName*, cn=plugins, cn=config**Valid Range**

Any valid plug-in version.

**Default Value**

Product version

**Syntax**

DirectoryString

**Example**

nsslapd-pluginVersion: 11.1.1.5.0

**7-BIT CHECK PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

7-Bit Check (NS7bitAttr)

**DN of Configuration Entry**

cn=7-bit check, cn=plugins, cn=config

**Description**

Checks certain attributes are seven-bit clean.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

List of attributes, `uid mail userpassword`, followed by a comma, and then by the suffix or suffixes on which the check is to occur.

**Dependencies**

None

**Performance Related Information**

None

**Further Information**

If your Directory Server uses non-ASCII characters such as Japanese and other languages for some attributes, remove those attributes from the list of attributes checked by this plug-in.

When adding or modifying an attribute value checked by this plug-in, and the new value violates the seven-bit check, the client receives a `LDAP_CONSTRAINT_VIOLATION (19)` return code, and a message such as the following: `Value of attribute attr contains extended (8-bit) characters: value`

**ACL PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ACL Plugin

**DN of Configuration Entry**

`cn=ACL Plugin,cn=plugins,cn=config`

**Description**

ACL access check plug-in

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**ACL PREOPERATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ACL preoperation

**DN of Configuration Entry**

cn=ACL\_preoperation,cn=plugins,cn=config

**Description**

ACL access check plug-in.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

Database

**Performance Related Information**

Leave this plug-in running at all times.

**BINARY SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Binary Syntax

**DN of Configuration Entry**

cn=Binary\_Syntax,cn=plugins,cn=config

**Description**

Syntax for handling binary data.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**BOOLEAN SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Boolean Syntax

**DN of Configuration Entry**

cn=Boolean\_Syntax,cn=plugins,cn=config

**Description**

Syntax for handling booleans.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CASE EXACT STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Case Exact String Syntax

**DN of Configuration Entry**

cn=Case Exact String Syntax,cn=plugins,cn=config

**Description**

Syntax for handling case-sensitive strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CASE IGNORE STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Case Ignore String Syntax

**DN of Configuration Entry**

cn=Case Ignore String Syntax,cn=plugins,cn=config

**Description**

Syntax for handling case-insensitive strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CHAINING DATABASE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Chaining Database

**DN of Configuration Entry**

cn=Chaining database,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CLASS OF SERVICE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Class of Service

**DN of Configuration Entry**

cn=Class of Service,cn=plugins,cn=config

**Description**

Allows for sharing of attributes between entries.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

Set the `nsslapd-pluginarg0` attribute to:

- 0 (default) to enable fast lookup of classic CoS templates
- 1 to disable fast lookup for classic CoS template selection
- 2 to disable checks for ambiguous pointer and classic CoS definitions

Ambiguous definitions result when more than one value could be returned for the same attribute of the same entry. When checking remains enabled, Directory Server logs an informational message upon encountering such an ambiguity, provided you have set the log level to allow plug-ins to log informational messages.

- 3 to disable both

Restart Directory Server for modifications to take effect.

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**COUNTRY STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Country String Syntax

**DN of Configuration Entry**

`cn=Country String Syntax,cn=plugins,cn=config`

**Description**

Syntax for handling countries.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**DISTINGUISHED NAME SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Distinguished Name Syntax

**DN of Configuration Entry**

cn=Distinguished Name Syntax,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**DSML FRONTEND SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Frontend

**DN of Configuration Entry**

cn=DSMLv2-SOAP-HTTP,cn=frontends,cn=plugins, cn=config

**Description**

Enables you to access the directory using DSML v2 over SOAP/HTTP.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

ds-hdsml-soapschemalocation

ds-hdsml-dsmlschemalocation

**Dependencies**

None

**Performance Related Information**

None

**GENERALIZED TIME SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Generalized Time Syntax

**DN of Configuration Entry**

cn=Generalized Time Syntax,cn=plugins,cn=config

**Description**

Syntax for dealing with dates, times, and time zones.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Further Information**

The Generalized Time String consists of the four digit year, two digit month (for example, 01 for January), two digit day, two digit hour, two digit minute, two digit second, an optional decimal part of a second and a time zone indication. We strongly recommend that you use the Z time zone indication (Greenwich Mean Time).

**INTEGER SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Integer Syntax

**DN of Configuration Entry**

cn=Integer Syntax,cn=plugins,cn=config

**Description**

Syntax for handling integers.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**INTERNATIONALIZATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Internationalization Plugin

**DN of Configuration Entry**

cn=Internationalization Plugin,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None. In contrast to previous versions of Directory Server, the collation orders and locales used by the internationalization plug-in are now stored in the configuration.

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**LDBM DATABASE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ldbm database plug-in

**DN of Configuration Entry**

cn=ldbm database plug-in,cn=plugins,cn=config

**Description**

Implements local databases.

**Configurable Options**

None

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**MULTIMASTER REPLICATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Multimaster Replication Plugin

**DN of Configuration Entry**

`cn=Multimaster Replication plugin,cn=plugins, cn=config`

**Description**

Enables replication between two Directory Server suffixes.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

database

**Performance Related Information**

None

**Further Information**

You can turn this plug-in off if you have only one server, which will never replicate.

**OCTET STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Octet String Syntax

**DN of Configuration Entry**

`cn=Octet String Syntax,cn=plugins,cn=config`

**Description**

Syntax for handling octet strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CLEAR PASSWORD STORAGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

CLEAR

**DN of Configuration Entry**

cn=CLEAR,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

CLEAR password storage scheme used for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CRYPT PASSWORD STORAGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

CRYPT

**DN of Configuration Entry**

cn=CRYPT,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

CRYPT password storage scheme used for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**NS-MTA-MD5 PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

NS-MTA-MD5

**DN of Configuration Entry**

cn=NS-MTA-MD5,cn>Password Storage Schemes, cn=plugins,cn=config

**Description**

NS-MTA-MD5 password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Further Information**

You can no longer choose to encrypt passwords using the NS-MTA-MD5 password storage scheme. The storage scheme is still present, but for backward compatibility only. The data in your directory still contains passwords encrypted with the NS-MTA-MD5 password storage scheme.

**RMCE PASSWORD STORAGE SCHEME PLUG-IN**

This password storage scheme plug-in is used for example by the administration framework and is reserved for internal use.

**SHA PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

SHA

**DN of Configuration Entry**

cn=SHA,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

SHA password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

If there are no passwords encrypted using the SHA password storage scheme, you may turn this plug-in off. If you want to encrypt your password with the SHA password storage scheme, choose SSHA instead. SSHA is a far more secure option.

**SSHA PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

SSHA

**DN of Configuration Entry**`cn=SSHA,cn>Password Storage Schemes,cn=plugins,cn=config`**Description**

SSHA password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**STRONG PASSWORD CHECK PLUG-IN**

When Directory Server is configured to check password quality, and this plug-in is enabled, the plug-in checks the following each time a password is added or modified.

- Clear text password values contain the classes of characters specified by the configuration.
- Clear text password values do not contain any sequence of four characters present in the dictionary file specified by the configuration.

Hashed password values such as

`{SSHA}0Ri1g2yq1H3GTZcuRQ4uS22syCQLBKAU2ypLSw==` are not checked.

Consider the following aspects of this plug-in.

**Plug-In Name**

Strong Password Checking plug-in

**DN of Configuration Entry**

cn=Strong Password Check,cn=plugins,cn=config

**Configurable options and arguments**

on | off

nsslapd-pluginarg0, which takes an integer representing a mask of values representing the character classes that must be present in a valid password. Set nsslapd-pluginarg0 to one of or a sum of the following values, not counting the special values 16 and 17.

- 1 means the password must contain special characters.
- 2 means the password must contain numeric characters.
- 4 means the password must contain upper case characters.
- 8 means the password must contain lower case characters.
- 16 is a special value meaning at least three of the four character classes.
- 17 is a special value meaning at least two of the four character classes.

The default setting is 15.

nsslapd-pluginarg1, which takes the absolute file system path to an ASCII dictionary file. If the argument is missing, the dictionary check is skipped. The plug-in does not initialize and Directory Server does not start if the value of this attribute is invalid or refers to an inaccessible file.

**Default settings**

off

**Dependencies**

Default password file,  
*install-path/resources/plugins/words-english-big.txt*

## POSTAL ADDRESS STRING SYNTAX PLUG-IN

Consider the following aspects of this plug-in.

**Plug-In Name**

Postal Address Syntax

**DN of Configuration Entry**

cn=Postal Address Syntax,cn=plugins,cn=config

**Description**

Syntax used for handling postal addresses.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**PTA PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Pass Through Authentication

**DN of Configuration Entry**

`cn=Pass Through Authentication,cn=plugins, cn=config`

**Description**

Enables pass-through authentication, the mechanism that allows one directory to consult another to authenticate bind requests.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

The LDAP URL to the configuration directory.

`nsslapd-pluginarg0: ldap://config.example.com/o=example`

**Dependencies**

None

**REFERENTIAL INTEGRITY POSTOPERATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Referential Integrity Postoperation

**DN of Configuration Entry**

`cn=Referential Integrity Postoperation, cn=plugins,cn=config`

**Description**

Enables the server to ensure referential integrity.

All attributes in all databases that are used by the referential integrity plug-in must be indexed. The indexes need to be created in the configuration of all the databases. When the retro change log is enabled, the `cn=changelog` suffix must be indexed.

**Configurable Options**

All configuration and on | off

**Default Setting**

off

**Configurable Arguments**

When enabled, the post operation Referential Integrity plug-in performs integrity updates on the `member`, `uniquemember`, `owner`, and `seeAlso` attributes immediately after a delete or rename operation. You can reconfigure the plug-in to perform integrity checks on all other attributes.

The following arguments are configurable:

1. (`nsslapd-pluginarg0`) Check for referential integrity
  - 1 = no check for referential integrity
  - 0 = check for referential integrity is performed immediately
  - positive integer = request for referential integrity is queued and processed at a later stage. This positive integer serves as a wake-up call for the thread to process the request, at intervals corresponding to the integer specified.
2. (`nsslapd-pluginarg1`) Log file for storing the change, for example `/local/dsInst/logs/referint`
3. (`nsslapd-pluginarg2`) Reserved for future use.
4. (Other `nsslapd-pluginarg*` attributes) Attribute names to be checked for referential integrity.

**Dependencies**

database type

**Tuning Recommendations**

Do the following when you use the referential integrity plug-in in a multi-master replication environment:

- Enable the referential integrity plug-in on all servers containing master replicas
- Enable the referential integrity plug-in with the same configuration on every master

Set the first argument to a positive value, such as 10, meaning ten seconds, to ensure that work performed by this plug-in happens asynchronously, rather than synchronously.

When enabling the plug-in, also create equality indexes for all attributes configured for use with the plug-in. The plug-in uses such indexes when searching for entries to update. Without equality indexes for the attributes it uses, the plug-in must perform costly unindexed searches that have negative impact on performance.

**RETRO CHANGE LOG PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Retro Changelog Plugin

**DN of Configuration Entry**`cn=Retro Changelog Plugin,cn=plugins,cn=config`**Description**

Used by LDAP clients for maintaining application compatibility with Directory Server 4.x versions.

Maintains a log of all changes occurring in Directory Server. The retro change log offers the same functionality as the changelog in the 4.x versions of Directory Server.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

The following arguments can be configured for the retro change log plug-in:

- `nsslapd-pluginarg0`: `-ignore_attributes` configures the retro change log plug-in to ignore attributes specified by the following `nsslapd-pluginarg`. This argument is configured by default.
- `nsslapd-pluginarg1`: `copyingFrom` specifies a list of attributes to be ignored by the preceding `nsslapd-pluginarg`. This argument is configured by default.
- `nsslapd-pluginarg2`: `suffixes="suffix1","suffix2"` configures the retro change log to record updates to specified suffixes only
- `nsslapd-pluginarg3`: `deletedEntryAttributes=attribute1,attribute2` configures the retro change log to record specified attributes of an entry when that entry is deleted

**Dependencies**

None

**Performance Related Information**

May slow down Directory Server performance.

**Example Configuration**

```
dn: cn=Retro Changelog Plugin,cn=plugins,cn=config
objectClass: top
objectClass: nsSlapdPlugin
objectClass: ds-signedPlugin
objectClass: extensibleObject
cn: Retro Changelog Plugin
nsslapd-pluginPath: /opt/SUNWdsee7/lib/sparcv9/retrocl-plugin.so
nsslapd-pluginInitfunc: retrocl_plugin_init
nsslapd-pluginType: object
nsslapd-plugin-depends-on-type: database
nsslapd-pluginarg0: -ignore_attributes
nsslapd-pluginarg1: copyingFrom
nsslapd-pluginarg2: suffixes="ou=people","dc=example","dc=com"
nsslapd-pluginarg3: deletedEntryAttributes="objectclass","employeenumber"
nsslapd-changelogdir: /local/dsInst/db/changelog
nsslapd-pluginEnabled: on
nsslapd-pluginId: retrocl
nsslapd-pluginVersion: 11.1.1.5.0
nsslapd-pluginVendor: Sun Microsystems, Inc.
nsslapd-pluginDescription: Retrocl Plugin
ds-pluginSignatureState: valid signature
```

**ROLES PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Roles Plugin

**DN of Configuration Entry**

cn=Roles Plugin,cn=plugins,cn=config

**Description**

Enables the use of roles in Directory Server.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

State Change Plugin

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**STATE CHANGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

State Change Plugin

**DN of Configuration Entry**

cn=State Change Plugin,cn=plugins,cn=config

**Description**

State change notification service plug-in for detecting updates, such as configuration changes, and triggering callbacks when updates happen.

This plug-in is used internally by the roles plug-in.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**SUBTREE ENTRY COUNTER PLUG-INS**

Consider the following aspects of this plug-in.

**Plug-In Name**Subtree Entry Counter For *ObjectClass*

**DN of Configuration Entry**

cn=Subtree Entry Counter for *ObjectClass*,cn=plugins, cn=config

**Description**

Maintain a count of entries with a particular object class. The following plug-ins are provided.

- Subtree entry counter for departments in domains
- Subtree entry counter for domains within a domain
- Subtree entry counter for mail lists
- Subtree entry counter for nested departments
- Subtree entry counter for total domains
- Subtree entry counter for users

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

These plug-ins are provided for use with Messaging Server only, and are disabled by default. Leave these plug-ins disabled unless your Messaging Server requires them.

**Counter Attributes Maintained**

*nsNumDepts*

Either the number of departments within a domain, or the number of departments within a department (nested departments), depending on the DN of the entry.

*nsNumDomains*

Either the number of total domains, or the number of domains within a domain or nested domain, depending on the DN of the entry.

*nsNumMailLists*

Number of mail lists.

**TELEPHONE SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Telephone Syntax

**DN of Configuration Entry**

cn=Telephone Syntax,cn=plugins,cn=config

**Description**

Syntax for handling telephone numbers.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**UID UNIQUENESS PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

UID Uniqueness

**DN of Configuration Entry**

cn=UID Uniqueness,cn=plugins,cn=config

**Description**

Checks that the values of specified attributes are unique each time a modification occurs on an entry.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

You may configure this plug-in in either of two different ways.

1. Specify attributes that must be unique for a series of one or more subtrees identified by DNs. For example, to specify that `employeeNumber` and `uid` attribute values must be unique across both `o=org1,dc=example,dc=com` and `o=org2,dc=example,dc=com`, configure the arguments in the configuration entry as follows:

```
nsslapd-pluginarg0: employeeNumber
nsslapd-pluginarg1: uid
nsslapd-pluginarg2: o=org1,dc=example,dc=com
nsslapd-pluginarg3: o=org2,dc=example,dc=com
```

2. You specify attributes that must be unique inside congruent subtrees, optionally only on entries of a specified object class. For example, to specify that `employeeNumber` and `uid` attribute values must be unique in either `o=org1,dc=example,dc=com` or `o=org2,dc=example,dc=com`, but only on entries of the `inetOrgPerson` object class, configure the arguments in the configuration entry as follows:

```
nsslapd-pluginarg0: employeeNumber
nsslapd-pluginarg1: uid
```

```
nsslapd-pluginarg2: MarkerObjectClass="organization"  
RequiredObjectClass="inetOrgPerson"
```

**Dependencies**

database type

**Performance Related Information**

Directory Server provides the UID Uniqueness plug-in by default. To ensure unique values for other attributes, you can create instances of the UID Uniqueness plug-in for those attributes.

The UID Uniqueness plug-in may slow down Directory Server performance.

**URI PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

URI Syntax

**DN of Configuration Entry**

cn=URI Syntax, cn=plugins, cn=config

**Description**

Syntax for handling URIs (Unique Resource Identifiers) including URLs (Unique Resource Locators.)

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**

[dse.ldif\(4\)](#)

---

## nsslapd-pluginVersion

Directory Server plug-in legacy configuration

### Description

The `nsslapd-plugin` attribute on `cn=config` is multi-valued, read-only attribute lists the syntaxes and matching rules loaded by the server. This manual page covers server plug-in configuration, rather than the `nsslapd-plugin` attribute.

This manual page provides an overview of legacy configuration information for server plug-ins. This manual page covers the individual plug-in configuration entry attributes. Also, this manual page covers the plug-ins provided with Directory Server, including configurable options, configurable arguments, default setting, dependencies, general performance related information, and further reading.

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**Note:** In most circumstances, you configure plug-in functionality using the `dsconf(1M)` command. See `plugin(5DSCONF)` for a list of configurable properties.

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### ATTRIBUTES FOR PLUG-IN CONFIGURATION ENTRIES

The following list covers each plug-in configuration entry attribute.

#### **nsslapd-plugin-depends-on-named**

This is a multivalued attribute, used to ensure that plug-ins are called by the server in the correct order. It takes a value that corresponds to the `cn` value of a plug-in. The plug-in whose `cn` value matches one of the values below it is started by the server prior to this plug-in. If the plug-in does not exist, the server fails to start.

**Entry DN**

`cn=pluginName,cn=plugins, cn=config`

**Valid Range**

Plug-in name

**Default Value**

None

**Syntax**

DirectoryString

**Example**

`nsslapd-plugin-depends-on-named: Class of Service`

#### **nsslapd-plugin-depends-on-type**

This is a multivalued attribute, used to ensure that plug-ins are called by the server in the correct order. It takes a value that corresponds to the type of a plug-in, contained in the attribute `nsslapd-pluginType`, and requires that plug-ins of that type are started before the present plug-in.

**Entry DN**

`cn=pluginName,cn=plugins, cn=config`

**Valid Range**

Plug-in type

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-plugin-depends-on-type: database

**nsslapd-pluginDescription**

Provides a description of the plug-in.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any DirectoryString

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginDescription: acl access check plug-in

**nsslapd-pluginEnabled**

Specifies whether or not the plug-in is enabled. This attribute can be changed over protocol, but will only take effect when the server is next restarted.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

on | off

**Default Value**

on

**Syntax**

DirectoryString

**Example**

nsslapd-pluginEnabled: on

**nsslapd-pluginId**

Specifies the plug-in ID.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in ID.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginId: chaining database

nsslapd-pluginInitfunc

Specifies the plug-in function to be initiated.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in function.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginInitfunc: NS7bitAttr\_Init

nsslapd-pluginPath

Specifies the full path to the plug-in.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid path

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginPath: /opt/SUNWdsee7/lib/sparcv9/uid-plugin.so

nsslapd-pluginType

Specifies the plug-in type.

**Entry DN***cn=pluginName, cn=plugins, cn=config***Valid Range**

Any valid plug-in type.

**Default Value**

None

**Syntax**

DirectoryString

**Example**

nsslapd-pluginType: preoperation

**nsslapd-pluginVendor**

Specifies the vendor of the plug-in.

**Entry DN**cn=*pluginName*, cn=plugins, cn=config**Valid Range**

Any approved plug-in vendor.

**Default Value**

Sun Microsystems, Inc.

**Syntax**

DirectoryString

**Example**

nsslapd-pluginVendor: Sun Microsystems, Inc.

**nsslapd-pluginVersion**

Specifies the plug-in version.

**Entry DN**cn=*pluginName*, cn=plugins, cn=config**Valid Range**

Any valid plug-in version.

**Default Value**

Product version

**Syntax**

DirectoryString

**Example**

nsslapd-pluginVersion: 11.1.1.5.0

**7-BIT CHECK PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

7-Bit Check (NS7bitAttr)

**DN of Configuration Entry**

cn=7-bit check, cn=plugins, cn=config

**Description**

Checks certain attributes are seven-bit clean.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

List of attributes, `uid mail userpassword`, followed by a comma, and then by the suffix or suffixes on which the check is to occur.

**Dependencies**

None

**Performance Related Information**

None

**Further Information**

If your Directory Server uses non-ASCII characters such as Japanese and other languages for some attributes, remove those attributes from the list of attributes checked by this plug-in.

When adding or modifying an attribute value checked by this plug-in, and the new value violates the seven-bit check, the client receives a `LDAP_CONSTRAINT_VIOLATION (19)` return code, and a message such as the following: `Value of attribute attr contains extended (8-bit) characters: value`

**ACL PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ACL Plugin

**DN of Configuration Entry**`cn=ACL Plugin,cn=plugins,cn=config`**Description**

ACL access check plug-in

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**ACL PREOPERATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ACL preoperation

**DN of Configuration Entry**

cn=ACL\_preoperation,cn=plugins,cn=config

**Description**

ACL access check plug-in.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

Database

**Performance Related Information**

Leave this plug-in running at all times.

**BINARY SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Binary Syntax

**DN of Configuration Entry**

cn=Binary\_Syntax,cn=plugins,cn=config

**Description**

Syntax for handling binary data.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**BOOLEAN SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Boolean Syntax

**DN of Configuration Entry**

cn=Boolean\_Syntax,cn=plugins,cn=config

**Description**

Syntax for handling booleans.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CASE EXACT STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Case Exact String Syntax

**DN of Configuration Entry**

cn=Case Exact String Syntax,cn=plugins,cn=config

**Description**

Syntax for handling case-sensitive strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CASE IGNORE STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Case Ignore String Syntax

**DN of Configuration Entry**

cn=Case Ignore String Syntax,cn=plugins,cn=config

**Description**

Syntax for handling case-insensitive strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CHAINING DATABASE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Chaining Database

**DN of Configuration Entry**

cn=Chaining database,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CLASS OF SERVICE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Class of Service

**DN of Configuration Entry**

cn=Class of Service,cn=plugins,cn=config

**Description**

Allows for sharing of attributes between entries.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

Set the `nsslapd-pluginarg0` attribute to:

- 0 (default) to enable fast lookup of classic CoS templates
- 1 to disable fast lookup for classic CoS template selection
- 2 to disable checks for ambiguous pointer and classic CoS definitions

Ambiguous definitions result when more than one value could be returned for the same attribute of the same entry. When checking remains enabled, Directory Server logs an informational message upon encountering such an ambiguity, provided you have set the log level to allow plug-ins to log informational messages.

- 3 to disable both

Restart Directory Server for modifications to take effect.

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**COUNTRY STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Country String Syntax

**DN of Configuration Entry**

`cn=Country String Syntax,cn=plugins,cn=config`

**Description**

Syntax for handling countries.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**DISTINGUISHED NAME SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Distinguished Name Syntax

**DN of Configuration Entry**

cn=Distinguished Name Syntax,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**DSML FRONTEND SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Frontend

**DN of Configuration Entry**

cn=DSMLv2-SOAP-HTTP,cn=frontends,cn=plugins, cn=config

**Description**

Enables you to access the directory using DSML v2 over SOAP/HTTP.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

ds-hdsml-soapschemalocation

ds-hdsml-dsmlschemalocation

**Dependencies**

None

**Performance Related Information**

None

**GENERALIZED TIME SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Generalized Time Syntax

**DN of Configuration Entry**

cn=Generalized Time Syntax,cn=plugins,cn=config

**Description**

Syntax for dealing with dates, times, and time zones.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Further Information**

The Generalized Time String consists of the four digit year, two digit month (for example, 01 for January), two digit day, two digit hour, two digit minute, two digit second, an optional decimal part of a second and a time zone indication. We strongly recommend that you use the Z time zone indication (Greenwich Mean Time).

**INTEGER SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Integer Syntax

**DN of Configuration Entry**

cn=Integer Syntax,cn=plugins,cn=config

**Description**

Syntax for handling integers.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**INTERNATIONALIZATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Internationalization Plugin

**DN of Configuration Entry**

cn=Internationalization Plugin,cn=plugins,cn=config

**Description**

Syntax for handling DNs.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None. In contrast to previous versions of Directory Server, the collation orders and locales used by the internationalization plug-in are now stored in the configuration.

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**LDBM DATABASE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

ldbm database plug-in

**DN of Configuration Entry**

cn=ldbm database plug-in,cn=plugins,cn=config

**Description**

Implements local databases.

**Configurable Options**

None

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Leave this plug-in running at all times.

**MULTIMASTER REPLICATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Multimaster Replication Plugin

**DN of Configuration Entry**

`cn=Multimaster Replication plugin,cn=plugins, cn=config`

**Description**

Enables replication between two Directory Server suffixes.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

database

**Performance Related Information**

None

**Further Information**

You can turn this plug-in off if you have only one server, which will never replicate.

**OCTET STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Octet String Syntax

**DN of Configuration Entry**

`cn=Octet String Syntax,cn=plugins,cn=config`

**Description**

Syntax for handling octet strings.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CLEAR PASSWORD STORAGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

CLEAR

**DN of Configuration Entry**

cn=CLEAR,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

CLEAR password storage scheme used for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**CRYPT PASSWORD STORAGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

CRYPT

**DN of Configuration Entry**

cn=CRYPT,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

CRYPT password storage scheme used for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**NS-MTA-MD5 PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

NS-MTA-MD5

**DN of Configuration Entry**

cn=NS-MTA-MD5,cn>Password Storage Schemes, cn=plugins,cn=config

**Description**

NS-MTA-MD5 password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Further Information**

You can no longer choose to encrypt passwords using the NS-MTA-MD5 password storage scheme. The storage scheme is still present, but for backward compatibility only. The data in your directory still contains passwords encrypted with the NS-MTA-MD5 password storage scheme.

**RMCE PASSWORD STORAGE SCHEME PLUG-IN**

This password storage scheme plug-in is used for example by the administration framework and is reserved for internal use.

**SHA PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

SHA

**DN of Configuration Entry**

cn=SHA,cn>Password Storage Schemes,cn=plugins, cn=config

**Description**

SHA password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

If there are no passwords encrypted using the SHA password storage scheme, you may turn this plug-in off. If you want to encrypt your password with the SHA password storage scheme, choose SSHA instead. SSHA is a far more secure option.

**SSHA PASSWORD STORAGE SCHEME PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

SSHA

**DN of Configuration Entry**`cn=SSHA,cn>Password Storage Schemes,cn=plugins,cn=config`**Description**

SSHA password storage scheme for password encryption.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**STRONG PASSWORD CHECK PLUG-IN**

When Directory Server is configured to check password quality, and this plug-in is enabled, the plug-in checks the following each time a password is added or modified.

- Clear text password values contain the classes of characters specified by the configuration.
- Clear text password values do not contain any sequence of four characters present in the dictionary file specified by the configuration.

Hashed password values such as

`{SSHA}0Ri1g2yq1H3GTZcuRQ4uS22syCQLBKAU2ypLSw==` are not checked.

Consider the following aspects of this plug-in.

**Plug-In Name**

Strong Password Checking plug-in

**DN of Configuration Entry**

cn=Strong Password Check,cn=plugins,cn=config

**Configurable options and arguments**

on | off

nsslapd-pluginarg0, which takes an integer representing a mask of values representing the character classes that must be present in a valid password. Set nsslapd-pluginarg0 to one of or a sum of the following values, not counting the special values 16 and 17.

- 1 means the password must contain special characters.
- 2 means the password must contain numeric characters.
- 4 means the password must contain upper case characters.
- 8 means the password must contain lower case characters.
- 16 is a special value meaning at least three of the four character classes.
- 17 is a special value meaning at least two of the four character classes.

The default setting is 15.

nsslapd-pluginarg1, which takes the absolute file system path to an ASCII dictionary file. If the argument is missing, the dictionary check is skipped. The plug-in does not initialize and Directory Server does not start if the value of this attribute is invalid or refers to an inaccessible file.

**Default settings**

off

**Dependencies**

Default password file,

*install-path/resources/plugins/words-english-big.txt*

**POSTAL ADDRESS STRING SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Postal Address Syntax

**DN of Configuration Entry**

cn=Postal Address Syntax,cn=plugins,cn=config

**Description**

Syntax used for handling postal addresses.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**PTA PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Pass Through Authentication

**DN of Configuration Entry**

`cn=Pass Through Authentication,cn=plugins, cn=config`

**Description**

Enables pass-through authentication, the mechanism that allows one directory to consult another to authenticate bind requests.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

The LDAP URL to the configuration directory.

`nsslapd-pluginarg0: ldap://config.example.com/o=example`

**Dependencies**

None

**REFERENTIAL INTEGRITY POSTOPERATION PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Referential Integrity Postoperation

**DN of Configuration Entry**

`cn=Referential Integrity Postoperation, cn=plugins,cn=config`

**Description**

Enables the server to ensure referential integrity.

All attributes in all databases that are used by the referential integrity plug-in must be indexed. The indexes need to be created in the configuration of all the databases.

When the retro change log is enabled, the `cn=changelog` suffix must be indexed.

**Configurable Options**

All configuration and on | off

**Default Setting**

off

**Configurable Arguments**

When enabled, the post operation Referential Integrity plug-in performs integrity updates on the `member`, `uniquemember`, `owner`, and `seeAlso` attributes immediately after a delete or rename operation. You can reconfigure the plug-in to perform integrity checks on all other attributes.

The following arguments are configurable:

1. (`nsslapd-pluginarg0`) Check for referential integrity
  - 1 = no check for referential integrity
  - 0 = check for referential integrity is performed immediately
  - positive integer = request for referential integrity is queued and processed at a later stage. This positive integer serves as a wake-up call for the thread to process the request, at intervals corresponding to the integer specified.
2. (`nsslapd-pluginarg1`) Log file for storing the change, for example `/local/dsInst/logs/referint`
3. (`nsslapd-pluginarg2`) Reserved for future use.
4. (Other `nsslapd-pluginarg*` attributes) Attribute names to be checked for referential integrity.

**Dependencies**

database type

**Tuning Recommendations**

Do the following when you use the referential integrity plug-in in a multi-master replication environment:

- Enable the referential integrity plug-in on all servers containing master replicas
- Enable the referential integrity plug-in with the same configuration on every master

Set the first argument to a positive value, such as 10, meaning ten seconds, to ensure that work performed by this plug-in happens asynchronously, rather than synchronously.

When enabling the plug-in, also create equality indexes for all attributes configured for use with the plug-in. The plug-in uses such indexes when searching for entries to update. Without equality indexes for the attributes it uses, the plug-in must perform costly unindexed searches that have negative impact on performance.

**RETRO CHANGE LOG PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Retro Changelog Plugin

**DN of Configuration Entry**

cn=Retro Changelog Plugin,cn=plugins,cn=config

**Description**

Used by LDAP clients for maintaining application compatibility with Directory Server 4.x versions.

Maintains a log of all changes occurring in Directory Server. The retro change log offers the same functionality as the changelog in the 4.x versions of Directory Server.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

The following arguments can be configured for the retro change log plug-in:

- `nsslapd-pluginarg0`: `-ignore_attributes` configures the retro change log plug-in to ignore attributes specified by the following `nsslapd-pluginarg`. This argument is configured by default.
- `nsslapd-pluginarg1`: `copyingFrom` specifies a list of attributes to be ignored by the preceding `nsslapd-pluginarg`. This argument is configured by default.
- `nsslapd-pluginarg2`: `suffixes="suffix1","suffix2"` configures the retro change log to record updates to specified suffixes only
- `nsslapd-pluginarg3`: `deletedEntryAttributes=attribute1,attribute2` configures the retro change log to record specified attributes of an entry when that entry is deleted

**Dependencies**

None

**Performance Related Information**

May slow down Directory Server performance.

**Example Configuration**

```
dn: cn=Retro Changelog Plugin,cn=plugins,cn=config
objectClass: top
objectClass: nsSlapdPlugin
objectClass: ds-signedPlugin
objectClass: extensibleObject
cn: Retro Changelog Plugin
nsslapd-pluginPath: /opt/SUNWdsee7/lib/sparcv9/retrocl-plugin.so
nsslapd-pluginInitfunc: retrocl_plugin_init
nsslapd-pluginType: object
nsslapd-plugin-depends-on-type: database
nsslapd-pluginarg0: -ignore_attributes
nsslapd-pluginarg1: copyingFrom
nsslapd-pluginarg2: suffixes="ou=people","dc=example","dc=com"
nsslapd-pluginarg3: deletedEntryAttributes="objectclass","employeenumber"
nsslapd-changelogdir: /local/dsInst/db/changelog
nsslapd-pluginEnabled: on
nsslapd-pluginId: retrocl
nsslapd-pluginVersion: 11.1.1.5.0
nsslapd-pluginVendor: Sun Microsystems, Inc.
nsslapd-pluginDescription: Retrocl Plugin
ds-pluginSignatureState: valid signature
```

**ROLES PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Roles Plugin

**DN of Configuration Entry**

cn=Roles Plugin,cn=plugins,cn=config

**Description**

Enables the use of roles in Directory Server.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

State Change Plugin

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**STATE CHANGE PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

State Change Plugin

**DN of Configuration Entry**

cn=State Change Plugin,cn=plugins,cn=config

**Description**

State change notification service plug-in for detecting updates, such as configuration changes, and triggering callbacks when updates happen.

This plug-in is used internally by the roles plug-in.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**SUBTREE ENTRY COUNTER PLUG-INS**

Consider the following aspects of this plug-in.

**Plug-In Name**Subtree Entry Counter For *ObjectClass*

**DN of Configuration Entry**

cn=Subtree Entry Counter for *ObjectClass*,cn=plugins, cn=config

**Description**

Maintain a count of entries with a particular object class. The following plug-ins are provided.

- Subtree entry counter for departments in domains
- Subtree entry counter for domains within a domain
- Subtree entry counter for mail lists
- Subtree entry counter for nested departments
- Subtree entry counter for total domains
- Subtree entry counter for users

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

These plug-ins are provided for use with Messaging Server only, and are disabled by default. Leave these plug-ins disabled unless your Messaging Server requires them.

**Counter Attributes Maintained**

*nsNumDepts*

Either the number of departments within a domain, or the number of departments within a department (nested departments), depending on the DN of the entry.

*nsNumDomains*

Either the number of total domains, or the number of domains within a domain or nested domain, depending on the DN of the entry.

*nsNumMailLists*

Number of mail lists.

**TELEPHONE SYNTAX PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

Telephone Syntax

**DN of Configuration Entry**

cn=Telephone Syntax,cn=plugins,cn=config

**Description**

Syntax for handling telephone numbers.

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**UID UNIQUENESS PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

UID Uniqueness

**DN of Configuration Entry**

cn=UID Uniqueness,cn=plugins,cn=config

**Description**

Checks that the values of specified attributes are unique each time a modification occurs on an entry.

**Configurable Options**

on | off

**Default Setting**

off

**Configurable Arguments**

You may configure this plug-in in either of two different ways.

1. Specify attributes that must be unique for a series of one or more subtrees identified by DNs. For example, to specify that `employeeNumber` and `uid` attribute values must be unique across both `o=org1,dc=example,dc=com` and `o=org2,dc=example,dc=com`, configure the arguments in the configuration entry as follows:

```
nsslapd-pluginarg0: employeeNumber
nsslapd-pluginarg1: uid
nsslapd-pluginarg2: o=org1,dc=example,dc=com
nsslapd-pluginarg3: o=org2,dc=example,dc=com
```

2. You specify attributes that must be unique inside congruent subtrees, optionally only on entries of a specified object class. For example, to specify that `employeeNumber` and `uid` attribute values must be unique in either `o=org1,dc=example,dc=com` or `o=org2,dc=example,dc=com`, but only on entries of the `inetOrgPerson` object class, configure the arguments in the configuration entry as follows:

```
nsslapd-pluginarg0: employeeNumber
nsslapd-pluginarg1: uid
```

```
nsslapd-pluginarg2: MarkerObjectClass="organization"  
RequiredObjectClass="inetOrgPerson"
```

**Dependencies**

database type

**Performance Related Information**

Directory Server provides the UID Uniqueness plug-in by default. To ensure unique values for other attributes, you can create instances of the UID Uniqueness plug-in for those attributes.

The UID Uniqueness plug-in may slow down Directory Server performance.

**URI PLUG-IN**

Consider the following aspects of this plug-in.

**Plug-In Name**

URI Syntax

**DN of Configuration Entry**

cn=URI Syntax, cn=plugins, cn=config

**Description**

Syntax for handling URIs (Unique Resource Identifiers) including URLs (Unique Resource Locators.)

**Configurable Options**

on | off

**Default Setting**

on

**Configurable Arguments**

None

**Dependencies**

None

**Performance Related Information**

Do not modify the configuration of this plug-in. Leave this plug-in running at all times.

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**

[dse.ldif\(4\)](#)

---

## nsslapd-port

LDAP port number

### Description

TCP/IP port number used for LDAP communications. If you want to run SSL/TLS over this port, you can do so through the Start TLS extended operation. This selected port must be unique on the host system; make sure no other application is attempting to use the same port number. Specifying a port number of less than 1024 requires Directory Server to run as super user.

---



---

**Note:** Be aware when changing this port number of other applications whose configurations you may have to modify to reflect the change.

---



---

You must restart the server for the port number change to be taken into account.

### Entry DN

cn=config

### Valid Range

1 to 65535

### Default Value

389

### Syntax

Integer

### Example

nsslapd-port: 389

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-privatenamespaces

private naming contexts

### Description

Contains the list of the private naming contexts `cn=config`, `cn=schema`, and `cn=monitor`.

#### Entry DN

`cn=config`

#### Valid Range

`cn=config`, `cn=schema`, and `cn=monitor`

#### Default Value

N/A

#### Syntax

DirectoryString

#### Example

```
nsslapd-privatenamespaces: cn=config
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-pwdgeneratorpwdlen

Generated password length

### Description

PROPERTY	VALUE
Entry DN	cn=config
Valid Range	6 to 512
Default Value	6
Syntax	Integer

This attribute specifies the length of the password generated by Directory Server when a password is reset using the LDAP Password Modify Extended Operation defined in RFC 3062 (<http://www.ietf.org/rfc/rfc3062.txt>) and no new password value is specified.

### Examples

```
nsslapd-pwdgeneratorpwdlen: 8
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

## nsslapd-readonly

read only mode

### Description

Specifies whether the whole server, or an individual database, is in read-only mode, meaning that neither data in a database nor configuration information can be modified. Any attempt to modify a database in read-only mode returns an error indicating that the server is unwilling to perform the operation.

#### Entry DN

`cn=config`

`cn=dbName, cn=ldbm database, cn=plugins, cn=config`

#### Valid Range

`on | off`

#### Default Value

`off`

#### Syntax

DirectoryString

#### Example

`nsslapd-readonly: off`

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-referral

referral

### Description

This multivalued attribute specifies the LDAP URL or URLs to be returned by the suffix, when the server receives a request for an entry not belonging to the local tree, that is, an entry whose suffix does not match the value specified on any of the suffix attributes. For example, suppose the database contains only the entries under the following DN.

```
ou=People, dc=example,dc=com
```

Yet, the request is for an entry under the following DN.

```
ou=Groups, dc=example,dc=com
```

In this case, the referral is returned so the client may contact the corresponding directory for the requested entry. Although only one referral is allowed per Directory Server instance, this referral can have multiple values.

---

---

**Note:** If you want to use SSL and TLS communications, the referral attribute should be of the following form.

```
ldaps://hostname
```

Start TLS does not support referrals.

---

---

For suffix configuration entries, this attribute is required when the value of the `nsslapd-state` attribute is set to `referral`.

#### Entry DNs

```
cn=config
```

```
cn="suffixName",cn=mapping tree,cn=config
```

#### Valid Range

Valid LDAP URL in the following format: `ldap://hostname`

#### Default Value

Not applicable

#### Syntax

DirectoryString

#### Example

```
nsslapd-referral: ldap://alternate.example.com
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**

[dse.ldif\(4\)](#)

---

## nsslapd-referralmode

referral mode

### Description

When set, this attribute causes the server send back the referral for *any* request on *any* suffix.

#### Entry DN

cn=config

#### Valid Range

Valid LDAP URL in the following format: `ldap://serverHost`

#### Default Value

Not applicable

#### Syntax

DirectoryString

#### Example

nsslapd-referralmode: ldap://backup.example.com

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-require-index

allow only indexed searches

### Description

When switched to `on`, this attribute allows you to refuse unindexed searches. This performance related attribute avoids saturating the server with erroneous searches.

#### Entry DN

`cn=dbname, cn=ldbm database, cn=plugins, cn=config`

#### Valid Range

`on | off`

#### Default Value

`off`

#### Syntax

DirectoryString

#### Example

`nsslapd-require-index: off`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-reservedescriptors

reserve file descriptors

### Description

This read-only attribute specifies the number of file descriptors that Directory Server reserves for managing non-client connections, such as index management and managing replication. The number of file descriptors that the server reserves for this purpose subtracts from the total number of file descriptors available for servicing LDAP client connections.

Most installations of Directory Server should never need to change this attribute. However, consider increasing the value on this attribute if all of the following are true:

- The server is replicating to a large number of consumer servers (more than 10), or the server is maintaining a large number of index files (more than 30).
- The server is servicing a large number of LDAP connections.
- You get error messages reporting that the server is unable to open file descriptors (the actual error message will differ depending on the operation that the server is attempting to perform), but these error messages are NOT related to managing client LDAP connections.

Increasing the value on this attribute may result in more LDAP clients being unable to access your directory. Therefore, when you increase the value on this attribute, increase the value on the `nsslapd-maxdescriptors` attribute also. Note that you may not be able to increase the `nsslapd-maxdescriptors` value if your server is already using the maximum number of file descriptors that your operating system allows a process to use. Refer to your operating system documentation for details. If this is the case, then reduce the load on your server by causing LDAP clients to search alternative directory replicas.

To assist you in computing the number of file descriptors you set for this attribute, use the following formula:

```
nsslapd-reservedescriptor =
20 +
(NumBackends * 4) +
NumGlobalIndexes +
ReplicationDescriptors +
ChainingBackendDescriptors +
PTADescriptors +
SSLDescriptors
```

The terms in the formula are as follows.

#### **NumldbmBackends**

Number of LDBM databases.

#### **NumGlobalIndexes**

Total number of configured indexes for all databases including system indexes. By default, there are 8 system indexes and 17 additional indexes per database.

#### **ReplicationDescriptors**

$NumSupplierReplicas + 8$

Where *NumSupplierReplicas* is number of replicas in the server that can act as a supplier (hub or master).

**ChainingBackendDescriptors**

*NumChainingBackends* \* *nsOperationConnectionsLimit*

Where *nsOperationConnectionsLimit* is defined in the chained suffix configuration and 10 by default.

**PTADescriptors**

3 if PTA is configured, 0 if PTA is not configured.

**SSLDescriptors**

5 (4 files + 1 listen socket) if SSL is configured, 0 if SSL is not configured.

**Entry DN**

cn=config

**Valid Range**

1 to 65535

**Default Value**

64

**Syntax**

Integer

**Example**

nsslapd-reservedescriptors: 64

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**

[dse.ldif\(4\)](#)

---

## nsslapd-rootdn

Directory Manager DN

### Description

Specifies the distinguished name of an entry that is not subject to access control restrictions, administrative limit restrictions for operations on the directory or resource limits in general. The attributes `nsslapd-sizelimit`, `nsslapd-timelimit`, and `nsslapd-schemacheck` do not apply to this DN either. `nsslapd-idletimeout` does however apply to connections opened by this DN.

#### Entry DN

`cn=config`

#### Valid Range

Any valid distinguished name

#### Default Value

`cn=Directory Manager`

#### Syntax

DN

#### Example

`nsslapd-rootdn: cn=Directory Manager`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-rootpw

Directory Manager password

### Description

Allows you to specify the password associated with the Directory Manager DN. When you provide the root password, it will be encrypted according to the encryption method you selected for `nsslapd-rootpwstoragescheme`.

When viewed from the `dse.ldif` file, this attribute shows the encryption method followed by the encrypted string of the password.

---

---

**Note:** If you configure a root DN at server installation time, you must also provide a root password. However, it is possible for the root password to be deleted from `dse.ldif` by direct editing of the file. In this situation, the root DN can only obtain the same access to your directory as you allow for anonymous access. Always make sure that a root password is defined in `dse.ldif` when a root DN is configured for your database.

---

---

### Entry DN

`cn=config`

### Valid Range

Any valid password encrypted by any one of the encryption methods described in [passwordStorageScheme\(5DSAT\)](#).

### Default Value

Not applicable

### Syntax

DirectoryString: `{encryption_method}encrypted_password`

### Example

`nsslapd-rootpw: {SSHA}fp+C/eJCYVV0ZlXDE52Pd9uOzjvJVk4B10biAg==`

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-rootpwstoragescheme

root password storage scheme

### Description

This attribute indicates the encryption method used for the root password.

#### Entry DN

cn=config

#### Valid Range

Any encryption method described in [passwordStorageScheme\(5DSAT\)](#)

#### Default Value

SSHA

#### Syntax

DirectoryString

#### Example

nsslapd-rootpwstoragescheme: SSHA

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-schemacheck

schema checking

### Description

Specifies whether the database schema will be enforced during entry insertion or modification. When this attribute has a value of `on`, Directory Server will not check the schema of existing entries until they are modified. The database schema defines the type of information allowed in the database. You can extend the default schema using the `objectclasses` and attribute types.

---

**Note:** Schema checking works by default when database modifications are made using an LDAP client, such as `ldapmodify`, the Directory Server console, or when importing a database from LDIF.

If you turn schema checking off, you will have to verify manually that your entries conform to the schema. If schema checking is turned on, the server sends an error message to inform you of the entries that do not match the schema. Make sure that the attributes and object classes you create in your LDIF statements are both spelled correctly and identified in `dse.ldif`. You will need to create a file in LDIF format in the schema directory or add the elements to `99user.ldif`.

---

#### Entry DN

`cn=config`

#### Valid Range

`on | off`

#### Default Value

`on`

#### Syntax

DirectoryString

#### Example

`nsslapd-schemacheck: on`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

**See Also**[dse.ldif\(4\)](#)

## nsslapd-schema-repl-useronly

replicate only user-defined schema elements

### Description

This attribute allows you to have greater control over the schema that is replicated. The attribute is `off` by default, implying that the entire schema is replicated. If the attribute is set to `on`, only schema with an X-ORIGIN of `user-defined` is replicated. This setting greatly improves the performance of schema replication.

If you are replicating from a current Directory Server to a 5.1 server, you *must* set this attribute to `on`. Otherwise the current schema will be pushed to the 5.1 server and the 5.1 server will be unable to restart, due to duplicate objects.

#### Entry DN

`cn=config`

#### Valid Range

`on | off`

#### Default Value

`off`

#### Syntax

DirectoryString

#### Example

`nsslapd-schema-repl-useronly: off`

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-search-tune

Skip check for modifications during search before returning entries

### Description

PROPERTY	VALUE
Entry DN	cn=config,cn=ldb database,cn=plugins,cn=config
Valid Range	See description that follows.
Default Value	Not defined
Syntax	Integer

This attribute specifies that Directory Server should skip the double-check it normally does to verify that search results returned include the most current version of the entry content, even if the entry has been modified during the search. This double-check verification involves testing the search filter against each entry to return in response to the search.

Allowing Directory Server to skip the filter test when the search involves complex filters and large static groups can result in significant performance improvement.

When `nsslapd-search-tune` is set, the access log identifies searches for which the filter test is skipped with the tag `notes=F`.

Set `nsslapd-search-tune` to a sum of the following values:

#### 1

Enable the filter test to be skipped before the entry is returned.

#### 2

Reserved, do not use.

#### 4

Reserved, do not use.

#### 8

Skip the filter test even if the attribute in the filter is in the list of requested attributes. This could potentially cause the server to return entries that no longer correspond to search criteria.

#### 16

Skip the filter test when search filters are complex, using `&` and `|`.

#### 32

Always finish building the list of candidate entries from the index.

### Examples

```
nsslapd-search-tune: 49
```

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

---

## nsslapd-securelistenhost

listen to IP address for secure connections

### Description

Allows multiple Directory Server instances to run on a multi-homed machine, using secure SSL/TLS connections, and makes it possible to limit listening to one or more interfaces of a multi-homed machine. Provide the hostname or host names corresponding to the IP interface or interfaces you want to specify as the values for this attribute. Directory Server responds only to requests sent to the interface or interfaces corresponding to the host name or host names specified. This prevents other programs from using the same port as Directory Server on the interfaces specified.

#### Entry DN

cn=config

#### Valid Range

Any secure host name or host names

#### Default Value

Not applicable

#### Syntax

DirectoryString

#### Example

nsslapd-securelistenhost: *secure-hostname*

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-securePort

encrypted LDAP port number

### Description

TCP/IP port number used for SSL/TLS communications. This selected port must be unique on the host system; make sure no other application is attempting to use the same port number. Specifying a port number of less than 1024 requires that Directory Server runs as super user.

---

---

**Note:** Be aware when changing this port number of other applications whose configurations you may have to modify to reflect the change.

---

---

The default value 636 is only used if the server has been configured with a private key and a certificate; otherwise it does not listen on this port.

You must restart the server for the port number change to be taken into account.

#### Entry DN

cn=config

#### Valid Range

1 to 65535

#### Default Value

636

#### Syntax

Integer

#### Example

nsslapd-securePort: 636

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-security

security

### Description

Enables the use of security features, SSL/TLS and attribute encryption, in Directory Server. If you require secure connections, or the use of the attribute encryption feature, this attribute should be set to on.

#### Entry DN

cn=config

#### Valid Range

on | off

#### Default Value

off

#### Syntax

DirectoryString

#### Example

```
nsslapd-security: off
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-sizelimit

size limit

### Description

Specifies the maximum number of entries to return from a search operation. If this limit is reached, the server returns any entries it has located that match the search request, as well as an exceeded size limit error.

When no limit is set, the server will return every matching entry to the client regardless of the number found. To set a no limit value whereby Directory Server will wait indefinitely for the search to complete, specify a value of -1 for this attribute in the `dse.ldif` file.

This limit applies to everyone regardless of their organization.

### Entry DN

`cn=config`

`cn=default instance config,cn=chaining database,  
cn=plugins,cn=config`

### Valid Range

-1 to the maximum 32 bit integer value (2147483647)

### Default Value

2000

### Syntax

Integer

### Example

```
nsslapd-sizelimit: 2000
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-state

how a suffix handles operations

### Description

Determines how the suffix handles operations.

#### Entry DN

`cn="suffixName",cn=mapping tree,cn=config`

#### Valid Range

`backend`

The backend database is used to process all operations.

`disabled`

The database is not available for processing operations. The server returns a "No such search object" error in response to requests made by client applications.

`referral`

A referral is returned for requests made to this suffix.

`referral on update`

The database is used for all operations except update requests, which receive a referral.

#### Default Value

`backend`

#### Syntax

DirectoryString

#### Example

`nsslapd-state: backend`

---

**Note:** You can manually change the value of the `nsslapd-state` attribute. For example, you can change the value to `referral` or `referral on update` if you want the server to be read-only for the duration of a backup.

However, if replication is enabled, replication manages the value of the `nsslapd-state` attribute, and overwrites the value you have manually set.

---

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

## See Also

[dse.ldif\(4\)](#)

---

## nsslapd-suffix

chained suffix identifier

### Description

Specifies the chained suffix. This is a single-valued attribute as each database instance can have only one suffix. Previously, it was possible to have more than one suffix on a single database instance but this is no longer the case. Any changes made to this attribute after the entry has been created take effect only after you restart the server containing the chained suffix.

#### Entry DN

`cn=dbName,cn=ldbm database,cn=plugins,cn=config`

#### Valid Range

Any valid DN

#### Default Value

Not applicable

#### Syntax

DirectoryString

#### Example

`nsslapd-suffix: o=example`

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-threadnumber

thread number

### Description

Defines the number of operation threads that Directory Server creates during startup. The `nsslapd-threadnumber` value should be increased if you have many directory clients performing time-consuming operations such as add or modify. This ensures that there are other threads available for servicing short-lived operations such as simple searches.

#### Entry DN

`cn=config`

#### Valid Range

1 to the number of threads supported by your system

#### Default Value

30

#### Syntax

Integer

#### Example

```
nsslapd-threadnumber: 60
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsslapd-timelimit

time limit

### Description

Specifies the maximum number of seconds allocated for a search request. If this limit is reached, Directory Server returns any entries it has located that match the search request, as well as an exceeded time limit error.

When no limit is set, the server returns every matching entry to the client regardless of the time it takes. To set a no limit value whereby Directory Server waits indefinitely for the search to complete, specify a value of -1 for this attribute in the `dse.ldif` file. A value of zero causes no time to be allowed for searches. The smallest time limit is 1 second.

#### Entry DN

`cn=config`

`cn=default instance config,cn=chaining database,  
cn=plugins,cn=config`

#### Valid range

-1 to the maximum 32 bit integer value (2147483647) in seconds

#### Default value

3600

#### Syntax

Integer

#### Example

`nsslapd-timelimit: 3600`

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsslapd-versionstring

version string

### Description

Specifies the server version number.

**Entry DN**

cn=config

**Valid range**

Any valid server version number.

**Default value**

Not applicable

**Syntax**

DirectoryString

**Example**

nsslapd-versionstring: Directory/11.1.1.5.0

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsSSL2

SSL v2 support

### Description

Supports SSL version 2.

#### Entry DN

cn=encryption,cn=config

#### Valid Range

on | off

#### Default Value

off

#### Syntax

DirectoryString

#### Example

nsSSL2: on

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsSSL3

SSL v3 support

### Description

Supports SSL version 3.

#### Entry DN

cn=encryption, cn=config

#### Valid Range

on | off

#### Default Value

off

#### Syntax

DirectoryString

#### Example

nsSSL3: on

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsSSL3ciphers

SSL encryption ciphers

### Description

This multivalued attribute specifies the set of encryption ciphers Directory Server uses during SSL communications. The default value, `all`, does not mean all the supported SSL ciphers, as supported ciphers with NULL key length are removed from the list.

#### Entry DN

`cn=encryption, cn=config`

#### Valid Range

Ciphers shown as `supportedSSLCiphers` on the root DSE, or `all`

#### Default Value

`all`

#### Syntax

DirectoryString

Use the `+` symbol to enable or `-` symbol to disable ciphers, followed by the cipher identifier. Blank spaces are not allowed in the list of ciphers.

To enable all ciphers, except `rsa_null_md5` which must be specifically called, you can specify `all`.

#### Example

`nsSSL3ciphers: +RSA_NULL_MD5, +RC4_56_SHA, -RC4_56_SHA`

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsSSLClientAuth

use SSL client authentication

### Description

In an SSL connection, this attribute specifies whether a client certificate is allowed, required, or should not be sent, `off`, to the SSL server.

#### Entry DN

`cn=encryption, cn=config`

#### Valid Range

`off` | `allowed` | `required`

#### Default Value

`allowed`

#### Syntax

`DirectoryString`

#### Example

`nsSSLClientAuth: allowed`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsSSLServerAuth

use SSL server authentication

### Description

Specifies the action that the SSL client should take on the server certificate sent by the SSL server in an SSL connection.

#### Entry DN

cn=encryption,cn=config

#### Valid Range

cert

Verify whether the server certificate is from a trusted certificate authority.

cncheck

Verify whether the server certificate is from a trusted certificate authority *and* verify the DN contained in the server certificate, to avoid man-in-the middle attacks on the server.

weak

Make no attempt to verify whether the server certificate is from a trusted certificate authority.

#### Default Value

cert

#### Syntax

DirectoryString

#### Example

nsSSLServerAuth: cert

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## nsSSLSessionTimeout

SSL session time out

### Description

Specifies the lifetime duration of an SSL session for both SSLv2 and SSLv3. The minimum timeout value is 5 seconds and if you enter a value below this, it is automatically replaced by 5 seconds. Values outside the valid ranges are replaced by the default value of 100 seconds for SSLv2.

#### Entry DN

cn=encryption, cn=config

#### Valid Range

(SSLv2) 5 seconds to 100 seconds

(SSLv3) 5 seconds to 24 hours

#### Default Value

0, which translates to 100 seconds if you are running SSLv2 and 24 hours if you are running SSLv3

#### Syntax

Integer

#### Example

```
nsSSLSessionTimeout: 5
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsState

Clock state for replication, unique ID generation

### Description

PROPERTY	VALUE
Entry DN	cn=replica,cn= <i>suffix name</i> ,cn=mapping tree,cn=config cn=uniqueid generator,cn=config
Valid Range	N/A
Default Value	N/A
Syntax	Binary

This attribute is part of replica configuration for nsDS5Replica entries.

This attribute is reserved for internal use for handling clock skew and detecting backward clock errors. Do not edit the value of this attribute.

### Examples

```
nsState:: AAEAAAAAAAAAAAAAAQ4rs0AAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAA==
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## nsSystemIndex

identify index as system index

### Description

This mandatory attribute specifies whether the index is a system index, that is, an index that is vital for Directory Server operations. If this attribute has a value of `true`, it is system essential. System indexes must not be removed as this seriously disrupts server functionality.

#### Entry DN

`cn=default indexes,cn=config,cn=ldbm database,  
cn=plugins,cn=config`

#### Valid Range

`true | false`

#### Default Value

Depends on the index

#### Syntax

DirectoryString

#### Example

`nssystemindex: true`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## nsTransmittedControls

chained LDAP controls

### Description

This attribute, which can be both a global, and thus dynamic, configuration, or a `cn=chained suffix instance`, `cn=chaining database`, `cn=plugins`, `cn=config instance` configuration attribute, allows you to alter the controls that the chained suffix forwards. The following controls are forwarded by default.

- Managed DSA, object identifier: 2.16.840.1.113730.3.4.2.
- Virtual list view (VLV), object identifier: 2.16.840.1.113730.3.4.9
- Server side sorting, object identifier: 1.2.840.113556.1.4.473

### Entry DN

`cn=config`, `cn=chaining database`, `cn=plugins`, `cn=config`

### Valid Range

Any valid OID or the above listed controls forwarded by the chained suffix.

### Default Value

None

### Syntax

Integer

### Example

`nsTransmittedControls: 1.2.840.113556.1.4.473`

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

## op-type

DS prioritized replication configuration (RPR) properties

### Description

Prioritized replication lets you force a Directory Server supplier to assign higher priority to certain updates replicated on a Directory Server consumer. You prioritize replication operations by creating replication priority rules.

#### **PROPERTY:** attr

Characteristic	Value
Syntax	ATTR_NAME
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the attribute type to which the replication priority rule applies.

#### **PROPERTY:** base-dn

Characteristic	Value
Syntax	DN
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN under which the replication priority rule applies. For example, if you set `base-dn:ou=administrators,dc=example,dc=com`, then changes to `uid=myAdmin,ou=administrators,dc=example,dc=com` might be replicated with high priority, but changes to `uid=bjensen,ou=people,dc=example,dc=com` would not.

#### **PROPERTY:** bind-dn

Characteristic	Value
Syntax	DN
Default Value	None
Is readable	Yes
Is modifiable	Yes

Characteristic	Value
Is multi-valued	No

This property specifies a bind DN for an account whose updates might be replicated with high priority.

**PROPERTY:** op-type

Characteristic	Value
Syntax	add   mod   del
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies a type of operation for which updates might be replicated with high priority.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

---

TIME

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dsconf\(1M\)](#)

## parent-suffix-dn

DS suffix configuration (SUF) properties

### Description

Each Directory Server suffix you create is configured according to the suffix properties documented here and in the documentation specified under the SEE ALSO section.

#### **PROPERTY:** `compression-entries`

Characteristic	Value
Syntax	<code>all overflow</code>
Default Value	<code>overflow</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies entry eligibility for compression.

`all`

All the entries will be compressed.

`overflow`

Only entries in overflow pages will be compressed.

#### **PROPERTY:** `compression-mode`

Characteristic	Value
Syntax	<code>none DSZ</code>
Default Value	<code>None</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies how entries are compressed.

`none`

No entries compression mechanism will be used.

`DSZ`

Entries will be compressed using the DSZ method.

**PROPERTY:** db-name

Characteristic	Value
Syntax	STRING
Default Value	<i>suffixName</i>
Is readable	Yes
Is modifiable	No
Is multi-valued	Yes

This property specifies the suffix that is used to process requests involving the database.

**PROPERTY:** db-path

Characteristic	Value
Syntax	PATH
Default Value	<i>server-instance-dir/db/suffix-dir</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute path to the suffix database.

**PROPERTY:** entry-cache-count

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	unlimited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of entries allowed in the entry cache of the suffix.

**PROPERTY:** entry-cache-size

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	20M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum amount of memory Directory Server requests for the entry cache of the suffix.

**PROPERTY:** `entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the number of entries stored in the suffix.

**PROPERTY:** `entry-crc-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether a CRC is computed on each entry.

**PROPERTY:** `index-filter-analyzer-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	No
Is multi-valued	No
Restart needed	No

This property specifies whether the index filter analyzer is running.

**PROPERTY:** `index-filter-analyzer-max-entries`

Characteristic	Value
Syntax	Integer
Default Value	2000

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies the maximum number of entries that the index filter analyzer may contain.

**PROPERTY:** `parent-suffix-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	DN of the parent entry
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN of the parent entry for the suffix. The value of this property must logically be a parent of the suffix.

For instance, if you have a suffix with DN `dc=com` and a suffix `dc=example, dc=com`, you can set `dc=com` as the `parent-suffix-dn` of `dc=example, dc=com`, and subtree searches with based DN `dc=com` then also traverses `dc=example, dc=com`.

**PROPERTY:** `referral-mode`

Characteristic	Value
Syntax	disabled   enabled   only-on-write
Default Value	disabled
Is readable	Yes
Is modifiable	Yes, if the suffix is not replicated
Is multi-valued	No

This property specifies how referrals are used when a client makes a request involving the suffix.

`disabled`  
Handle requests locally; do not return referral URLs.

`enabled`  
Return referral URLs to client requests.

`only-on-write`  
Return referral URLs to client requests only for write operations.

**PROPERTY:** repl-accept-client-update-enabled

Characteristic	Value
Syntax	on   off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the replicated suffix accepts write operations from client applications, or instead returns referral URLs.

**PROPERTY:** repl-cl-max-age

Characteristic	Value
Syntax	DURATION   undefined
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age for a record in the replication changelog. Older records are purged.

**PROPERTY:** repl-cl-max-entry-count

Characteristic	Value
Syntax	INTEGER
Default Value	0 (meaning undefined)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum number of records in the replication changelog. When the limit is exceeded, older records are purged.

**PROPERTY:** repl-id

Characteristic	Value
Syntax	INTEGER
Default Value	None
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication

Characteristic	Value
Is multi-valued	No

This property specifies the replica identification number, 1-65534 for a supplier, 65535 for a consumer or a hub. Once set, this property cannot be modified.

**PROPERTY:** `repl-manager-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the bind DN's of users allowed to bind to perform replication operations on the suffix.

**PROPERTY:** `repl-purge-delay`

Characteristic	Value
Syntax	DURATION   never
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age of tombstone entries used by replication. Tombstone entries are entries marked for deletion that have not yet been removed, and also replication state information associated with the entries. When setting this attribute, ensure that the purge delay is longer than the longest replication cycle in your replication policy to avoid incurring conflict resolution problems and divergence between replicas.

**PROPERTY:** `repl-rewrite-referrals-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether referrals you set can be automatically overwritten by the server to reference replicas.

**PROPERTY:** `repl-role`

Characteristic	Value
Syntax	<code>not-replicated</code>   <code>master</code>   <code>hub</code>   <code>consumer</code>
Default Value	<code>not-replicated</code>
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the role played by the suffix in a replicated topology.

`not-replicated`

The suffix is not part of a replicated topology.

`master`

This suffix is a supplier of replication updates in a replicated topology. It can accept both read and write operations.

`hub`

This suffix is a supplier of replication updates in a replicated topology. It can accept read operations and replication updates.

`consumer`

This suffix is a dedicated consumer of replication updates in a replicated topology. It can accept read operations and replication updates, but not writes from clients.

To promote a replica, use the `dsconf promote-repl` command. To demote a replica, use the `dsconf demote-repl` command.

**PROPERTY:** `require-index-enabled`

Characteristic	Value
Syntax	<code>on</code>   <code>off</code>
Default Value	<code>off</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether unindexed searches are allowed. When `on`, unindexed searches return `LDAP_UNWILLING_TO_PERFORM`.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

true or false.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple

specifiers. However, `MEMORY_SIZE` properties allow decimal values, for example, 1.5M.

**NAME**

A valid `cn` (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus `640` specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form `hhmm` in 24-hour format, where `hh` stands for hours and `mm` stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

`dsconf(1M)`, `all-ids-threshold(5DSCONF)`, `db-path(5DSCONF)`, `enabled(5DSCONF)`, `moddn-enabled(5DSCONF)`, `referral-url(5DSCONF)`

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## path

DS logging configuration (LOG) properties

### Description

Directory Server writes to three main types of log files you can configure, the *INSTANCE\_PATH/logs/access*, *INSTANCE\_PATH/logs/audit*, and *INSTANCE\_PATH/logs/errors* logs, where *INSTANCE\_PATH* is the full path where the server instance is located, such as */local/dsInst*.

When you specify one of these properties with `dsconf get-log-prop` or `dsconf set-log-prop`, you must specify which type of log configuration, *access*, *audit*, or *error*, you want to examine. For example, to see whether audit logging is enabled for a server instance:

```
$ dsconf get-log-prop audit enabled
enabled : off
$
```

#### PROPERTY: buffering-enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, not applicable to audit and errors logs
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether Directory Server writes access log entries directly to disk, or use a buffer, by default.

#### PROPERTY: enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, off for audit, on for errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether the specified log type is enabled.

**PROPERTY:** level

Characteristic	Value
Syntax	See the description that follows.
Default Value	default
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property defines which kinds of messages get logged. This property is applicable only to `access` and `errors` logs.

**access log levels**

The following settings are supported:

`none`

Nothing is logged in ACCESS log.

`acc-internal`

Log access information for internal operations.

`default`

Log client access to entries.

`acc-default_plus_referrals`

As default, but also log access to referrals.

`acc-timing`

Use precise timing for microsecond resolution of elapsed times.

**errors log levels**

The following settings are supported:

`default`

Log startup, shutdown, errors, and warnings.

`err-function-calls`

Log when server enters or exits a function.

`err-search-args`

Log search arguments.

`err-connection`

Connection management.

`err-packets`

Log packets sent and received.

`err-search-filter`

Log search filter information.

`err-config-file`

Log information for changes to the configuration file `dse.ldif`.

`err-acl`  
Log access control processing information.

`err-ldbm`  
Log information from the ldbm database plugin.

`err-entry-parsing`  
Log LDIF parsing errors.

`err-housekeeping`  
Log event queue information.

`err-replication`  
Log information about replication operations.

`err-entry-cache`  
Log entry cache information.

`err-plugins`  
Log information from server plug-ins.

`err-dsml`  
Log information from DSML front end.

`err-dsml-advanced`  
Debugging information for DSML.

#### **PROPERTY:** `max-age`

Characteristic	Value
Syntax	DURATION   unlimited
Default Value	1M (one month)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the age beyond which the specified type of log file is deleted.

#### **PROPERTY:** `max-disk-space-size`

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	500M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum disk space the specified type of log is allowed to consume. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

**PROPERTY:** `max-file-count`

Characteristic	Value
Syntax	Integer
Default Value	10 for access, 2 for errors, 1 for audit
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of log files, including rotated logs, of the specified type that the server allows to be created in the log file directory. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

When you set this property to 1, the specified log is not rotated.

**PROPERTY:** `max-size`

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	100M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum file size for the specified log. When the limit is reached, the server rotates the log file, unless `max-file-count` is set to 1.

**PROPERTY:** `min-free-disk-space-size`

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	5M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum free space allowed on the disk where the specified log is stored. When the limit is reached, the server deletes the oldest log files until enough space is available.

**PROPERTY:** `path`

Characteristic	Value
Syntax	PATH

Characteristic	Value
Default Value	<i>INSTANCE_PATH/logs/access, INSTANCE_PATH/logs/audit, INSTANCE_PATH/logs/errors</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the full path to the specified log file type.

**PROPERTY:** `perm`

Characteristic	Value
Syntax	<code>OCTAL_MODE</code>
Default Value	<code>600</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the read, write, and execute permissions on the specified log file.

**PROPERTY:** `rotation-interval`

Characteristic	Value
Syntax	<code>DURATION   unlimited</code>
Default Value	<code>1d (one day) for access, 1w (one week) for audit and errors</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the duration between rotations of the specified log file.

**PROPERTY:** `rotation-min-file-size`

Characteristic	Value
Syntax	<code>MEMORY_SIZE   undefined</code>
Default Value	<code>undefined</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum size the specified log file must have before the server rotates it.

**PROPERTY:** rotation-time

Characteristic	Value
Syntax	TIME   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the time of day when the server rotates the specified log file.

**PROPERTY:** verbose-enabled

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether extra informational messages are written to the errors log.

**Syntax Values**

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as cn or objectClass.

**BOOLEAN**

true or false.

**DN**

A valid distinguished name such as ou=People, dc=example, dc=com.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as 1w, 7d, 168h, 10080m, or 604800s. You can also specify one week as 1w0d0h0m0s.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [enabled\(5DSCONF\)](#)

---

## perm

DS logging configuration (LOG) properties

### Description

Directory Server writes to three main types of log files you can configure, the *INSTANCE\_PATH/logs/access*, *INSTANCE\_PATH/logs/audit*, and *INSTANCE\_PATH/logs/errors* logs, where *INSTANCE\_PATH* is the full path where the server instance is located, such as */local/dsInst*.

When you specify one of these properties with `dsconf get-log-prop` or `dsconf set-log-prop`, you must specify which type of log configuration, *access*, *audit*, or *error*, you want to examine. For example, to see whether audit logging is enabled for a server instance:

```
$ dsconf get-log-prop audit enabled
enabled : off
$
```

#### PROPERTY: buffering-enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, not applicable to audit and errors logs
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether Directory Server writes access log entries directly to disk, or use a buffer, by default.

#### PROPERTY: enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, off for audit, on for errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether the specified log type is enabled.

**PROPERTY:** level

Characteristic	Value
Syntax	See the description that follows.
Default Value	default
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property defines which kinds of messages get logged. This property is applicable only to `access` and `errors` logs.

**access log levels**

The following settings are supported:

`acc-internal`

Log access information for internal operations.

`default`

Log client access to entries.

`acc-default_plus_referrals`

As default, but also log access to referrals.

`acc-timing`

Use precise timing for microsecond resolution of elapsed times.

**errors log levels**

The following settings are supported:

`default`

Log startup, shutdown, errors, and warnings.

`err-function-calls`

Log when server enters or exits a function.

`err-search-args`

Log search arguments.

`err-connection`

Connection management.

`err-packets`

Log packets sent and received.

`err-search-filter`

Log search filter information.

`err-config-file`

Log information for changes to the configuration file `dse.ldif`.

`err-acl`

Log access control processing information.

`err-ldbm`  
Log information from the ldbm database plugin.

`err-entry-parsing`  
Log LDIF parsing errors.

`err-housekeeping`  
Log event queue information.

`err-replication`  
Log information about replication operations.

`err-entry-cache`  
Log entry cache information.

`err-plugins`  
Log information from server plug-ins.

`err-dsml`  
Log information from DSML front end.

`err-dsml-advanced`  
Debugging information for DSML.

**PROPERTY:** `max-age`

Characteristic	Value
Syntax	DURATION   unlimited
Default Value	1M (one month)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the age beyond which the specified type of log file is deleted.

**PROPERTY:** `max-disk-space-size`

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	500M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum disk space the specified type of log is allowed to consume. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

**PROPERTY:** `max-file-count`

Characteristic	Value
Syntax	Integer
Default Value	10 for access, 2 for errors, 1 for audit
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of log files, including rotated logs, of the specified type that the server allows to be created in the log file directory. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

When you set this property to 1, the specified log is not rotated.

**PROPERTY:** `max-size`

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	100M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum file size for the specified log. When the limit is reached, the server rotates the log file, unless `max-file-count` is set to 1.

**PROPERTY:** `min-free-disk-space-size`

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	5M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum free space allowed on the disk where the specified log is stored. When the limit is reached, the server deletes the oldest log files until enough space is available.

**PROPERTY:** `path`

Characteristic	Value
Syntax	PATH

Characteristic	Value
Default Value	<i>INSTANCE_PATH/logs/access, INSTANCE_PATH/logs/audit, INSTANCE_PATH/logs/errors</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the full path to the specified log file type.

**PROPERTY:** perm

Characteristic	Value
Syntax	OCTAL_MODE
Default Value	600
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the read, write, and execute permissions on the specified log file.

**PROPERTY:** rotation-interval

Characteristic	Value
Syntax	DURATION   unlimited
Default Value	1d (one day) for access, 1w (one week) for audit and errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the duration between rotations of the specified log file.

**PROPERTY:** rotation-min-file-size

Characteristic	Value
Syntax	MEMORY_SIZE   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum size the specified log file must have before the server rotates it.

**PROPERTY:** rotation-time

Characteristic	Value
Syntax	TIME   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the time of day when the server rotates the specified log file.

**PROPERTY:** verbose-enabled

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether extra informational messages are written to the errors log.

**Syntax Values**

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as cn or objectClass.

**BOOLEAN**

true or false.

**DN**

A valid distinguished name such as ou=People, dc=example, dc=com.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as 1w, 7d, 168h, 10080m, or 604800s. You can also specify one week as 1w0d0h0m0s.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [enabled\(5DSCONF\)](#)

## plugin

DS plug-in configuration (PLG) properties

### Description

Directory Server implements some key functionality as plug-ins. Plug-ins take the form of libraries loaded when the server starts, and called at different points in the processing of client application requests. When you create custom plug-ins, you must configure the server to load and use them, then restart Directory Server to load the newly configured plug-ins.

**PROPERTY:** `argument`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies arguments passed to the plug-in when it is loaded by Directory Server. Arguments are passed in the order you specify them. Updating the list of arguments replaces all the existing arguments previously specified when the plug-in is loaded again.

**PROPERTY:** `depends-on-named`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies names of plug-ins that must be available and loaded before Directory Server loads the current plug-in.

**PROPERTY:** `depends-on-type`

Characteristic	Value
Syntax	STRING (See the description that follows.)
Default Value	None
Is readable	Yes

Characteristic	Value
Is modifiable	Yes
Is multi-valued	Yes

This property specifies types of plug-ins that must be available and loaded before Directory Server loads the current plug-in. The value must be the value of a plug-in `type` property.

**PROPERTY:** `feature`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in identifier from the `Slapi_PluginDesc` structure.

**PROPERTY:** `init-func`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the name of function called by Directory Server to initialize the plug-in.

**PROPERTY:** `lib-path`

Characteristic	Value
Syntax	PATH
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute file system path to the library containing plug-in.

**PROPERTY:** type

Characteristic	Value
Syntax	STRING (See the description that follows.)
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in type. The following plug-in types are supported.

ldbentryfetchstore

Entry store and fetch plug-in

extendedop

Extended operation plug-in

passwordcheck

Password check plug-in

postoperation

Post-operation plug-in

preoperation

Pre-operation plug-in

internalpostoperation

Internal post-operation plug-in

internalpreoperation

Internal pre-operation plug-in

matchingrule

Matching rule plug-in for extensible match search filters

object

Generic plug-in type, sometimes used to register other plug-ins

passwordcheck

Strong password check plug-in

pwdstoragescheme

Password storage scheme plug-in

**PROPERTY:** vendor

Characteristic	Value
Syntax	STRING
Default Value	Vendor name in plug-in configuration
Is readable	Yes
Is modifiable	Yes

Characteristic	Value
Is multi-valued	No

This property specifies the plug-in vendor from the `Slapi_PluginDesc` structure.

**PROPERTY:** `version`

Characteristic	Value
Syntax	STRING
Default Value	Version string in plug-in configuration
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in version from the `Slapi_PluginDesc` structure.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

ATTR\_NAME

A valid attribute type name such as `cn` or `objectClass`.

BOOLEAN

`true` or `false`.

DN

A valid distinguished name such as `ou=People,dc=example,dc=com`.

DURATION

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

EMAIL\_ADDRESS

A valid e-mail address.

HOST\_NAME

An IP address or host name.

INTEGER

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Stable

**See Also**

[dsconf\(1M\)](#), [desc\(5DSCONF\)](#), [enabled\(5DSCONF\)](#)

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## polling-thread-count

DS server instance configuration (SER) property polling-thread-count

### Description

The behavior of a Directory Server instance is configured according to server properties such as `polling-thread-count`.

Characteristic	Value
Syntax	INTEGER
Default Value	1
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property is not supported on Microsoft Windows platforms. This property is not supported in releases prior to Directory Server Enterprise Edition version 6.3.

Changing the value requires the server to be restarted.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pres-enabled

DS attribute indexing (IDX) properties

### Description

Directory Server can index attributes, making them faster to search. The `dsconf` command helps you configure five of the six supported index types:

1. Equality indexes to determine expediently whether an attribute value is equal to a specified value
2. Presence indexes to determine whether a specified attribute has any values
3. Substring indexes to determine whether a specified attribute has values containing a specified string, also used to compare regular expressions to attribute values
4. Approximate indexes, based on metaphone approximation and useful for English language strings only, to determine whether a specified attribute has any values that sound like the specified string
5. International indexes, also called matching rule indexes, to expedite sorting and searching in accordance with the language rules of a particular locale

The `dsconf` command does not help you configure virtual list view, also known as browsing, indexes.

The `dsconf` command does help you assign all IDs threshold values to indexes. As the number of entries and attribute values grows in a directory, the number of attribute values to index also grows, as does therefore the size of the indexes. In some deployments a server can end up maintaining index lists so large that the cost of rebuilding an index when attributes are modified or added outweighs the benefit the index provides for searches. All IDs thresholds limit the growth of large indexes by defining the maximum number of entry identifiers Directory Server maintains in an index list. You can define all IDs thresholds for individual indexes and for some types of indexes.

Some indexes are maintained by the server for its own use. These are called system indexes. In general, do not modify or remove systems indexes; such modifications could have severe repercussions on performance.

See *Directory Server Indexing in Reference for Oracle Directory Server Enterprise Edition* for further details about indexing.

#### **PROPERTY:** `all-ids-threshold`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of entry IDs the server maintains in an index list for the specified attribute type. By default its value is inherited from the `all-ids-threshold` setting for the suffix, whose default value in turn is inherited from the `all-ids-threshold` setting for the server, which by default is 4000. In addition to inheritance of default settings, this property handles settings as follows:

`inherited`

The threshold is inherited from the more global setting.

`<2000`

The threshold value is rounded up to 2000.

`>2000`

The setting is used as a guaranteed minimum threshold. Because of internal mechanisms, the real value can be slightly more than the specified value.

After you modify this property, reindex the attribute for which you changed the threshold. For example:

```
$ dsconf set-index-prop dc=example,dc=com uid all-ids-threshold:5000
$ dsconf reindex -t uid dc=example,dc=com
```

```
## example: Indexing attribute: uid
## example: Finished indexing.
```

```
Task completed (slapd exit code: 0).
$
```

### PROPERTY: `all-ids-threshold-eq`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for equality indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

### PROPERTY: `all-ids-threshold-pres`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for presence indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

**PROPERTY:** `all-ids-threshold-sub`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for substring indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

**PROPERTY:** `approx-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether approximate indexes are maintained for the specified attribute type. You cannot set an all IDs threshold value for approximate indexes.

**PROPERTY:** `desc`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

Use this optional property to provide a short description of the index configuration.

**PROPERTY:** eq-enabled

Characteristic	Value
Syntax	on off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether equality indexes are maintained for the specified attribute type.

**PROPERTY:** matching-rule

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the matching rule indexes maintained for the specified attribute type.

Values for this property must be valid collation order object identifiers (OIDs). See *Directory Server Internationalized Directory in Directory Server Enterprise Edition Reference* for the OIDs corresponding to supported locales.

**PROPERTY:** pres-enabled

Characteristic	Value
Syntax	on off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether presence indexes are maintained for the specified attribute type.

**PROPERTY:** sub-enabled

Characteristic	Value
Syntax	on off
Default Value	off

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether substring indexes are maintained for the specified attribute type.

**PROPERTY:** `system`

Characteristic	Value
Syntax	<code>true false</code>
Default Value	<code>false</code>
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property identifies whether the specified index is a system index, and therefore should be left alone.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike **DURATION** properties, **MEMORY\_SIZE** properties cannot combine multiple specifiers. However, **MEMORY\_SIZE** properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [all-ids-threshold\(5DSCONF\)](#), [desc\(5DSCONF\)](#)

## pwd-accept-hashed-pwd-enabled

DS server instance configuration (SER) property `pwd-accept-hashed-pwd-enabled`

### Description

The behavior of a Directory Server instance is configured according to server properties such as `pwd-accept-hashed-pwd-enabled`.

Characteristic	Value
Syntax	on   off
Default Value	N/A
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies whether the server accepts modifications with hashed password values without checking their content. This property takes effect only when `pwd-check-enabled` is on.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-check-enabled

DS server instance configuration (SER) property pwd-check-enabled

### Description

The behavior of a Directory Server instance is configured according to server properties such as `pwd-check-enabled`.

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies whether the server checks the quality of password values when they are modified.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-compat-mode

DS server instance configuration (SER) property pwd-compat-mode

### Description

The behavior of a Directory Server instance is configured according to server properties such as `pwd-compat-mode`.

Characteristic	Value
Syntax	DS5-compatible-mode   DS6-migration-mode   DS6-mode
Default Value	DS5-compatible-mode
Is readable	Yes
Is modifiable	No
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the password policy compatibility mode for the server. Change it using `dsconf pwd-compat`. See *Administrator's Guide for Oracle Directory Server Enterprise Edition* for details on password policy.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-expire-no-warning-enabled

DS server instance configuration (SER) property pwd-expire-no-warning-enabled

### Description

The behavior of a Directory Server instance is configured according to server properties such as pwd-expire-no-warning-enabled.

Characteristic	Value
Syntax	on   off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies whether a password can expire without prior warning to a client application.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-expire-warning-delay

DS server instance configuration (SER) property pwd-expire-warning-delay

### Description

The behavior of a Directory Server instance is configured according to server properties such as `pwd-expire-warning-delay`.

Characteristic	Value
Syntax	DURATION   disabled
Default Value	1d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the duration preceding password expiration during which the server returns warnings about the password expiring to client applications binding using the password.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-failure-count-interval

DS server instance configuration (SER) property pwd-failure-count-interval

### Description

The behavior of a Directory Server instance is configured according to server properties such as `pwd-failure-count-interval`.

Characteristic	Value
Syntax	DURATION   disabled
Default Value	10m
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the age beyond which password failures are purged from the failure count.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-grace-login-limit

DS server instance configuration (SER) property pwd-grace-login-limit

### Description

The behavior of a Directory Server instance is configured according to server properties such as `pwd-grace-login-limit`.

Characteristic	Value
Syntax	INTEGER   disabled
Default Value	disabled
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the number of times an expired password can be used to authenticate.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-keep-last-auth-time-enabled

DS server instance configuration (SER) property pwd-keep-last-auth-time-enabled

### Description

The behavior of a Directory Server instance is configured according to server properties such as `pwd-keep-last-auth-time-enabled`.

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies whether to record authentication times in the `pwdLastAuthTime` operational attribute on user entries.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-lockout-duration

DS server instance configuration (SER) property pwd-lockout-duration

### Description

The behavior of a Directory Server instance is configured according to server properties such as `pwd-lockout-duration`.

Characteristic	Value
Syntax	DURATION   disabled
Default Value	1h
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the how long before the server unlocks an account that is locked.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-lockout-enabled

DS server instance configuration (SER) property pwd-lockout-enabled

### Description

The behavior of a Directory Server instance is configured according to server properties such as `pwd-lockout-enabled`.

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies whether the server locks accounts after a specified number, `pwd-max-failure-count`, of consecutive failed attempts to bind.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-lockout-repl-priority-enabled

DS server instance configuration (SER) property pwd-lockout-repl-priority-enabled

### Description

The behavior of a Directory Server instance is configured according to server properties such as `pwd-lockout-repl-priority-enabled`.

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies whether password lockout attributes are replicated with high priority.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-max-age

DS server instance configuration (SER) property pwd-max-age

### Description

The behavior of a Directory Server instance is configured according to server properties such as `pwd-max-age`.

Characteristic	Value
Syntax	DURATION   disabled
Default Value	disabled
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the age beyond which a password expires.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-max-failure-count

DS server instance configuration (SER) property pwd-max-failure-count

### Description

The behavior of a Directory Server instance is configured according to server properties such as `pwd-max-failure-count`.

Characteristic	Value
Syntax	INTEGER   disabled
Default Value	3
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the number of consecutive failed bind attempts after which the password may not be used to authenticate to the server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-max-history-count

DS server instance configuration (SER) property pwd-max-history-count

### Description

The behavior of a Directory Server instance is configured according to server properties such as pwd-max-history-count.

Characteristic	Value
Syntax	INTEGER   disabled
Default Value	disabled
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the number of password values stored in the password history of the entry. These values cannot be used again until they are no longer present in the history.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-min-age

DS server instance configuration (SER) property pwd-min-age

### Description

The behavior of a Directory Server instance is configured according to server properties such as `pwd-min-age`.

Characteristic	Value
Syntax	DURATION   disabled
Default Value	disabled
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the minimum duration between password modifications.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-min-length

DS server instance configuration (SER) property pwd-min-length

### Description

The behavior of a Directory Server instance is configured according to server properties such as `pwd-min-length`.

Characteristic	Value
Syntax	INTEGER   disabled
Default Value	6
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the minimum number of characters allowed in a password value when quality checking has been enabled.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-mod-gen-length

DS server instance configuration (SER) property pwd-mod-gen-length

### Description

The behavior of a Directory Server instance is configured according to server properties such as pwd-mod-gen-length.

Characteristic	Value
Syntax	INTEGER   disabled
Default Value	6
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the length of the password generated by Directory Server when a password is reset using the LDAP Password Modify Extended Operation defined in RFC 3062 (<http://www.ietf.org/rfc/rfc3062.txt>) and no new password value is specified.

Although the syntax for this property is integer, its value must be between 6 and 512, inclusive.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-must-change-enabled

DS server instance configuration (SER) property pwd-must-change-enabled

### Description

The behavior of a Directory Server instance is configured according to server properties such as `pwd-must-change-enabled`.

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies whether the password must be changed after the initial client bind after the password has been set or reset by another user.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-root-dn-bypass-enabled

DS server instance configuration (SER) property `pwd-root-dn-bypass-enabled`

### Description

The behavior of a Directory Server instance is configured according to server properties such as `pwd-root-dn-bypass-enabled`.

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies whether the directory super user is allowed to update passwords with values that violate password policy.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-safe-modify-enabled

DS server instance configuration (SER) property `pwd-safe-modify-enabled`

### Description

The behavior of a Directory Server instance is configured according to server properties such as `pwd-safe-modify-enabled`.

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies whether the current password must be provided with the request to modify the password.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

---

## pwd-storage-scheme

DS server instance configuration (SER) property pwd-storage-scheme

### Description

The behavior of a Directory Server instance is configured according to server properties such as `pwd-storage-scheme`.

Characteristic	Value
Syntax	STRING
Default Value	SSHA
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the algorithm used to encode password values.

Possible storage schemes are given by DS server instance configuration (SER) property `pwd-supported-storage-scheme`.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-strong-check-dictionary-path

DS server instance configuration (SER) property pwd-strong-check-dictionary-path

### Description

The behavior of a Directory Server instance is configured according to server properties such as pwd-strong-check-dictionary-path.

Characteristic	Value
Syntax	PATH   none
Default Value	<i>instance-path</i> /plugins/words-english-big.txt
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the path to the dictionary file used for strong password checks.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-strong-check-enabled

DS server instance configuration (SER) property pwd-strong-check-enabled

### Description

The behavior of a Directory Server instance is configured according to server properties such as `pwd-strong-check-enabled`.

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies whether the server checks new password values to ensure they match with `pwd-strong-check-require-charset` settings, and do not match records in the dictionary file.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-strong-check-require-charset

DS server instance configuration (SER) property pwd-strong-check-require-charset

### Description

The behavior of a Directory Server instance is configured according to server properties such as pwd-strong-check-require-charset.

Characteristic	Value
Syntax	lower   upper   digit   special   any-two   any-three
Default Value	lower && upper && digit && special
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the sets of characters that must be present in a password value modification.

lower

The new password must include a lower case character.

upper

The new password must include an upper case character.

digit

The new password must include a digit.

special

The new password must include a special character.

any-two

The new password must include at least one character from each of at least two of the abovementioned character sets.

any-three

The new password must include at least one character from each of at least three of the abovementioned character sets.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-supported-storage-scheme

DS server instance configuration (SER) property pwd-supported-storage-scheme

### Description

The behavior of a Directory Server instance is configured according to server properties such as pwd-supported-storage-scheme.

Characteristic	Value
Syntax	STRING
Default Value	See the following description.
Is readable	Yes
Is modifiable	No
Is multi-valued	Yes

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the set of encryption storage schemes supported for Directory Server user passwords. Supported storage schemes include CLEAR, CRYPT, SHA, SSHA, SHA256, SSHA256, SHA384, SSHA384, SHA512, SSHA512.

SHA256, SSHA256, SHA512, SSHA512 are supported in Directory Server Enterprise Edition 11g Release 1 (11.1.1.5.0) or later versions. SHA384, SSHA384 are supported in Directory Server Enterprise Edition 11g Release 1 (11.1.1.7.0) or later versions.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## pwd-user-change-enabled

DS server instance configuration (SER) property pwd-user-change-enabled

### Description

The behavior of a Directory Server instance is configured according to server properties such as `pwd-user-change-enabled`.

Characteristic	Value
Syntax	on   off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies whether users may change their own passwords.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## read-write-mode

---

DS server instance configuration (SER) property read-write-mode

### Description

The behavior of a Directory Server instance is configured according to server properties such as `read-write-mode`.

Characteristic	Value
Syntax	<code>read-only</code>   <code>read-write</code>   <code>frozen</code>
Default Value	<code>read-write</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies whether the suffixes and configuration data on the server can be modified. Use `frozen` when quiescing a server for online file system backup.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	<code>SUNWdsee7</code>
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

---

## referral-mode

DS suffix configuration (SUF) properties

### Description

Each Directory Server suffix you create is configured according to the suffix properties documented here and in the documentation specified under the SEE ALSO section.

#### **PROPERTY:** `compression-entries`

Characteristic	Value
Syntax	<code>all overflow</code>
Default Value	<code>overflow</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies entry eligibility for compression.

`all`

All the entries will be compressed.

`overflow`

Only entries in overflow pages will be compressed.

#### **PROPERTY:** `compression-mode`

Characteristic	Value
Syntax	<code>none DSZ</code>
Default Value	<code>None</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies how entries are compressed.

`none`

No entries compression mechanism will be used.

`DSZ`

Entries will be compressed using the DSZ method.

**PROPERTY:** db-name

Characteristic	Value
Syntax	STRING
Default Value	<i>suffixName</i>
Is readable	Yes
Is modifiable	No
Is multi-valued	Yes

This property specifies the suffix that is used to process requests involving the database.

**PROPERTY:** db-path

Characteristic	Value
Syntax	PATH
Default Value	<i>server-instance-dir/db/suffix-dir</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute path to the suffix database.

**PROPERTY:** entry-cache-count

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	unlimited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of entries allowed in the entry cache of the suffix.

**PROPERTY:** entry-cache-size

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	20M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum amount of memory Directory Server requests for the entry cache of the suffix.

**PROPERTY:** `entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the number of entries stored in the suffix.

**PROPERTY:** `entry-crc-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether a CRC is computed on each entry.

**PROPERTY:** `index-filter-analyzer-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	No
Is multi-valued	No
Restart needed	No

This property specifies whether the index filter analyzer is running.

**PROPERTY:** `index-filter-analyzer-max-entries`

Characteristic	Value
Syntax	Integer
Default Value	2000

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies the maximum number of entries that the index filter analyzer may contain.

**PROPERTY:** `parent-suffix-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	DN of the parent entry
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN of the parent entry for the suffix. The value of this property must logically be a parent of the suffix.

For instance, if you have a suffix with DN `dc=com` and a suffix `dc=example, dc=com`, you can set `dc=com` as the `parent-suffix-dn` of `dc=example, dc=com`, and subtree searches with based DN `dc=com` then also travers `dc=example, dc=com`.

**PROPERTY:** `referral-mode`

Characteristic	Value
Syntax	disabled   enabled   only-on-write
Default Value	disabled
Is readable	Yes
Is modifiable	Yes, if the suffix is not replicated
Is multi-valued	No

This property specifies how referrals are used when a client makes a request involving the suffix.

`disabled`  
Handle requests locally; do not return referral URLs.

`enabled`  
Return referral URLs to client requests.

`only-on-write`  
Return referral URLs to client requests only for write operations.

**PROPERTY:** `repl-accept-client-update-enabled`

Characteristic	Value
Syntax	on   off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the replicated suffix accepts write operations from client applications, or instead returns referral URLs.

**PROPERTY:** `repl-cl-max-age`

Characteristic	Value
Syntax	DURATION   undefined
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age for a record in the replication changelog. Older records are purged.

**PROPERTY:** `repl-cl-max-entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0 (meaning undefined)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum number of records in the replication changelog. When the limit is exceeded, older records are purged.

**PROPERTY:** `repl-id`

Characteristic	Value
Syntax	INTEGER
Default Value	None
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication

Characteristic	Value
Is multi-valued	No

This property specifies the replica identification number, 1-65534 for a supplier, 65535 for a consumer or a hub. Once set, this property cannot be modified.

**PROPERTY:** `repl-manager-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the bind DN's of users allowed to bind to perform replication operations on the suffix.

**PROPERTY:** `repl-purge-delay`

Characteristic	Value
Syntax	DURATION   never
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age of tombstone entries used by replication. Tombstone entries are entries marked for deletion that have not yet been removed, and also replication state information associated with the entries. When setting this attribute, ensure that the purge delay is longer than the longest replication cycle in your replication policy to avoid incurring conflict resolution problems and divergence between replicas.

**PROPERTY:** `repl-rewrite-referrals-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether referrals you set can be automatically overwritten by the server to reference replicas.

**PROPERTY:** `repl-role`

Characteristic	Value
Syntax	<code>not-replicated   master   hub   consumer</code>
Default Value	<code>not-replicated</code>
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the role played by the suffix in a replicated topology.

`not-replicated`

The suffix is not part of a replicated topology.

`master`

This suffix is a supplier of replication updates in a replicated topology. It can accept both read and write operations.

`hub`

This suffix is a supplier of replication updates in a replicated topology. It can accept read operations and replication updates.

`consumer`

This suffix is a dedicated consumer of replication updates in a replicated topology. It can accept read operations and replication updates, but not writes from clients.

To promote a replica, use the `dsconf promote-repl` command. To demote a replica, use the `dsconf demote-repl` command.

**PROPERTY:** `require-index-enabled`

Characteristic	Value
Syntax	<code>on   off</code>
Default Value	<code>off</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether unindexed searches are allowed. When `on`, unindexed searches return `LDAP_UNWILLING_TO_PERFORM`.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form `hhmm-hhmm 0123456`, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple

specifiers. However, `MEMORY_SIZE` properties allow decimal values, for example, 1.5M.

**NAME**

A valid `cn` (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus `640` specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form `hhmm` in 24-hour format, where `hh` stands for hours and `mm` stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

`dsconf(1M)`, `all-ids-threshold(5DSCONF)`, `db-path(5DSCONF)`, `enabled(5DSCONF)`, `moddn-enabled(5DSCONF)`, `referral-url(5DSCONF)`

---

## referral-url

Whether the server accepts mod DN operations

### Description

Characteristic	Value
Syntax	LDAP_URL   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the URLs returned as referrals when clients request an operation not supported by the server instance or suffix for the target entry.

### Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

#### ATTR\_NAME

A valid attribute type name such as `cn` or `objectClass`.

#### BOOLEAN

`true` or `false`.

#### DN

A valid distinguished name such as `ou=People,dc=example,dc=com`.

#### DURATION

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and milliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

#### EMAIL\_ADDRESS

A valid e-mail address.

#### HOST\_NAME

An IP address or host name.

#### INTEGER

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [server\(5DSCONF\)](#), [suffix\(5DSCONF\)](#)

## ref-integrity-attr

DS server instance configuration (SER) property ref-integrity-attr

### Description

The behavior of a Directory Server instance is configured according to server properties such as ref-integrity-attr.

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies attributes for which referential integrity must be checked on update.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## ref-integrity-check-delay

DS server instance configuration (SER) property ref-integrity-check-delay

### Description

The behavior of a Directory Server instance is configured according to server properties such as `ref-integrity-check-delay`.

Characteristic	Value
Syntax	DURATION   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the delay between referential integrity checks. The default is no delay.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## ref-integrity-enabled

DS server instance configuration (SER) property ref-integrity-enabled

### Description

The behavior of a Directory Server instance is configured according to server properties such as `ref-integrity-enabled`.

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies whether referential integrity checks are performed by the server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

---

## repl-accept-client-update-enabled

DS suffix configuration (SUF) properties

### Description

Each Directory Server suffix you create is configured according to the suffix properties documented here and in the documentation specified under the SEE ALSO section.

#### **PROPERTY:** `compression-entries`

Characteristic	Value
Syntax	<code>all overflow</code>
Default Value	<code>overflow</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies entry eligibility for compression.

`all`

All the entries will be compressed.

`overflow`

Only entries in overflow pages will be compressed.

#### **PROPERTY:** `compression-mode`

Characteristic	Value
Syntax	<code>none DSZ</code>
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies how entries are compressed.

`none`

No entries compression mechanism will be used.

`DSZ`

Entries will be compressed using the DSZ method.

**PROPERTY:** db-name

Characteristic	Value
Syntax	STRING
Default Value	<i>suffixName</i>
Is readable	Yes
Is modifiable	No
Is multi-valued	Yes

This property specifies the suffix that is used to process requests involving the database.

**PROPERTY:** db-path

Characteristic	Value
Syntax	PATH
Default Value	<i>server-instance-dir/db/suffix-dir</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute path to the suffix database.

**PROPERTY:** entry-cache-count

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	unlimited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of entries allowed in the entry cache of the suffix.

**PROPERTY:** entry-cache-size

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	20M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum amount of memory Directory Server requests for the entry cache of the suffix.

**PROPERTY:** `entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the number of entries stored in the suffix.

**PROPERTY:** `entry-crc-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether a CRC is computed on each entry.

**PROPERTY:** `index-filter-analyzer-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	No
Is multi-valued	No
Restart needed	No

This property specifies whether the index filter analyzer is running.

**PROPERTY:** `index-filter-analyzer-max-entries`

Characteristic	Value
Syntax	Integer
Default Value	2000

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies the maximum number of entries that the index filter analyzer may contain.

**PROPERTY:** `parent-suffix-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	DN of the parent entry
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN of the parent entry for the suffix. The value of this property must logically be a parent of the suffix.

For instance, if you have a suffix with DN `dc=com` and a suffix `dc=example`, `dc=com`, you can set `dc=com` as the `parent-suffix-dn` of `dc=example`, `dc=com`, and subtree searches with based DN `dc=com` then also traverses `dc=example`, `dc=com`.

**PROPERTY:** `referral-mode`

Characteristic	Value
Syntax	disabled   enabled   only-on-write
Default Value	disabled
Is readable	Yes
Is modifiable	Yes, if the suffix is not replicated
Is multi-valued	No

This property specifies how referrals are used when a client makes a request involving the suffix.

`disabled`  
Handle requests locally; do not return referral URLs.

`enabled`  
Return referral URLs to client requests.

`only-on-write`  
Return referral URLs to client requests only for write operations.

**PROPERTY:** `repl-accept-client-update-enabled`

Characteristic	Value
Syntax	on   off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the replicated suffix accepts write operations from client applications, or instead returns referral URLs.

**PROPERTY:** `repl-cl-max-age`

Characteristic	Value
Syntax	DURATION   undefined
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age for a record in the replication changelog. Older records are purged.

**PROPERTY:** `repl-cl-max-entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0 (meaning undefined)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum number of records in the replication changelog. When the limit is exceeded, older records are purged.

**PROPERTY:** `repl-id`

Characteristic	Value
Syntax	INTEGER
Default Value	None
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication

Characteristic	Value
Is multi-valued	No

This property specifies the replica identification number, 1-65534 for a supplier, 65535 for a consumer or a hub. Once set, this property cannot be modified.

**PROPERTY:** `repl-manager-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the bind DN's of users allowed to bind to perform replication operations on the suffix.

**PROPERTY:** `repl-purge-delay`

Characteristic	Value
Syntax	DURATION   never
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age of tombstone entries used by replication. Tombstone entries are entries marked for deletion that have not yet been removed, and also replication state information associated with the entries. When setting this attribute, ensure that the purge delay is longer than the longest replication cycle in your replication policy to avoid incurring conflict resolution problems and divergence between replicas.

**PROPERTY:** `repl-rewrite-referrals-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether referrals you set can be automatically overwritten by the server to reference replicas.

**PROPERTY:** `repl-role`

Characteristic	Value
Syntax	<code>not-replicated</code>   <code>master</code>   <code>hub</code>   <code>consumer</code>
Default Value	<code>not-replicated</code>
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the role played by the suffix in a replicated topology.

`not-replicated`

The suffix is not part of a replicated topology.

`master`

This suffix is a supplier of replication updates in a replicated topology. It can accept both read and write operations.

`hub`

This suffix is a supplier of replication updates in a replicated topology. It can accept read operations and replication updates.

`consumer`

This suffix is a dedicated consumer of replication updates in a replicated topology. It can accept read operations and replication updates, but not writes from clients.

To promote a replica, use the `dsconf promote-repl` command. To demote a replica, use the `dsconf demote-repl` command.

**PROPERTY:** `require-index-enabled`

Characteristic	Value
Syntax	<code>on</code>   <code>off</code>
Default Value	<code>off</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether unindexed searches are allowed. When `on`, unindexed searches return `LDAP_UNWILLING_TO_PERFORM`.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form `hmm-hmm 0123456`, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple

specifiers. However, `MEMORY_SIZE` properties allow decimal values, for example, 1.5M.

**NAME**

A valid `cn` (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus `640` specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form `hhmm` in 24-hour format, where `hh` stands for hours and `mm` stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

`dsconf(1M)`, `all-ids-threshold(5DSCONF)`, `db-path(5DSCONF)`, `enabled(5DSCONF)`, `moddn-enabled(5DSCONF)`, `referral-url(5DSCONF)`

## repl-agmt

DS replication agreement configuration (RAG) properties

### Description

A replication agreement governs how a Directory Server supplier updates a Directory Server consumer. Although this configuration element is called an agreement, it concerns the configuration only of the supplier.

#### PROPERTY: `auth-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the bind DN used by the supplier to bind to the consumer in order to perform replication-related updates. This bind DN must be present on the consumer.

#### PROPERTY: `auth-protocol`

Characteristic	Value
Syntax	<code>clear ssl-simple ssl-client</code>
Default Value	<code>clear</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the protocol used by the supplier to bind to the consumer in order to perform replication-related updates. The default is to bind with simple authentication in clear text without securing the connection, as most replications connections are made on an internal network. You may however configure replication to use SSL and simple authentication to protect the connection from malicious snooping, or SSL with client authentication to further protect the connection.

#### PROPERTY: `auth-pwd`

Characteristic	Value
Syntax	STRING
Default Value	None

Characteristic	Value
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the password used by the supplier to bind to the consumer. You provide it using `auth-pwd-file`.

**PROPERTY:** `auth-pwd-file`

Characteristic	Value
Syntax	PATH
Default Value	" "
Is readable	No
Is modifiable	Yes
Is multi-valued	No

This property specifies the file from which the bind password for replication is read to create the replication agreement. The file is read once on replication agreement creation, and the password is stored for future use.

**PROPERTY:** `repl-fractional-exclude-attr`

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the list of attributes not to replicate. This property is mutually exclusive with `repl-fractional-include-attr`.

**PROPERTY:** `repl-fractional-include-attr`

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the list of attributes to replicate. This property is mutually exclusive with `repl-fractional-exclude-attr`.

**PROPERTY:** `repl-schedule`

Characteristic	Value
Syntax	INTERVAL   always
Default Value	always
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the times and days when replication can take place.

**PROPERTY:** `transport-compression`

Characteristic	Value
Syntax	best-compression   best-speed   default-compression   no-compression
Default Value	no-compression
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the level of `libz` compression used on replication updates from the supplier to the consumer. Supported settings are as follows.

`no-compression`  
No compression

`default-compression`  
Default zlib compression (zlib numeric value = -1)

`best-speed`  
Fastest zlib compression (zlib numeric value = 1)

`best-compression`  
Strongest zlib compression (zlib numeric value = 9)

If the bottleneck for replication in your environment is network bandwidth, this property can potentially help you tune the replication protocol for better performance.

**PROPERTY:** `transport-group-size`

Characteristic	Value
Syntax	INTEGER
Default Value	1
Is readable	Yes

Characteristic	Value
Is modifiable	Yes
Is multi-valued	No

This property specifies how many replication messages are grouped on the supplier before being sent to the consumer. Valid range is 1 to 255.

If the bottleneck for replication in your environment is network bandwidth, this property can potentially help you tune the replication protocol for better performance.

**PROPERTY:** `transport-window-size`

Characteristic	Value
Syntax	INTEGER
Default Value	10
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of replication messages sent from the supplier to the consumer before waiting for a response from the consumer to continue. Valid range is 1 to 65535.

If the bottleneck for replication in your environment is network latency or network bandwidth, this property can potentially help you tune the replication protocol for better performance.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [desc\(5DSCONF\)](#), [enabled\(5DSCONF\)](#),

## repl-cl-max-age

DS suffix configuration (SUF) properties

### Description

Each Directory Server suffix you create is configured according to the suffix properties documented here and in the documentation specified under the SEE ALSO section.

#### **PROPERTY:** `compression-entries`

Characteristic	Value
Syntax	<code>all overflow</code>
Default Value	<code>overflow</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies entry eligibility for compression.

`all`

All the entries will be compressed.

`overflow`

Only entries in overflow pages will be compressed.

#### **PROPERTY:** `compression-mode`

Characteristic	Value
Syntax	<code>none DSZ</code>
Default Value	<code>None</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies how entries are compressed.

`none`

No entries compression mechanism will be used.

`DSZ`

Entries will be compressed using the DSZ method.

**PROPERTY:** db-name

Characteristic	Value
Syntax	STRING
Default Value	<i>suffixName</i>
Is readable	Yes
Is modifiable	No
Is multi-valued	Yes

This property specifies the suffix that is used to process requests involving the database.

**PROPERTY:** db-path

Characteristic	Value
Syntax	PATH
Default Value	<i>server-instance-dir/db/suffix-dir</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute path to the suffix database.

**PROPERTY:** entry-cache-count

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	unlimited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of entries allowed in the entry cache of the suffix.

**PROPERTY:** entry-cache-size

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	20M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum amount of memory Directory Server requests for the entry cache of the suffix.

**PROPERTY:** `entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the number of entries stored in the suffix.

**PROPERTY:** `entry-crc-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether a CRC is computed on each entry.

**PROPERTY:** `index-filter-analyzer-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	No
Is multi-valued	No
Restart needed	No

This property specifies whether the index filter analyzer is running.

**PROPERTY:** `index-filter-analyzer-max-entries`

Characteristic	Value
Syntax	Integer
Default Value	2000

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies the maximum number of entries that the index filter analyzer may contain.

**PROPERTY:** `parent-suffix-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	DN of the parent entry
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN of the parent entry for the suffix. The value of this property must logically be a parent of the suffix.

For instance, if you have a suffix with DN `dc=com` and a suffix `dc=example, dc=com`, you can set `dc=com` as the `parent-suffix-dn` of `dc=example, dc=com`, and subtree searches with based DN `dc=com` then also travers `dc=example, dc=com`.

**PROPERTY:** `referral-mode`

Characteristic	Value
Syntax	disabled   enabled   only-on-write
Default Value	disabled
Is readable	Yes
Is modifiable	Yes, if the suffix is not replicated
Is multi-valued	No

This property specifies how referrals are used when a client makes a request involving the suffix.

`disabled`  
Handle requests locally; do not return referral URLs.

`enabled`  
Return referral URLs to client requests.

`only-on-write`  
Return referral URLs to client requests only for write operations.

**PROPERTY:** `repl-accept-client-update-enabled`

Characteristic	Value
Syntax	on   off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the replicated suffix accepts write operations from client applications, or instead returns referral URLs.

**PROPERTY:** `repl-cl-max-age`

Characteristic	Value
Syntax	DURATION   undefined
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age for a record in the replication changelog. Older records are purged.

**PROPERTY:** `repl-cl-max-entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0 (meaning undefined)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum number of records in the replication changelog. When the limit is exceeded, older records are purged.

**PROPERTY:** `repl-id`

Characteristic	Value
Syntax	INTEGER
Default Value	None
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication

Characteristic	Value
Is multi-valued	No

This property specifies the replica identification number, 1-65534 for a supplier, 65535 for a consumer or a hub. Once set, this property cannot be modified.

**PROPERTY:** `repl-manager-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the bind DN's of users allowed to bind to perform replication operations on the suffix.

**PROPERTY:** `repl-purge-delay`

Characteristic	Value
Syntax	DURATION   never
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age of tombstone entries used by replication. Tombstone entries are entries marked for deletion that have not yet been removed, and also replication state information associated with the entries. When setting this attribute, ensure that the purge delay is longer than the longest replication cycle in your replication policy to avoid incurring conflict resolution problems and divergence between replicas.

**PROPERTY:** `repl-rewrite-referrals-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether referrals you set can be automatically overwritten by the server to reference replicas.

**PROPERTY:** `repl-role`

Characteristic	Value
Syntax	<code>not-replicated   master   hub   consumer</code>
Default Value	<code>not-replicated</code>
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the role played by the suffix in a replicated topology.

`not-replicated`

The suffix is not part of a replicated topology.

`master`

This suffix is a supplier of replication updates in a replicated topology. It can accept both read and write operations.

`hub`

This suffix is a supplier of replication updates in a replicated topology. It can accept read operations and replication updates.

`consumer`

This suffix is a dedicated consumer of replication updates in a replicated topology. It can accept read operations and replication updates, but not writes from clients.

To promote a replica, use the `dsconf promote-repl` command. To demote a replica, use the `dsconf demote-repl` command.

**PROPERTY:** `require-index-enabled`

Characteristic	Value
Syntax	<code>on   off</code>
Default Value	<code>off</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether unindexed searches are allowed. When `on`, unindexed searches return `LDAP_UNWILLING_TO_PERFORM`.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple

specifiers. However, `MEMORY_SIZE` properties allow decimal values, for example, 1.5M.

#### NAME

A valid `cn` (common name).

#### OCTAL\_MODE

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus `640` specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

#### PASSWORD\_FILE

The full path to the file from which the bind password should be read.

#### PATH

A valid, absolute file system path.

#### STRING

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

#### SUPPORTED\_SSL\_CIPHER

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

#### SUPPORTED\_SSL\_PROTOCOL

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

#### TIME

A time of the form `hhmm` in 24-hour format, where `hh` stands for hours and `mm` stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

`dsconf(1M)`, `all-ids-threshold(5DSCONF)`, `db-path(5DSCONF)`, `enabled(5DSCONF)`, `moddn-enabled(5DSCONF)`, `referral-url(5DSCONF)`

## repl-cl-max-entry-count

DS suffix configuration (SUF) properties

### Description

Each Directory Server suffix you create is configured according to the suffix properties documented here and in the documentation specified under the SEE ALSO section.

#### **PROPERTY:** `compression-entries`

Characteristic	Value
Syntax	<code>all overflow</code>
Default Value	<code>overflow</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies entry eligibility for compression.

`all`

All the entries will be compressed.

`overflow`

Only entries in overflow pages will be compressed.

#### **PROPERTY:** `compression-mode`

Characteristic	Value
Syntax	<code>none DSZ</code>
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies how entries are compressed.

`none`

No entries compression mechanism will be used.

`DSZ`

Entries will be compressed using the DSZ method.

**PROPERTY:** db-name

Characteristic	Value
Syntax	STRING
Default Value	<i>suffixName</i>
Is readable	Yes
Is modifiable	No
Is multi-valued	Yes

This property specifies the suffix that is used to process requests involving the database.

**PROPERTY:** db-path

Characteristic	Value
Syntax	PATH
Default Value	<i>server-instance-dir/db/suffix-dir</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute path to the suffix database.

**PROPERTY:** entry-cache-count

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	unlimited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of entries allowed in the entry cache of the suffix.

**PROPERTY:** entry-cache-size

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	20M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum amount of memory Directory Server requests for the entry cache of the suffix.

**PROPERTY:** `entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the number of entries stored in the suffix.

**PROPERTY:** `entry-crc-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether a CRC is computed on each entry.

**PROPERTY:** `index-filter-analyzer-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	No
Is multi-valued	No
Restart needed	No

This property specifies whether the index filter analyzer is running.

**PROPERTY:** `index-filter-analyzer-max-entries`

Characteristic	Value
Syntax	Integer
Default Value	2000

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies the maximum number of entries that the index filter analyzer may contain.

**PROPERTY:** `parent-suffix-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	DN of the parent entry
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN of the parent entry for the suffix. The value of this property must logically be a parent of the suffix.

For instance, if you have a suffix with DN `dc=com` and a suffix `dc=example, dc=com`, you can set `dc=com` as the `parent-suffix-dn` of `dc=example, dc=com`, and subtree searches with based DN `dc=com` then also traverses `dc=example, dc=com`.

**PROPERTY:** `referral-mode`

Characteristic	Value
Syntax	disabled   enabled   only-on-write
Default Value	disabled
Is readable	Yes
Is modifiable	Yes, if the suffix is not replicated
Is multi-valued	No

This property specifies how referrals are used when a client makes a request involving the suffix.

`disabled`  
Handle requests locally; do not return referral URLs.

`enabled`  
Return referral URLs to client requests.

`only-on-write`  
Return referral URLs to client requests only for write operations.

**PROPERTY:** `repl-accept-client-update-enabled`

Characteristic	Value
Syntax	on   off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the replicated suffix accepts write operations from client applications, or instead returns referral URLs.

**PROPERTY:** `repl-cl-max-age`

Characteristic	Value
Syntax	DURATION   undefined
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age for a record in the replication changelog. Older records are purged.

**PROPERTY:** `repl-cl-max-entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0 (meaning undefined)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum number of records in the replication changelog. When the limit is exceeded, older records are purged.

**PROPERTY:** `repl-id`

Characteristic	Value
Syntax	INTEGER
Default Value	None
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication

Characteristic	Value
Is multi-valued	No

This property specifies the replica identification number, 1-65534 for a supplier, 65535 for a consumer or a hub. Once set, this property cannot be modified.

**PROPERTY:** `repl-manager-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the bind DN's of users allowed to bind to perform replication operations on the suffix.

**PROPERTY:** `repl-purge-delay`

Characteristic	Value
Syntax	DURATION   never
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age of tombstone entries used by replication. Tombstone entries are entries marked for deletion that have not yet been removed, and also replication state information associated with the entries. When setting this attribute, ensure that the purge delay is longer than the longest replication cycle in your replication policy to avoid incurring conflict resolution problems and divergence between replicas.

**PROPERTY:** `repl-rewrite-referrals-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether referrals you set can be automatically overwritten by the server to reference replicas.

**PROPERTY:** `repl-role`

Characteristic	Value
Syntax	<code>not-replicated</code>   <code>master</code>   <code>hub</code>   <code>consumer</code>
Default Value	<code>not-replicated</code>
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the role played by the suffix in a replicated topology.

`not-replicated`

The suffix is not part of a replicated topology.

`master`

This suffix is a supplier of replication updates in a replicated topology. It can accept both read and write operations.

`hub`

This suffix is a supplier of replication updates in a replicated topology. It can accept read operations and replication updates.

`consumer`

This suffix is a dedicated consumer of replication updates in a replicated topology. It can accept read operations and replication updates, but not writes from clients.

To promote a replica, use the `dsconf promote-repl` command. To demote a replica, use the `dsconf demote-repl` command.

**PROPERTY:** `require-index-enabled`

Characteristic	Value
Syntax	<code>on</code>   <code>off</code>
Default Value	<code>off</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether unindexed searches are allowed. When `on`, unindexed searches return `LDAP_UNWILLING_TO_PERFORM`.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

true or false.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form `hhmm-hhmm 0123456`, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple

specifiers. However, `MEMORY_SIZE` properties allow decimal values, for example, 1.5M.

**NAME**

A valid `cn` (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus `640` specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

`dsconf(1M)`, `all-ids-threshold(5DSCONF)`, `db-path(5DSCONF)`, `enabled(5DSCONF)`, `moddn-enabled(5DSCONF)`, `referral-url(5DSCONF)`

## repl-fractional-exclude-attr

DS replication agreement configuration (RAG) properties

### Description

A replication agreement governs how a Directory Server supplier updates a Directory Server consumer. Although this configuration element is called an agreement, it concerns the configuration only of the supplier.

**PROPERTY:** `auth-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the bind DN used by the supplier to bind to the consumer in order to perform replication-related updates. This bind DN must be present on the consumer.

**PROPERTY:** `auth-protocol`

Characteristic	Value
Syntax	clear ssl-simple ssl-client
Default Value	clear
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the protocol used by the supplier to bind to the consumer in order to perform replication-related updates. The default is to bind with simple authentication in clear text without securing the connection, as most replications connections are made on an internal network. You may however configure replication to use SSL and simple authentication to protect the connection from malicious snooping, or SSL with client authentication to further protect the connection.

**PROPERTY:** `auth-pwd`

Characteristic	Value
Syntax	STRING
Default Value	None

Characteristic	Value
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the password used by the supplier to bind to the consumer. You provide it using `auth-pwd-file`.

**PROPERTY:** `auth-pwd-file`

Characteristic	Value
Syntax	PATH
Default Value	" "
Is readable	No
Is modifiable	Yes
Is multi-valued	No

This property specifies the file from which the bind password for replication is read to create the replication agreement. The file is read once on replication agreement creation, and the password is stored for future use.

**PROPERTY:** `repl-fractional-exclude-attr`

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the list of attributes not to replicate. This property is mutually exclusive with `repl-fractional-include-attr`.

**PROPERTY:** `repl-fractional-include-attr`

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the list of attributes to replicate. This property is mutually exclusive with `repl-fractional-exclude-attr`.

**PROPERTY:** `repl-schedule`

Characteristic	Value
Syntax	INTERVAL   always
Default Value	always
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the times and days when replication can take place.

**PROPERTY:** `transport-compression`

Characteristic	Value
Syntax	best-compression   best-speed   default-compression   no-compression
Default Value	no-compression
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the level of `libz` compression used on replication updates from the supplier to the consumer. Supported settings are as follows.

`no-compression`  
No compression

`default-compression`  
Default zlib compression (zlib numeric value = -1)

`best-speed`  
Fastest zlib compression (zlib numeric value = 1)

`best-compression`  
Strongest zlib compression (zlib numeric value = 9)

If the bottleneck for replication in your environment is network bandwidth, this property can potentially help you tune the replication protocol for better performance.

**PROPERTY:** `transport-group-size`

Characteristic	Value
Syntax	INTEGER
Default Value	1
Is readable	Yes

Characteristic	Value
Is modifiable	Yes
Is multi-valued	No

This property specifies how many replication messages are grouped on the supplier before being sent to the consumer. Valid range is 1 to 255.

If the bottleneck for replication in your environment is network bandwidth, this property can potentially help you tune the replication protocol for better performance.

**PROPERTY:** `transport-window-size`

Characteristic	Value
Syntax	INTEGER
Default Value	10
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of replication messages sent from the supplier to the consumer before waiting for a response from the consumer to continue. Valid range is 1 to 65535.

If the bottleneck for replication in your environment is network latency or network bandwidth, this property can potentially help you tune the replication protocol for better performance.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dsconf\(1M\)](#), [desc\(5DSCONF\)](#), [enabled\(5DSCONF\)](#)

## repl-fractional-include-attr

DS replication agreement configuration (RAG) properties

### Description

A replication agreement governs how a Directory Server supplier updates a Directory Server consumer. Although this configuration element is called an agreement, it concerns the configuration only of the supplier.

**PROPERTY:** `auth-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the bind DN used by the supplier to bind to the consumer in order to perform replication-related updates. This bind DN must be present on the consumer.

**PROPERTY:** `auth-protocol`

Characteristic	Value
Syntax	clear ssl-simple ssl-client
Default Value	clear
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the protocol used by the supplier to bind to the consumer in order to perform replication-related updates. The default is to bind with simple authentication in clear text without securing the connection, as most replications connections are made on an internal network. You may however configure replication to use SSL and simple authentication to protect the connection from malicious snooping, or SSL with client authentication to further protect the connection.

**PROPERTY:** `auth-pwd`

Characteristic	Value
Syntax	STRING
Default Value	None

Characteristic	Value
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the password used by the supplier to bind to the consumer. You provide it using `auth-pwd-file`.

**PROPERTY:** `auth-pwd-file`

Characteristic	Value
Syntax	PATH
Default Value	" "
Is readable	No
Is modifiable	Yes
Is multi-valued	No

This property specifies the file from which the bind password for replication is read to create the replication agreement. The file is read once on replication agreement creation, and the password is stored for future use.

**PROPERTY:** `repl-fractional-exclude-attr`

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the list of attributes not to replicate. This property is mutually exclusive with `repl-fractional-include-attr`.

**PROPERTY:** `repl-fractional-include-attr`

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the list of attributes to replicate. This property is mutually exclusive with `repl-fractional-exclude-attr`.

**PROPERTY:** `repl-schedule`

Characteristic	Value
Syntax	INTERVAL   always
Default Value	always
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the times and days when replication can take place.

**PROPERTY:** `transport-compression`

Characteristic	Value
Syntax	best-compression   best-speed   default-compression   no-compression
Default Value	no-compression
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the level of `libz` compression used on replication updates from the supplier to the consumer. Supported settings are as follows.

`no-compression`  
No compression

`default-compression`  
Default zlib compression (zlib numeric value = -1)

`best-speed`  
Fastest zlib compression (zlib numeric value = 1)

`best-compression`  
Strongest zlib compression (zlib numeric value = 9)

If the bottleneck for replication in your environment is network bandwidth, this property can potentially help you tune the replication protocol for better performance.

**PROPERTY:** `transport-group-size`

Characteristic	Value
Syntax	INTEGER
Default Value	1
Is readable	Yes

Characteristic	Value
Is modifiable	Yes
Is multi-valued	No

This property specifies how many replication messages are grouped on the supplier before being sent to the consumer. Valid range is 1 to 255.

If the bottleneck for replication in your environment is network bandwidth, this property can potentially help you tune the replication protocol for better performance.

**PROPERTY:** `transport-window-size`

Characteristic	Value
Syntax	INTEGER
Default Value	10
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of replication messages sent from the supplier to the consumer before waiting for a response from the consumer to continue. Valid range is 1 to 65535.

If the bottleneck for replication in your environment is network latency or network bandwidth, this property can potentially help you tune the replication protocol for better performance.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dsconf\(1M\)](#), [desc\(5DSCONF\)](#), [enabled\(5DSCONF\)](#)

---

## replication

Directory Server replication configuration

### Description

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**Note:** In most cases you do not need to know how to manage the object classes and attributes mentioned here. Instead you handle replication configuration through Directory Service Control Center or the `dsconf(1M)` command. The information here is included primarily for those of you who are familiar with command-line configuration for replication in previous Directory Server versions.

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Replication works in Directory Server using extended operations. Changes to a suffix on a supplier server are replayed on the consumer server. Each server stores configuration information defining its role in replication, and defining the user account that has access to perform replication operations. The supplier server also stores configuration information about the replication agreement it has with the consumer.

Replication configuration is reflected in object classes and attributes under `cn=config` of the Directory Server instance.

### Replica Configuration

The configuration entry that indicates a suffix is replicated has a DN of the following form.

```
cn=replica,cn=suffix name,cn=mapping tree,cn=config
```

For example, the following configuration entry DN corresponds to the suffix `dc=example,dc=com`.

```
cn=replica,cn=dc\=example\,dc\=com,cn=mapping tree,cn=config
```

Such entries have the object class `nsDS5Replica`.

### Replication Agreement Configuration

The configuration entries that describe replication agreements with other servers have DNs of the following form.

```
cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,  
cn=config
```

For example, the following configuration entry DN corresponds to the suffix `dc=example,dc=com`.

```
cn=ds.example.com:389,cn=replica,cn=dc\=example\,dc\=com,  
cn=mapping tree,cn=config
```

Replication agreement entries have the object class `nsDS5ReplicationAgreement`.

## Replication Priority Configuration

The configuration entries that describe replication priority rules have DNs of the form:

```
cn=rule name,cn=replica,cn=suffix name,cn=mapping tree,
cn=config
```

For example, the following configuration entry DN corresponds to the suffix `dc=example,dc=com`.

```
cn=pwdReplPrio,cn=replica,cn=dc\=example\,dc\=com,cn=mapping tree,
cn=config
```

Replication priority rule entries have the object class `ReplPriorityRule`.

## Replication Manager Configuration

The configuration entry for the account used to bind and perform replication has, by default, the DN:

```
cn=replication manager,cn=replication,cn=config
```

The account entry is a standard `person(5DSOC)` object class. It defines the DN and `userPassword` for replication. The password policy for the account used to bind and perform replication has, by default, the DN:

```
cn=Password Policy,cn=replication manager,cn=replication,
cn=config
```

The password policy entry is governed by the schema for `pwpolicy(5DSSD)`. As both `person` and `pwpolicy` related object classes and attribute types are described elsewhere, they are not further described here.

## Extended Description

This section examines replication configuration on a master supplier server, and on a dedicated consumer server. The sample configurations shown here were created using the `dsconf` to configure replication.

### Supplier Side Configuration

On the supplier side, the key configuration entries are the replica configuration and the replication agreement.

#### Supplier Replica Configuration

For a master supplier, an `nsDS5Replica` configuration entry looks something like the following:

```
dn: cn=replica,cn=\dc=example\,dc\=com,cn=mapping tree,cn=config
nsDS5ReplicaRoot: dc=example,dc=com
nsDS5ReplicaBindDN: cn=replication manager,cn=replication,cn=config
objectClass: top
objectClass: nsDS5Replica
nsDS5ReplicaId: 1
nsDS5Flags: 1
nsDS5ReplicaType: 3
cn: replica
creatorsName: cn=directory manager
modifiersName: cn=directory manager
nsState:: AAEAAAAAAAAAAAAAAQ4rs0AAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAA==
nsDS5ReplicaName: d2e14d02-600311da-80ace5db-c83e55ac
```

numSubordinates: 1

In this example, the key attributes are the following:

nsDS5ReplicaRoot

Holds the DN of the root of the replicated suffix. Once set, it must not be modified.

nsDS5ReplicaBindDN

Holds the DN of the account used to bind for replication. If replication is performed over SSL, this attribute can hold the certificate identity associated with the DN.

nsDS5ReplicaId

Specifies the unique ID of this master supplier server, a value from 1-65534, inclusive.

A hub uses the same replica ID as a consumer, 65535.

nsDS5Flags

Governs change logging and automatic referrals. It takes one of the following values:

0

No changes are logged. Automatic referrals are not overwritten.

1

Changes are logged. Automatic referrals are not overwritten.

4

No changes are logged. Automatic referrals are overwritten.

5

Changes are logged. Automatic referrals are overwritten.

nsDS5ReplicaType

Defines the role this replica plays in replicating with other servers. It takes one of the following values:

0

Reserved for internal use

1

Dedicated supplier

2

Dedicated consumer (read-only)

3

Supplier/consumer (read-write)

cn

This attribute names the replica. Once set, it must not be modified.

nsState

Stores the state of the clock for handling synchronization. Reserved for internal use.

nsDS5ReplicaName

Read-only unique identifier for the replica.

The replica configuration entry can also hold the following attributes not shown here:

[ds5BeginReplicaAcceptUpdates\(5DSCONF\)](#)

```
ds5ReplicaConsumerTimeout(5DSCONF)
ds5LastInitTimeStamp(5DSCONF)
ds5ReferralDelayAfterInit(5DSCONF)
dsChangelogMaxAge(5DSCONF)
dsChangelogMaxentries(5DSCONF)
dsFilterSPConfigchecksum(5DSCONF)
nsDS5ReplicaAutoReferral(5DSCONF)
nsDS5ReplicaChangeCount(5DSCONF)
nsDS5ReplicaPurgeDelay(5DSCONF)
nsDS5ReplicaReferral(5DSCONF)
nsDS5ReplicaTombstonePurgeInterval(5DSCONF)
nsDS5Task(5DSCONF)
```

### Supplier Replication Agreement

For a master supplier, an nsDS5ReplicationAgreement configuration entry looks something like the following:

```
dn: cn=ds.example.com:389,cn=replica,cn=dc\=example\,dc\=com,
   cn=mapping tree,cn=config
nsDS5ReplicaHost: ds.example.com
nsDS5ReplicaUpdateSchedule: *
nsDS5ReplicaTransportInfo: LDAP
objectClass: top
objectClass: nsDS5ReplicationAgreement
nsDS5ReplicaPort: 389
nsDS5ReplicaBindMethod: SIMPLE
cn: ds.example.com:389
nsDS5ReplicaRoot: dc=example,dc=com
nsDS5ReplicaBindDN: cn=replication manager,cn=replication,
   cn=config
nsDS5ReplicaCredentials:: e0RFU31JakduS3VZSWhEcThEcExDQ1U2
   V1N2QTdjcUw4emhDdXl3S1dmc3NTZ2t3eS9mWmR4VmpUZ1VYRE1NLzR2T
   UVBDQpyZVdYU3A3U1ZwYz0=
```

In this example, the key attributes are the following:

nsDS5ReplicaHost

Holds the host name where the consumer runs.

nsDS5ReplicaUpdateSchedule

Specifies when replication happens. If you must restrict the time when replication can happen, set this attribute. This attribute can take multiple values of the form *hmm-hmm 0123456*, where the first element specifies the time span, and the second specifies which days, starting with Sunday (0) to Saturday (6).

nsDS5ReplicaTransportInfo

Specifies the transport used for replication, LDAP or SSL.

nsDS5ReplicaPort

Holds port number on which the consumer listens.

cn

This attribute names the replication agreement. Once set, it must not be modified.

nsDS5ReplicaBindMethod

Specifies bind protocol, SIMPLE, SSLCLIENTAUTH.

nsDS5ReplicaRoot

Holds the DN of the root of the replicated suffix. Once set, it must not be modified.

nsDS5ReplicaBindDN

Holds the DN of the account on the consumer used for replication.

nsDS5ReplicaCredentials

Holds the bind credentials of the account on the consumer used for replication.

The replication agreement entry can also hold the following attributes not shown here:

description\_5dsat(5DSAT)  
 ds5AgreementEnable(5DSCONF)  
 ds5ReplicaAutomaticInit(5DSCONF)  
 ds5ReplicaTransportCompressionLevel(5DSCONF)  
 ds5ReplicaTransportConcurrencyLevel(5DSCONF)  
 ds5ReplicaTransportGroupSize(5DSCONF)  
 ds5ReplicaTransportGrpPktSize(5DSCONF)  
 ds5ReplicaTransportWindowSize(5DSCONF)  
 ds6ruv(5DSCONF)  
 dsReplFractionalExclude(5DSCONF)  
 dsReplFractionalInclude(5DSCONF)  
 nsDS5ReplicaUpdateSchedule(5DSCONF)  
 nsds50ruv(5DSCONF)  
 nsds5BeginReplicaRefresh(5DSCONF)  
 nsds5ReplicaTimeout(5DSCONF)  
 nsds5replicaChangesSentSinceStartup(5DSCONF)  
 nsds5replicaLastInitEnd(5DSCONF)  
 nsds5replicaLastInitStart(5DSCONF)  
 nsds5replicaLastInitStatus(5DSCONF)  
 nsds5replicaLastUpdateEnd(5DSCONF)  
 nsds5replicaLastUpdateStart(5DSCONF)  
 nsds5replicaLastUpdateStatus(5DSCONF)  
 nsds5replicaUpdateInProgress(5DSCONF)

### Supplier Priority Rule

For a master supplier, a ReplPriorityRule configuration entry looks something like the following:

```
dn: cn=pwdReplPrio,cn=replica,cn=dc\=example\,dc\=com,cn=mapping tree,cn=config
objectClass: top
objectClass: ReplPriorityRule
replPriorityType: mod
replPriorityAttribute: userPassword
nsDS5ReplicaRoot: dc=example,dc=com
cn: pwdReplPrio
```

In this example, the key attributes are the following:

replPriorityType

Specifies the type of operation which are replicated with high priority.

replPriorityAttribute

Specifies the attribute whose changes are replicated with high priority.

nsDS5ReplicaRoot

Holds the DN of the root of the replicated suffix to which this priority rule applies.

cn

This attribute names the priority rule.

The replication priority rule entry can also hold the following attributes not shown here:

[replPriorityBaseDN\(5DSCONF\)](#)  
[replPriorityBindDN\(5DSCONF\)](#)

## Consumer Side Configuration

On the consumer side, the key configuration entry is the replica configuration. On a dedicated consumer, it is also useful to see how the mapping tree entry for the suffix is configured to refer updates to the supplier.

### Consumer Replica Configuration

For a dedicated consumer, an `nsDS5Replica` configuration entry looks something like the following:

```
dn: cn=replica,cn=dc\=example\,dc\=com,cn=mapping tree,cn=config
nsDS5ReplicaRoot: dc=example,dc=com
nsDS5ReplicaBindDN: cn=replication manager,cn=replication,cn=config
objectClass: top
objectClass: nsDS5Replica
nsDS5Flags: 0
nsDS5ReplicaType: 2
cn: replica
nsDS5ReplicaId: 65535
nsState: //8AAAAAAAAAAAAAAQ4rtPAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAA==
nsDS5ReplicaName: 07ed9f82-600411da-8096d729-0ba76005
dsFilterSPConfigchecksum: 0
ds5LastInitTimeStamp: 0
```

Key attributes in this example are explained in *Supplier Replica Configuration*.

A hub uses the same replica ID as a consumer, 65535.

### Referrals On Consumer

For a dedicated consumer suffix, the mapping tree configuration entry refers client applications to the supplier for write operations:

```
dn: cn=dc\=example\,dc\=com,cn=mapping tree,cn=config
objectClass: top
objectClass: extensibleObject
objectClass: nsMappingTree
nsslapd-backend: example
cn: dc=example,dc=com
numSubordinates: 1
nsslapd-referral: ldap://master.example.com:389/dc%3Dexample,dc%3Dcom
nsslapd-state: referral on update
```

Notice that the `nsslapd-referral` attribute refers clients to the master on host `master.example.com` and port 389 when they request update operations that would write to the directory. These attributes are set by the server when replication is initialized. The dedicated consumer then accepts write operations only from the supplier replica.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

---

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

---

**See Also**

[dsconf\(1M\)](#), [person\(5DSOC\)](#), [pwpolicy\(5DSSD\)](#)

## repl-id

DS suffix configuration (SUF) properties

### Description

Each Directory Server suffix you create is configured according to the suffix properties documented here and in the documentation specified under the SEE ALSO section.

#### **PROPERTY:** `compression-entries`

Characteristic	Value
Syntax	<code>all overflow</code>
Default Value	<code>overflow</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies entry eligibility for compression.

`all`

All the entries will be compressed.

`overflow`

Only entries in overflow pages will be compressed.

#### **PROPERTY:** `compression-mode`

Characteristic	Value
Syntax	<code>none DSZ</code>
Default Value	<code>None</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies how entries are compressed.

`none`

No entries compression mechanism will be used.

`DSZ`

Entries will be compressed using the DSZ method.

**PROPERTY:** db-name

Characteristic	Value
Syntax	STRING
Default Value	<i>suffixName</i>
Is readable	Yes
Is modifiable	No
Is multi-valued	Yes

This property specifies the suffix that is used to process requests involving the database.

**PROPERTY:** db-path

Characteristic	Value
Syntax	PATH
Default Value	<i>server-instance-dir/db/suffix-dir</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute path to the suffix database.

**PROPERTY:** entry-cache-count

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	unlimited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of entries allowed in the entry cache of the suffix.

**PROPERTY:** entry-cache-size

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	20M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum amount of memory Directory Server requests for the entry cache of the suffix.

**PROPERTY:** `entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the number of entries stored in the suffix.

**PROPERTY:** `entry-crc-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether a CRC is computed on each entry.

**PROPERTY:** `index-filter-analyzer-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	No
Is multi-valued	No
Restart needed	No

This property specifies whether the index filter analyzer is running.

**PROPERTY:** `index-filter-analyzer-max-entries`

Characteristic	Value
Syntax	Integer
Default Value	2000

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies the maximum number of entries that the index filter analyzer may contain.

**PROPERTY:** `parent-suffix-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	DN of the parent entry
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN of the parent entry for the suffix. The value of this property must logically be a parent of the suffix.

For instance, if you have a suffix with DN `dc=com` and a suffix `dc=example, dc=com`, you can set `dc=com` as the `parent-suffix-dn` of `dc=example, dc=com`, and subtree searches with based DN `dc=com` then also travers `dc=example, dc=com`.

**PROPERTY:** `referral-mode`

Characteristic	Value
Syntax	disabled   enabled   only-on-write
Default Value	disabled
Is readable	Yes
Is modifiable	Yes, if the suffix is not replicated
Is multi-valued	No

This property specifies how referrals are used when a client makes a request involving the suffix.

`disabled`  
Handle requests locally; do not return referral URLs.

`enabled`  
Return referral URLs to client requests.

`only-on-write`  
Return referral URLs to client requests only for write operations.

**PROPERTY:** repl-accept-client-update-enabled

Characteristic	Value
Syntax	on   off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the replicated suffix accepts write operations from client applications, or instead returns referral URLs.

**PROPERTY:** repl-cl-max-age

Characteristic	Value
Syntax	DURATION   undefined
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age for a record in the replication changelog. Older records are purged.

**PROPERTY:** repl-cl-max-entry-count

Characteristic	Value
Syntax	INTEGER
Default Value	0 (meaning undefined)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum number of records in the replication changelog. When the limit is exceeded, older records are purged.

**PROPERTY:** repl-id

Characteristic	Value
Syntax	INTEGER
Default Value	None
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication

Characteristic	Value
Is multi-valued	No

This property specifies the replica identification number, 1-65534 for a supplier, 65535 for a consumer or a hub. Once set, this property cannot be modified.

**PROPERTY:** `repl-manager-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the bind DN's of users allowed to bind to perform replication operations on the suffix.

**PROPERTY:** `repl-purge-delay`

Characteristic	Value
Syntax	DURATION   never
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age of tombstone entries used by replication. Tombstone entries are entries marked for deletion that have not yet been removed, and also replication state information associated with the entries. When setting this attribute, ensure that the purge delay is longer than the longest replication cycle in your replication policy to avoid incurring conflict resolution problems and divergence between replicas.

**PROPERTY:** `repl-rewrite-referrals-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether referrals you set can be automatically overwritten by the server to reference replicas.

**PROPERTY:** `repl-role`

Characteristic	Value
Syntax	<code>not-replicated</code>   <code>master</code>   <code>hub</code>   <code>consumer</code>
Default Value	<code>not-replicated</code>
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the role played by the suffix in a replicated topology.

`not-replicated`

The suffix is not part of a replicated topology.

`master`

This suffix is a supplier of replication updates in a replicated topology. It can accept both read and write operations.

`hub`

This suffix is a supplier of replication updates in a replicated topology. It can accept read operations and replication updates.

`consumer`

This suffix is a dedicated consumer of replication updates in a replicated topology. It can accept read operations and replication updates, but not writes from clients.

To promote a replica, use the `dsconf promote-repl` command. To demote a replica, use the `dsconf demote-repl` command.

**PROPERTY:** `require-index-enabled`

Characteristic	Value
Syntax	<code>on</code>   <code>off</code>
Default Value	<code>off</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether unindexed searches are allowed. When `on`, unindexed searches return `LDAP_UNWILLING_TO_PERFORM`.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

true or false.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form `hhmm-hhmm 0123456`, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple

specifiers. However, `MEMORY_SIZE` properties allow decimal values, for example, 1.5M.

**NAME**

A valid `cn` (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus `640` specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

`dsconf(1M)`, `all-ids-threshold(5DSCONF)`, `db-path(5DSCONF)`, `enabled(5DSCONF)`, `moddn-enabled(5DSCONF)`, `referral-url(5DSCONF)`

---

## repl-manager-bind-dn

DS suffix configuration (SUF) properties

### Description

Each Directory Server suffix you create is configured according to the suffix properties documented here and in the documentation specified under the SEE ALSO section.

#### **PROPERTY:** `compression-entries`

Characteristic	Value
Syntax	<code>all overflow</code>
Default Value	<code>overflow</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies entry eligibility for compression.

`all`

All the entries will be compressed.

`overflow`

Only entries in overflow pages will be compressed.

#### **PROPERTY:** `compression-mode`

Characteristic	Value
Syntax	<code>none DSZ</code>
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies how entries are compressed.

`none`

No entries compression mechanism will be used.

`DSZ`

Entries will be compressed using the DSZ method.

**PROPERTY:** db-name

Characteristic	Value
Syntax	STRING
Default Value	<i>suffixName</i>
Is readable	Yes
Is modifiable	No
Is multi-valued	Yes

This property specifies the suffix that is used to process requests involving the database.

**PROPERTY:** db-path

Characteristic	Value
Syntax	PATH
Default Value	<i>server-instance-dir/db/suffix-dir</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute path to the suffix database.

**PROPERTY:** entry-cache-count

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	unlimited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of entries allowed in the entry cache of the suffix.

**PROPERTY:** entry-cache-size

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	20M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum amount of memory Directory Server requests for the entry cache of the suffix.

**PROPERTY:** `entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the number of entries stored in the suffix.

**PROPERTY:** `entry-crc-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether a CRC is computed on each entry.

**PROPERTY:** `index-filter-analyzer-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	No
Is multi-valued	No
Restart needed	No

This property specifies whether the index filter analyzer is running.

**PROPERTY:** `index-filter-analyzer-max-entries`

Characteristic	Value
Syntax	Integer
Default Value	2000

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies the maximum number of entries that the index filter analyzer may contain.

**PROPERTY:** `parent-suffix-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	DN of the parent entry
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN of the parent entry for the suffix. The value of this property must logically be a parent of the suffix.

For instance, if you have a suffix with DN `dc=com` and a suffix `dc=example, dc=com`, you can set `dc=com` as the `parent-suffix-dn` of `dc=example, dc=com`, and subtree searches with based DN `dc=com` then also travers `dc=example, dc=com`.

**PROPERTY:** `referral-mode`

Characteristic	Value
Syntax	disabled   enabled   only-on-write
Default Value	disabled
Is readable	Yes
Is modifiable	Yes, if the suffix is not replicated
Is multi-valued	No

This property specifies how referrals are used when a client makes a request involving the suffix.

`disabled`  
Handle requests locally; do not return referral URLs.

`enabled`  
Return referral URLs to client requests.

`only-on-write`  
Return referral URLs to client requests only for write operations.

**PROPERTY:** `repl-accept-client-update-enabled`

Characteristic	Value
Syntax	on   off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the replicated suffix accepts write operations from client applications, or instead returns referral URLs.

**PROPERTY:** `repl-cl-max-age`

Characteristic	Value
Syntax	DURATION   undefined
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age for a record in the replication changelog. Older records are purged.

**PROPERTY:** `repl-cl-max-entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0 (meaning undefined)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum number of records in the replication changelog. When the limit is exceeded, older records are purged.

**PROPERTY:** `repl-id`

Characteristic	Value
Syntax	INTEGER
Default Value	None
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication

Characteristic	Value
Is multi-valued	No

This property specifies the replica identification number, 1-65534 for a supplier, 65535 for a consumer or a hub. Once set, this property cannot be modified.

**PROPERTY:** `repl-manager-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the bind DN's of users allowed to bind to perform replication operations on the suffix.

**PROPERTY:** `repl-purge-delay`

Characteristic	Value
Syntax	DURATION   never
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age of tombstone entries used by replication. Tombstone entries are entries marked for deletion that have not yet been removed, and also replication state information associated with the entries. When setting this attribute, ensure that the purge delay is longer than the longest replication cycle in your replication policy to avoid incurring conflict resolution problems and divergence between replicas.

**PROPERTY:** `repl-rewrite-referrals-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether referrals you set can be automatically overwritten by the server to reference replicas.

**PROPERTY:** `repl-role`

Characteristic	Value
Syntax	<code>not-replicated   master   hub   consumer</code>
Default Value	<code>not-replicated</code>
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the role played by the suffix in a replicated topology.

`not-replicated`

The suffix is not part of a replicated topology.

`master`

This suffix is a supplier of replication updates in a replicated topology. It can accept both read and write operations.

`hub`

This suffix is a supplier of replication updates in a replicated topology. It can accept read operations and replication updates.

`consumer`

This suffix is a dedicated consumer of replication updates in a replicated topology. It can accept read operations and replication updates, but not writes from clients.

To promote a replica, use the `dsconf promote-repl` command. To demote a replica, use the `dsconf demote-repl` command.

**PROPERTY:** `require-index-enabled`

Characteristic	Value
Syntax	<code>on   off</code>
Default Value	<code>off</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether unindexed searches are allowed. When `on`, unindexed searches return `LDAP_UNWILLING_TO_PERFORM`.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form `hhmm-hhmm 0123456`, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple

specifiers. However, `MEMORY_SIZE` properties allow decimal values, for example, 1.5M.

**NAME**

A valid `cn` (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus `640` specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A `DirectoryString` value, as specified by RFC 2252

(<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

`dsconf(1M)`, `all-ids-threshold(5DSCONF)`, `db-path(5DSCONF)`, `enabled(5DSCONF)`, `moddn-enabled(5DSCONF)`, `referral-url(5DSCONF)`

## repl-priority

DS prioritized replication configuration (RPR) properties

### Description

Prioritized replication lets you force a Directory Server supplier to assign higher priority to certain updates replicated on a Directory Server consumer. You prioritize replication operations by creating replication priority rules.

**PROPERTY:** attr

Characteristic	Value
Syntax	ATTR_NAME
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the attribute type to which the replication priority rule applies.

**PROPERTY:** base-dn

Characteristic	Value
Syntax	DN
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN under which the replication priority rule applies. For example, if you set `base-dn:ou=administrators,dc=example,dc=com`, then changes to `uid=myAdmin,ou=administrators,dc=example,dc=com` might be replicated with high priority, but changes to `uid=bjensen,ou=people,dc=example,dc=com` would not.

**PROPERTY:** bind-dn

Characteristic	Value
Syntax	DN
Default Value	None
Is readable	Yes
Is modifiable	Yes

Characteristic	Value
Is multi-valued	No

This property specifies a bind DN for an account whose updates might be replicated with high priority.

**PROPERTY:** `op-type`

Characteristic	Value
Syntax	add   mod   del
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies a type of operation for which updates might be replicated with high priority.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

---

TIME

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dsconf\(1M\)](#)

## replPriorityAttribute

Attribute to replicate with high priority

### Description

PROPERTY	VALUE
Entry DN	<i>cn=rule name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	Any valid attribute type
Default Value	N/A
Syntax	DirectoryString

This attribute is part of replica configuration for `ReplPriorityRule` entries.

When this multi-valued attribute is set, the server replicates changes to the attribute you specify with high priority.

### Examples

```
replPriorityAttribute: userPassword
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

---

## replPriorityBaseDN

Replicate changes under this base with high priority

### Description

PROPERTY	VALUE
Entry DN	<i>cn=rule name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	Any valid DN inside the replicated suffix
Default Value	N/A
Syntax	DirectoryString

This attribute is part of replica configuration for `ReplPriorityRule` entries.

When this attribute is set, the server replicates changes to entries under the specified DN with high priority.

### Examples

```
replPriorityBaseDN: ou=people,dc=example,dc=com
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

## replPriorityBindDN

Replicate changes performed by this user with high priority

### Description

PROPERTY	VALUE
Entry DN	<i>cn=rule name,cn=replica,cn=suffix name,cn=mapping tree,cn=config</i>
Valid Range	Any valid DN
Default Value	N/A
Syntax	DirectoryString

This attribute is part of replica configuration for `ReplPriorityRule` entries.

When this attribute is set, the server replicates changes made by the user having the specified bind DN with high priority.

### Examples

```
replPriorityBindDN: uid=admin,ou=Administrators,dc=example,dc=com
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

---

## ReplPriorityRule

Directory Server replication configuration

### Description

---

---

**Note:** In most cases you do not need to know how to manage the object classes and attributes mentioned here. Instead you handle replication configuration through Directory Service Control Center or the `dsconf(1M)` command. The information here is included primarily for those of you who are familiar with command-line configuration for replication in previous Directory Server versions.

---

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Replication works in Directory Server using extended operations. Changes to a suffix on a supplier server are replayed on the consumer server. Each server stores configuration information defining its role in replication, and defining the user account that has access to perform replication operations. The supplier server also stores configuration information about the replication agreement it has with the consumer.

Replication configuration is reflected in object classes and attributes under `cn=config` of the Directory Server instance.

### Replica Configuration

The configuration entry that indicates a suffix is replicated has a DN of the following form.

```
cn=replica,cn=suffix name,cn=mapping tree,cn=config
```

For example, the following configuration entry DN corresponds to the suffix `dc=example,dc=com`.

```
cn=replica,cn=dc\=example\,dc\=com,cn=mapping tree,cn=config
```

Such entries have the object class `nsDS5Replica`.

### Replication Agreement Configuration

The configuration entries that describe replication agreements with other servers have DNs of the following form.

```
cn=agreement name,cn=replica,cn=suffix name,cn=mapping tree,  
cn=config
```

For example, the following configuration entry DN corresponds to the suffix `dc=example,dc=com`.

```
cn=ds.example.com:389,cn=replica,cn=dc\=example\,dc\=com,  
cn=mapping tree,cn=config
```

Replication agreement entries have the object class `nsDS5ReplicationAgreement`.

## Replication Priority Configuration

The configuration entries that describe replication priority rules have DNs of the form:

```
cn=rule name,cn=replica,cn=suffix name,cn=mapping tree,
cn=config
```

For example, the following configuration entry DN corresponds to the suffix `dc=example,dc=com`.

```
cn=pwdReplPrio,cn=replica,cn=dc\=example\,dc\=com,cn=mapping tree,
cn=config
```

Replication priority rule entries have the object class `ReplPriorityRule`.

## Replication Manager Configuration

The configuration entry for the account used to bind and perform replication has, by default, the DN:

```
cn=replication manager,cn=replication,cn=config
```

The account entry is a standard `person(5DSOC)` object class. It defines the DN and `userPassword` for replication. The password policy for the account used to bind and perform replication has, by default, the DN:

```
cn=Password Policy,cn=replication manager,cn=replication,
cn=config
```

The password policy entry is governed by the schema for `pwpolicy(5DSSD)`. As both `person` and `pwpolicy` related object classes and attribute types are described elsewhere, they are not further described here.

## Extended Description

This section examines replication configuration on a master supplier server, and on a dedicated consumer server. The sample configurations shown here were created using the `dsconf` to configure replication.

### Supplier Side Configuration

On the supplier side, the key configuration entries are the replica configuration and the replication agreement.

#### Supplier Replica Configuration

For a master supplier, an `nsDS5Replica` configuration entry looks something like the following:

```
dn: cn=replica,cn=\dc=example\,dc\=com,cn=mapping tree,cn=config
nsDS5ReplicaRoot: dc=example,dc=com
nsDS5ReplicaBindDN: cn=replication manager,cn=replication,cn=config
objectClass: top
objectClass: nsDS5Replica
nsDS5ReplicaId: 1
nsDS5Flags: 1
nsDS5ReplicaType: 3
cn: replica
creatorsName: cn=directory manager
modifiersName: cn=directory manager
nsState:: AAEAAAAAAAAAAAAAAAAQ4rs0AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAA==
nsDS5ReplicaName: d2e14d02-600311da-80ace5db-c83e55ac
```

numSubordinates: 1

In this example, the key attributes are the following:

nsDS5ReplicaRoot

Holds the DN of the root of the replicated suffix. Once set, it must not be modified.

nsDS5ReplicaBindDN

Holds the DN of the account used to bind for replication. If replication is performed over SSL, this attribute can hold the certificate identity associated with the DN.

nsDS5ReplicaId

Specifies the unique ID of this master supplier server, a value from 1-65534, inclusive.

A hub uses the same replica ID as a consumer, 65535.

nsDS5Flags

Governs change logging and automatic referrals. It takes one of the following values:

0

No changes are logged. Automatic referrals are not overwritten.

1

Changes are logged. Automatic referrals are not overwritten.

4

No changes are logged. Automatic referrals are overwritten.

5

Changes are logged. Automatic referrals are overwritten.

nsDS5ReplicaType

Defines the role this replica plays in replicating with other servers. It takes one of the following values:

0

Reserved for internal use

1

Dedicated supplier

2

Dedicated consumer (read-only)

3

Supplier/consumer (read-write)

cn

This attribute names the replica. Once set, it must not be modified.

nsState

Stores the state of the clock for handling synchronization. Reserved for internal use.

nsDS5ReplicaName

Read-only unique identifier for the replica.

The replica configuration entry can also hold the following attributes not shown here:

[ds5BeginReplicaAcceptUpdates\(5DSCONF\)](#)

```
ds5ReplicaConsumerTimeout(5DSCONF)
ds5LastInitTimeStamp(5DSCONF)
ds5ReferralDelayAfterInit(5DSCONF)
dsChangelogMaxAge(5DSCONF)
dsChangelogMaxentries(5DSCONF)
dsFilterSPConfigchecksum(5DSCONF)
nsDS5ReplicaAutoReferral(5DSCONF)
nsDS5ReplicaChangeCount(5DSCONF)
nsDS5ReplicaPurgeDelay(5DSCONF)
nsDS5ReplicaReferral(5DSCONF)
nsDS5ReplicaTombstonePurgeInterval(5DSCONF)
nsDS5Task(5DSCONF)
```

### Supplier Replication Agreement

For a master supplier, an nsDS5ReplicationAgreement configuration entry looks something like the following:

```
dn: cn=ds.example.com:389,cn=replica,cn=dc\=example\,dc\=com,
   cn=mapping tree,cn=config
nsDS5ReplicaHost: ds.example.com
nsDS5ReplicaUpdateSchedule: *
nsDS5ReplicaTransportInfo: LDAP
objectClass: top
objectClass: nsDS5ReplicationAgreement
nsDS5ReplicaPort: 389
nsDS5ReplicaBindMethod: SIMPLE
cn: ds.example.com:389
nsDS5ReplicaRoot: dc=example,dc=com
nsDS5ReplicaBindDN: cn=replication manager,cn=replication,
   cn=config
nsDS5ReplicaCredentials:: e0RFU31JakduS3VZSWhEcThEcExDQ1U2
   V1N2QTdjcUw4emhDdX13S1dmc3NTZ2t3eS9mWmR4VmpUZ1LVYRE1NLzR2T
   UVBDQpyZVdYU3A3U1ZwYz0=
```

In this example, the key attributes are the following:

nsDS5ReplicaHost

Holds the host name where the consumer runs.

nsDS5ReplicaUpdateSchedule

Specifies when replication happens. If you must restrict the time when replication can happen, set this attribute. This attribute can take multiple values of the form *h:mm-h:mm 0123456*, where the first element specifies the time span, and the second specifies which days, starting with Sunday (0) to Saturday (6).

nsDS5ReplicaTransportInfo

Specifies the transport used for replication, LDAP or SSL.

nsDS5ReplicaPort

Holds port number on which the consumer listens.

cn

This attribute names the replication agreement. Once set, it must not be modified.

nsDS5ReplicaBindMethod

Specifies bind protocol, SIMPLE, SSLCLIENTAUTH.

nsDS5ReplicaRoot

Holds the DN of the root of the replicated suffix. Once set, it must not be modified.

nsDS5ReplicaBindDN

Holds the DN of the account on the consumer used for replication.

nsDS5ReplicaCredentials

Holds the bind credentials of the account on the consumer used for replication.

The replication agreement entry can also hold the following attributes not shown here:

description\_5dsat(5DSAT)  
 ds5AgreementEnable(5DSCONF)  
 ds5ReplicaAutomaticInit(5DSCONF)  
 ds5ReplicaTransportCompressionLevel(5DSCONF)  
 ds5ReplicaTransportConcurrencyLevel(5DSCONF)  
 ds5ReplicaTransportGroupSize(5DSCONF)  
 ds5ReplicaTransportGrpPktSize(5DSCONF)  
 ds5ReplicaTransportWindowSize(5DSCONF)  
 ds6ruv(5DSCONF)  
 dsReplFractionalExclude(5DSCONF)  
 dsReplFractionalInclude(5DSCONF)  
 nsDS5ReplicaUpdateSchedule(5DSCONF)  
 nsds50ruv(5DSCONF)  
 nsds5BeginReplicaRefresh(5DSCONF)  
 nsds5ReplicaTimeout(5DSCONF)  
 nsds5replicaChangesSentSinceStartup(5DSCONF)  
 nsds5replicaLastInitEnd(5DSCONF)  
 nsds5replicaLastInitStart(5DSCONF)  
 nsds5replicaLastInitStatus(5DSCONF)  
 nsds5replicaLastUpdateEnd(5DSCONF)  
 nsds5replicaLastUpdateStart(5DSCONF)  
 nsds5replicaLastUpdateStatus(5DSCONF)  
 nsds5replicaUpdateInProgress(5DSCONF)

### Supplier Priority Rule

For a master supplier, a ReplPriorityRule configuration entry looks something like the following:

```
dn: cn=pwdReplPrio,cn=replica,cn=dc\=example\,dc\=com,cn=mapping tree,cn=config
objectClass: top
objectClass: ReplPriorityRule
replPriorityType: mod
replPriorityAttribute: userPassword
nsDS5ReplicaRoot: dc=example,dc=com
cn: pwdReplPrio
```

In this example, the key attributes are the following:

replPriorityType

Specifies the type of operation which are replicated with high priority.

replPriorityAttribute

Specifies the attribute whose changes are replicated with high priority.

nsDS5ReplicaRoot

Holds the DN of the root of the replicated suffix to which this priority rule applies.

cn

This attribute names the priority rule.

The replication priority rule entry can also hold the following attributes not shown here:

[replPriorityBaseDN\(5DSCONF\)](#)  
[replPriorityBindDN\(5DSCONF\)](#)

## Consumer Side Configuration

On the consumer side, the key configuration entry is the replica configuration. On a dedicated consumer, it is also useful to see how the mapping tree entry for the suffix is configured to refer updates to the supplier.

### Consumer Replica Configuration

For a dedicated consumer, an `nsDS5Replica` configuration entry looks something like the following:

```
dn: cn=replica,cn=dc=example,dc=com,cn=mapping tree,cn=config
nsDS5ReplicaRoot: dc=example,dc=com
nsDS5ReplicaBindDN: cn=replication manager,cn=replication,cn=config
objectClass: top
objectClass: nsDS5Replica
nsDS5Flags: 0
nsDS5ReplicaType: 2
cn: replica
nsDS5ReplicaId: 65535
nsState: //8AAAAAAAAAAAAQ4rtPAAAAAAAAAAAAAAAAAAAAQAAAAAAAA==
nsDS5ReplicaName: 07ed9f82-600411da-8096d729-0ba76005
dsFilterSPConfigchecksum: 0
ds5LastInitTimeStamp: 0
```

Key attributes in this example are explained in *Supplier Replica Configuration*.

A hub uses the same replica ID as a consumer, 65535.

### Referrals On Consumer

For a dedicated consumer suffix, the mapping tree configuration entry refers client applications to the supplier for write operations:

```
dn: cn=dc=example,dc=com,cn=mapping tree,cn=config
objectClass: top
objectClass: extensibleObject
objectClass: nsMappingTree
nsslapd-backend: example
cn: dc=example,dc=com
numSubordinates: 1
nsslapd-referral: ldap://master.example.com:389/dc%3Dexample,dc%3Dcom
nsslapd-state: referral on update
```

Notice that the `nsslapd-referral` attribute refers clients to the master on host `master.example.com` and port 389 when they request update operations that would write to the directory. These attributes are set by the server when replication is initialized. The dedicated consumer then accepts write operations only from the supplier replica.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

---

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

---

**See Also**

[dsconf\(1M\)](#), [person\(5DSOC\)](#), [pwpolicy\(5DSSD\)](#)

---

## replPriorityType

Operation type to replicate with high priority

### Description

PROPERTY	VALUE
Entry DN	<i>cn=rule name, cn=replica, cn=suffix name, cn=mapping tree, cn=config</i>
Valid Range	add   del   mod
Default Value	All update operations
Syntax	DirectoryString

This attribute is part of replica configuration for `ReplPriorityRule` entries.

When this attribute is set, the server replicates changes of the type you specify with high priority as follows:

add

Additions and deletions are replicated with high priority.

del

Deletions are replicated with high priority.

mod

Modifications are replicated with high priority.

### Examples

```
replPriorityType: mod
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[replication\(5DSCONF\)](#)

---

## repl-purge-delay

DS suffix configuration (SUF) properties

### Description

Each Directory Server suffix you create is configured according to the suffix properties documented here and in the documentation specified under the SEE ALSO section.

#### **PROPERTY:** `compression-entries`

Characteristic	Value
Syntax	<code>all overflow</code>
Default Value	<code>overflow</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies entry eligibility for compression.

`all`

All the entries will be compressed.

`overflow`

Only entries in overflow pages will be compressed.

#### **PROPERTY:** `compression-mode`

Characteristic	Value
Syntax	<code>none DSZ</code>
Default Value	<code>None</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies how entries are compressed.

`none`

No entries compression mechanism will be used.

`DSZ`

Entries will be compressed using the DSZ method.

**PROPERTY:** db-name

Characteristic	Value
Syntax	STRING
Default Value	<i>suffixName</i>
Is readable	Yes
Is modifiable	No
Is multi-valued	Yes

This property specifies the suffix that is used to process requests involving the database.

**PROPERTY:** db-path

Characteristic	Value
Syntax	PATH
Default Value	<i>server-instance-dir/db/suffix-dir</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute path to the suffix database.

**PROPERTY:** entry-cache-count

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	unlimited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of entries allowed in the entry cache of the suffix.

**PROPERTY:** entry-cache-size

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	20M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum amount of memory Directory Server requests for the entry cache of the suffix.

**PROPERTY:** `entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the number of entries stored in the suffix.

**PROPERTY:** `entry-crc-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether a CRC is computed on each entry.

**PROPERTY:** `index-filter-analyzer-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	No
Is multi-valued	No
Restart needed	No

This property specifies whether the index filter analyzer is running.

**PROPERTY:** `index-filter-analyzer-max-entries`

Characteristic	Value
Syntax	Integer
Default Value	2000

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies the maximum number of entries that the index filter analyzer may contain.

**PROPERTY:** `parent-suffix-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	DN of the parent entry
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN of the parent entry for the suffix. The value of this property must logically be a parent of the suffix.

For instance, if you have a suffix with DN `dc=com` and a suffix `dc=example, dc=com`, you can set `dc=com` as the `parent-suffix-dn` of `dc=example, dc=com`, and subtree searches with based DN `dc=com` then also travers `dc=example, dc=com`.

**PROPERTY:** `referral-mode`

Characteristic	Value
Syntax	disabled   enabled   only-on-write
Default Value	disabled
Is readable	Yes
Is modifiable	Yes, if the suffix is not replicated
Is multi-valued	No

This property specifies how referrals are used when a client makes a request involving the suffix.

`disabled`  
Handle requests locally; do not return referral URLs.

`enabled`  
Return referral URLs to client requests.

`only-on-write`  
Return referral URLs to client requests only for write operations.

**PROPERTY:** `repl-accept-client-update-enabled`

Characteristic	Value
Syntax	on   off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the replicated suffix accepts write operations from client applications, or instead returns referral URLs.

**PROPERTY:** `repl-cl-max-age`

Characteristic	Value
Syntax	DURATION   undefined
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age for a record in the replication changelog. Older records are purged.

**PROPERTY:** `repl-cl-max-entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0 (meaning undefined)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum number of records in the replication changelog. When the limit is exceeded, older records are purged.

**PROPERTY:** `repl-id`

Characteristic	Value
Syntax	INTEGER
Default Value	None
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication

Characteristic	Value
Is multi-valued	No

This property specifies the replica identification number, 1-65534 for a supplier, 65535 for a consumer or a hub. Once set, this property cannot be modified.

**PROPERTY:** `repl-manager-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the bind DN's of users allowed to bind to perform replication operations on the suffix.

**PROPERTY:** `repl-purge-delay`

Characteristic	Value
Syntax	DURATION   never
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age of tombstone entries used by replication. Tombstone entries are entries marked for deletion that have not yet been removed, and also replication state information associated with the entries. When setting this attribute, ensure that the purge delay is longer than the longest replication cycle in your replication policy to avoid incurring conflict resolution problems and divergence between replicas.

**PROPERTY:** `repl-rewrite-referrals-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether referrals you set can be automatically overwritten by the server to reference replicas.

**PROPERTY:** `repl-role`

Characteristic	Value
Syntax	<code>not-replicated</code>   <code>master</code>   <code>hub</code>   <code>consumer</code>
Default Value	<code>not-replicated</code>
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the role played by the suffix in a replicated topology.

`not-replicated`

The suffix is not part of a replicated topology.

`master`

This suffix is a supplier of replication updates in a replicated topology. It can accept both read and write operations.

`hub`

This suffix is a supplier of replication updates in a replicated topology. It can accept read operations and replication updates.

`consumer`

This suffix is a dedicated consumer of replication updates in a replicated topology. It can accept read operations and replication updates, but not writes from clients.

To promote a replica, use the `dsconf promote-repl` command. To demote a replica, use the `dsconf demote-repl` command.

**PROPERTY:** `require-index-enabled`

Characteristic	Value
Syntax	<code>on</code>   <code>off</code>
Default Value	<code>off</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether unindexed searches are allowed. When `on`, unindexed searches return `LDAP_UNWILLING_TO_PERFORM`.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple

specifiers. However, `MEMORY_SIZE` properties allow decimal values, for example, 1.5M.

#### NAME

A valid `cn` (common name).

#### OCTAL\_MODE

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus `640` specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

#### PASSWORD\_FILE

The full path to the file from which the bind password should be read.

#### PATH

A valid, absolute file system path.

#### STRING

A `DirectoryString` value, as specified by RFC 2252

(<http://www.ietf.org/rfc/rfc2252.txt>).

#### SUPPORTED\_SSL\_CIPHER

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

#### SUPPORTED\_SSL\_PROTOCOL

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

#### TIME

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

`dsconf(1M)`, `all-ids-threshold(5DSCONF)`, `db-path(5DSCONF)`, `enabled(5DSCONF)`, `moddn-enabled(5DSCONF)`, `referral-url(5DSCONF)`

## repl-rewrite-referrals-enabled

DS suffix configuration (SUF) properties

### Description

Each Directory Server suffix you create is configured according to the suffix properties documented here and in the documentation specified under the SEE ALSO section.

#### **PROPERTY:** `compression-entries`

Characteristic	Value
Syntax	<code>all overflow</code>
Default Value	<code>overflow</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies entry eligibility for compression.

`all`

All the entries will be compressed.

`overflow`

Only entries in overflow pages will be compressed.

#### **PROPERTY:** `compression-mode`

Characteristic	Value
Syntax	<code>none DSZ</code>
Default Value	<code>None</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies how entries are compressed.

`none`

No entries compression mechanism will be used.

`DSZ`

Entries will be compressed using the DSZ method.

**PROPERTY:** db-name

Characteristic	Value
Syntax	STRING
Default Value	<i>suffixName</i>
Is readable	Yes
Is modifiable	No
Is multi-valued	Yes

This property specifies the suffix that is used to process requests involving the database.

**PROPERTY:** db-path

Characteristic	Value
Syntax	PATH
Default Value	<i>server-instance-dir/db/suffix-dir</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute path to the suffix database.

**PROPERTY:** entry-cache-count

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	unlimited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of entries allowed in the entry cache of the suffix.

**PROPERTY:** entry-cache-size

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	20M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum amount of memory Directory Server requests for the entry cache of the suffix.

**PROPERTY:** `entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the number of entries stored in the suffix.

**PROPERTY:** `entry-crc-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether a CRC is computed on each entry.

**PROPERTY:** `index-filter-analyzer-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	No
Is multi-valued	No
Restart needed	No

This property specifies whether the index filter analyzer is running.

**PROPERTY:** `index-filter-analyzer-max-entries`

Characteristic	Value
Syntax	Integer
Default Value	2000

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies the maximum number of entries that the index filter analyzer may contain.

**PROPERTY:** `parent-suffix-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	DN of the parent entry
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN of the parent entry for the suffix. The value of this property must logically be a parent of the suffix.

For instance, if you have a suffix with DN `dc=com` and a suffix `dc=example, dc=com`, you can set `dc=com` as the `parent-suffix-dn` of `dc=example, dc=com`, and subtree searches with based DN `dc=com` then also traverses `dc=example, dc=com`.

**PROPERTY:** `referral-mode`

Characteristic	Value
Syntax	disabled   enabled   only-on-write
Default Value	disabled
Is readable	Yes
Is modifiable	Yes, if the suffix is not replicated
Is multi-valued	No

This property specifies how referrals are used when a client makes a request involving the suffix.

`disabled`  
Handle requests locally; do not return referral URLs.

`enabled`  
Return referral URLs to client requests.

`only-on-write`  
Return referral URLs to client requests only for write operations.

**PROPERTY:** `repl-accept-client-update-enabled`

Characteristic	Value
Syntax	on   off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the replicated suffix accepts write operations from client applications, or instead returns referral URLs.

**PROPERTY:** `repl-cl-max-age`

Characteristic	Value
Syntax	DURATION   undefined
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age for a record in the replication changelog. Older records are purged.

**PROPERTY:** `repl-cl-max-entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0 (meaning undefined)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum number of records in the replication changelog. When the limit is exceeded, older records are purged.

**PROPERTY:** `repl-id`

Characteristic	Value
Syntax	INTEGER
Default Value	None
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication

Characteristic	Value
Is multi-valued	No

This property specifies the replica identification number, 1-65534 for a supplier, 65535 for a consumer or a hub. Once set, this property cannot be modified.

**PROPERTY:** `repl-manager-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the bind DN's of users allowed to bind to perform replication operations on the suffix.

**PROPERTY:** `repl-purge-delay`

Characteristic	Value
Syntax	DURATION   never
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age of tombstone entries used by replication. Tombstone entries are entries marked for deletion that have not yet been removed, and also replication state information associated with the entries. When setting this attribute, ensure that the purge delay is longer than the longest replication cycle in your replication policy to avoid incurring conflict resolution problems and divergence between replicas.

**PROPERTY:** `repl-rewrite-referrals-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether referrals you set can be automatically overwritten by the server to reference replicas.

**PROPERTY:** `repl-role`

Characteristic	Value
Syntax	<code>not-replicated   master   hub   consumer</code>
Default Value	<code>not-replicated</code>
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the role played by the suffix in a replicated topology.

`not-replicated`

The suffix is not part of a replicated topology.

`master`

This suffix is a supplier of replication updates in a replicated topology. It can accept both read and write operations.

`hub`

This suffix is a supplier of replication updates in a replicated topology. It can accept read operations and replication updates.

`consumer`

This suffix is a dedicated consumer of replication updates in a replicated topology. It can accept read operations and replication updates, but not writes from clients.

To promote a replica, use the `dsconf promote-repl` command. To demote a replica, use the `dsconf demote-repl` command.

**PROPERTY:** `require-index-enabled`

Characteristic	Value
Syntax	<code>on   off</code>
Default Value	<code>off</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether unindexed searches are allowed. When `on`, unindexed searches return `LDAP_UNWILLING_TO_PERFORM`.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

true or false.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form `hhmm-hhmm 0123456`, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple

specifiers. However, `MEMORY_SIZE` properties allow decimal values, for example, 1.5M.

**NAME**

A valid `cn` (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus `640` specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form `hhmm` in 24-hour format, where `hh` stands for hours and `mm` stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

`dsconf(1M)`, `all-ids-threshold(5DSCONF)`, `db-path(5DSCONF)`, `enabled(5DSCONF)`, `moddn-enabled(5DSCONF)`, `referral-url(5DSCONF)`

---

## repl-role

DS suffix configuration (SUF) properties

### Description

Each Directory Server suffix you create is configured according to the suffix properties documented here and in the documentation specified under the SEE ALSO section.

#### **PROPERTY:** `compression-entries`

Characteristic	Value
Syntax	<code>all overflow</code>
Default Value	<code>overflow</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies entry eligibility for compression.

`all`

All the entries will be compressed.

`overflow`

Only entries in overflow pages will be compressed.

#### **PROPERTY:** `compression-mode`

Characteristic	Value
Syntax	<code>none DSZ</code>
Default Value	<code>None</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies how entries are compressed.

`none`

No entries compression mechanism will be used.

`DSZ`

Entries will be compressed using the DSZ method.

**PROPERTY:** db-name

Characteristic	Value
Syntax	STRING
Default Value	<i>suffixName</i>
Is readable	Yes
Is modifiable	No
Is multi-valued	Yes

This property specifies the suffix that is used to process requests involving the database.

**PROPERTY:** db-path

Characteristic	Value
Syntax	PATH
Default Value	<i>server-instance-dir/db/suffix-dir</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute path to the suffix database.

**PROPERTY:** entry-cache-count

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	unlimited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of entries allowed in the entry cache of the suffix.

**PROPERTY:** entry-cache-size

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	20M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum amount of memory Directory Server requests for the entry cache of the suffix.

**PROPERTY:** `entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the number of entries stored in the suffix.

**PROPERTY:** `entry-crc-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether a CRC is computed on each entry.

**PROPERTY:** `index-filter-analyzer-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	No
Is multi-valued	No
Restart needed	No

This property specifies whether the index filter analyzer is running.

**PROPERTY:** `index-filter-analyzer-max-entries`

Characteristic	Value
Syntax	Integer
Default Value	2000

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies the maximum number of entries that the index filter analyzer may contain.

**PROPERTY:** `parent-suffix-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	DN of the parent entry
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN of the parent entry for the suffix. The value of this property must logically be a parent of the suffix.

For instance, if you have a suffix with DN `dc=com` and a suffix `dc=example, dc=com`, you can set `dc=com` as the `parent-suffix-dn` of `dc=example, dc=com`, and subtree searches with based DN `dc=com` then also travers `dc=example, dc=com`.

**PROPERTY:** `referral-mode`

Characteristic	Value
Syntax	disabled   enabled   only-on-write
Default Value	disabled
Is readable	Yes
Is modifiable	Yes, if the suffix is not replicated
Is multi-valued	No

This property specifies how referrals are used when a client makes a request involving the suffix.

`disabled`  
Handle requests locally; do not return referral URLs.

`enabled`  
Return referral URLs to client requests.

`only-on-write`  
Return referral URLs to client requests only for write operations.

**PROPERTY:** `repl-accept-client-update-enabled`

Characteristic	Value
Syntax	on   off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the replicated suffix accepts write operations from client applications, or instead returns referral URLs.

**PROPERTY:** `repl-cl-max-age`

Characteristic	Value
Syntax	DURATION   undefined
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age for a record in the replication changelog. Older records are purged.

**PROPERTY:** `repl-cl-max-entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0 (meaning undefined)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum number of records in the replication changelog. When the limit is exceeded, older records are purged.

**PROPERTY:** `repl-id`

Characteristic	Value
Syntax	INTEGER
Default Value	None
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication

Characteristic	Value
Is multi-valued	No

This property specifies the replica identification number, 1-65534 for a supplier, 65535 for a consumer or a hub. Once set, this property cannot be modified.

**PROPERTY:** `repl-manager-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the bind DN's of users allowed to bind to perform replication operations on the suffix.

**PROPERTY:** `repl-purge-delay`

Characteristic	Value
Syntax	DURATION   never
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age of tombstone entries used by replication. Tombstone entries are entries marked for deletion that have not yet been removed, and also replication state information associated with the entries. When setting this attribute, ensure that the purge delay is longer than the longest replication cycle in your replication policy to avoid incurring conflict resolution problems and divergence between replicas.

**PROPERTY:** `repl-rewrite-referrals-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether referrals you set can be automatically overwritten by the server to reference replicas.

**PROPERTY:** `repl-role`

Characteristic	Value
Syntax	<code>not-replicated</code>   <code>master</code>   <code>hub</code>   <code>consumer</code>
Default Value	<code>not-replicated</code>
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the role played by the suffix in a replicated topology.

`not-replicated`

The suffix is not part of a replicated topology.

`master`

This suffix is a supplier of replication updates in a replicated topology. It can accept both read and write operations.

`hub`

This suffix is a supplier of replication updates in a replicated topology. It can accept read operations and replication updates.

`consumer`

This suffix is a dedicated consumer of replication updates in a replicated topology. It can accept read operations and replication updates, but not writes from clients.

To promote a replica, use the `dsconf promote-repl` command. To demote a replica, use the `dsconf demote-repl` command.

**PROPERTY:** `require-index-enabled`

Characteristic	Value
Syntax	<code>on</code>   <code>off</code>
Default Value	<code>off</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether unindexed searches are allowed. When `on`, unindexed searches return `LDAP_UNWILLING_TO_PERFORM`.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple

specifiers. However, `MEMORY_SIZE` properties allow decimal values, for example, 1.5M.

#### NAME

A valid `cn` (common name).

#### OCTAL\_MODE

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus `640` specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

#### PASSWORD\_FILE

The full path to the file from which the bind password should be read.

#### PATH

A valid, absolute file system path.

#### STRING

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

#### SUPPORTED\_SSL\_CIPHER

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

#### SUPPORTED\_SSL\_PROTOCOL

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

#### TIME

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

`dsconf(1M)`, `all-ids-threshold(5DSCONF)`, `db-path(5DSCONF)`, `enabled(5DSCONF)`, `moddn-enabled(5DSCONF)`, `referral-url(5DSCONF)`

---

## repl-schedule

DS replication agreement configuration (RAG) properties

### Description

A replication agreement governs how a Directory Server supplier updates a Directory Server consumer. Although this configuration element is called an agreement, it concerns the configuration only of the supplier.

**PROPERTY:** `auth-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the bind DN used by the supplier to bind to the consumer in order to perform replication-related updates. This bind DN must be present on the consumer.

**PROPERTY:** `auth-protocol`

Characteristic	Value
Syntax	clear ssl-simple ssl-client
Default Value	clear
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the protocol used by the supplier to bind to the consumer in order to perform replication-related updates. The default is to bind with simple authentication in clear text without securing the connection, as most replications connections are made on an internal network. You may however configure replication to use SSL and simple authentication to protect the connection from malicious snooping, or SSL with client authentication to further protect the connection.

**PROPERTY:** `auth-pwd`

Characteristic	Value
Syntax	STRING
Default Value	None

Characteristic	Value
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the password used by the supplier to bind to the consumer. You provide it using `auth-pwd-file`.

**PROPERTY:** `auth-pwd-file`

Characteristic	Value
Syntax	PATH
Default Value	" "
Is readable	No
Is modifiable	Yes
Is multi-valued	No

This property specifies the file from which the bind password for replication is read to create the replication agreement. The file is read once on replication agreement creation, and the password is stored for future use.

**PROPERTY:** `repl-fractional-exclude-attr`

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the list of attributes not to replicate. This property is mutually exclusive with `repl-fractional-include-attr`.

**PROPERTY:** `repl-fractional-include-attr`

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the list of attributes to replicate. This property is mutually exclusive with `repl-fractional-exclude-attr`.

**PROPERTY:** `repl-schedule`

Characteristic	Value
Syntax	INTERVAL   always
Default Value	always
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the times and days when replication can take place.

**PROPERTY:** `transport-compression`

Characteristic	Value
Syntax	best-compression   best-speed   default-compression   no-compression
Default Value	no-compression
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the level of `libz` compression used on replication updates from the supplier to the consumer. Supported settings are as follows.

`no-compression`  
No compression

`default-compression`  
Default zlib compression (zlib numeric value = -1)

`best-speed`  
Fastest zlib compression (zlib numeric value = 1)

`best-compression`  
Strongest zlib compression (zlib numeric value = 9)

If the bottleneck for replication in your environment is network bandwidth, this property can potentially help you tune the replication protocol for better performance.

**PROPERTY:** `transport-group-size`

Characteristic	Value
Syntax	INTEGER
Default Value	1
Is readable	Yes

Characteristic	Value
Is modifiable	Yes
Is multi-valued	No

This property specifies how many replication messages are grouped on the supplier before being sent to the consumer. Valid range is 1 to 255.

If the bottleneck for replication in your environment is network bandwidth, this property can potentially help you tune the replication protocol for better performance.

#### **PROPERTY:** transport-window-size

Characteristic	Value
Syntax	INTEGER
Default Value	10
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of replication messages sent from the supplier to the consumer before waiting for a response from the consumer to continue. Valid range is 1 to 65535.

If the bottleneck for replication in your environment is network latency or network bandwidth, this property can potentially help you tune the replication protocol for better performance.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

#### ATTR\_NAME

A valid attribute type name such as `cn` or `objectClass`.

#### BOOLEAN

`true` or `false`.

#### DN

A valid distinguished name such as `ou=People,dc=example,dc=com`.

#### DURATION

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [desc\(5DSCONF\)](#), [enabled\(5DSCONF\)](#)

## repl-user-schema-enabled

DS server instance configuration (SER) property repl-user-schema-enabled

### Description

The behavior of a Directory Server instance is configured according to server properties such as `repl-user-schema-enabled`.

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies whether only schema elements with X-ORIGIN of `user-defined` are replicated. This can be useful when replicating between server versions with schema that are not fully compatible.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## require-bind-pwd-enabled

DS server instance configuration (SER) property `require-bind-pwd-enabled`

### Description

The behavior of a Directory Server instance is configured according to server properties such as `require-bind-pwd-enabled`.

Characteristic	Value
Syntax	on   off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies whether the server rejects simple authentication attempts to bind that do not include a password.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## require-index-enabled

DS suffix configuration (SUF) properties

### Description

Each Directory Server suffix you create is configured according to the suffix properties documented here and in the documentation specified under the SEE ALSO section.

#### **PROPERTY:** `compression-entries`

Characteristic	Value
Syntax	<code>all overflow</code>
Default Value	<code>overflow</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies entry eligibility for compression.

`all`

All the entries will be compressed.

`overflow`

Only entries in overflow pages will be compressed.

#### **PROPERTY:** `compression-mode`

Characteristic	Value
Syntax	<code>none DSZ</code>
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies how entries are compressed.

`none`

No entries compression mechanism will be used.

`DSZ`

Entries will be compressed using the DSZ method.

**PROPERTY:** db-name

Characteristic	Value
Syntax	STRING
Default Value	<i>suffixName</i>
Is readable	Yes
Is modifiable	No
Is multi-valued	Yes

This property specifies the suffix that is used to process requests involving the database.

**PROPERTY:** db-path

Characteristic	Value
Syntax	PATH
Default Value	<i>server-instance-dir/db/suffix-dir</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute path to the suffix database.

**PROPERTY:** entry-cache-count

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	unlimited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of entries allowed in the entry cache of the suffix.

**PROPERTY:** entry-cache-size

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	20M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum amount of memory Directory Server requests for the entry cache of the suffix.

**PROPERTY:** `entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the number of entries stored in the suffix.

**PROPERTY:** `entry-crc-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether a CRC is computed on each entry.

**PROPERTY:** `index-filter-analyzer-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	No
Is multi-valued	No
Restart needed	No

This property specifies whether the index filter analyzer is running.

**PROPERTY:** `index-filter-analyzer-max-entries`

Characteristic	Value
Syntax	Integer
Default Value	2000

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies the maximum number of entries that the index filter analyzer may contain.

**PROPERTY:** `parent-suffix-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	DN of the parent entry
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN of the parent entry for the suffix. The value of this property must logically be a parent of the suffix.

For instance, if you have a suffix with DN `dc=com` and a suffix `dc=example, dc=com`, you can set `dc=com` as the `parent-suffix-dn` of `dc=example, dc=com`, and subtree searches with based DN `dc=com` then also traverses `dc=example, dc=com`.

**PROPERTY:** `referral-mode`

Characteristic	Value
Syntax	disabled   enabled   only-on-write
Default Value	disabled
Is readable	Yes
Is modifiable	Yes, if the suffix is not replicated
Is multi-valued	No

This property specifies how referrals are used when a client makes a request involving the suffix.

`disabled`  
Handle requests locally; do not return referral URLs.

`enabled`  
Return referral URLs to client requests.

`only-on-write`  
Return referral URLs to client requests only for write operations.

**PROPERTY:** repl-accept-client-update-enabled

Characteristic	Value
Syntax	on   off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the replicated suffix accepts write operations from client applications, or instead returns referral URLs.

**PROPERTY:** repl-cl-max-age

Characteristic	Value
Syntax	DURATION   undefined
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age for a record in the replication changelog. Older records are purged.

**PROPERTY:** repl-cl-max-entry-count

Characteristic	Value
Syntax	INTEGER
Default Value	0 (meaning undefined)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum number of records in the replication changelog. When the limit is exceeded, older records are purged.

**PROPERTY:** repl-id

Characteristic	Value
Syntax	INTEGER
Default Value	None
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication

Characteristic	Value
Is multi-valued	No

This property specifies the replica identification number, 1-65534 for a supplier, 65535 for a consumer or a hub. Once set, this property cannot be modified.

**PROPERTY:** `repl-manager-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the bind DN's of users allowed to bind to perform replication operations on the suffix.

**PROPERTY:** `repl-purge-delay`

Characteristic	Value
Syntax	DURATION   never
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age of tombstone entries used by replication. Tombstone entries are entries marked for deletion that have not yet been removed, and also replication state information associated with the entries. When setting this attribute, ensure that the purge delay is longer than the longest replication cycle in your replication policy to avoid incurring conflict resolution problems and divergence between replicas.

**PROPERTY:** `repl-rewrite-referrals-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether referrals you set can be automatically overwritten by the server to reference replicas.

**PROPERTY:** `repl-role`

Characteristic	Value
Syntax	<code>not-replicated   master   hub   consumer</code>
Default Value	<code>not-replicated</code>
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the role played by the suffix in a replicated topology.

`not-replicated`

The suffix is not part of a replicated topology.

`master`

This suffix is a supplier of replication updates in a replicated topology. It can accept both read and write operations.

`hub`

This suffix is a supplier of replication updates in a replicated topology. It can accept read operations and replication updates.

`consumer`

This suffix is a dedicated consumer of replication updates in a replicated topology. It can accept read operations and replication updates, but not writes from clients.

To promote a replica, use the `dsconf promote-repl` command. To demote a replica, use the `dsconf demote-repl` command.

**PROPERTY:** `require-index-enabled`

Characteristic	Value
Syntax	<code>on   off</code>
Default Value	<code>off</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether unindexed searches are allowed. When `on`, unindexed searches return `LDAP_UNWILLING_TO_PERFORM`.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

true or false.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple

specifiers. However, `MEMORY_SIZE` properties allow decimal values, for example, 1.5M.

**NAME**

A valid `cn` (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus `640` specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

`dsconf(1M)`, `all-ids-threshold(5DSCONF)`, `db-path(5DSCONF)`, `enabled(5DSCONF)`, `moddn-enabled(5DSCONF)`, `referral-url(5DSCONF)`

## retro-cl-deleted-entry-attr

DS server instance configuration (SER) property retro-cl-deleted-entry-attr

### Description

The behavior of a Directory Server instance is configured according to server properties such as retro-cl-deleted-entry-attr.

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the attributes to record in the retro change log when an entry is deleted.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## retro-cl-enabled

---

DS server instance configuration (SER) property retro-cl-enabled

### Description

The behavior of a Directory Server instance is configured according to server properties such as `retro-cl-enabled`.

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies whether the server maintains a retro changelog of all changes occurring on the server instance.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## retro-cl-ignored-attr

DS server instance configuration (SER) property retro-cl-ignored-attr

### Description

The behavior of a Directory Server instance is configured according to server properties such as retro-cl-ignored-attr.

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the list of attributes not to record in the retro changelog when updates occur.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## retro-cl-max-age

DS server instance configuration (SER) property retro-cl-max-age

### Description

The behavior of a Directory Server instance is configured according to server properties such as retro-cl-max-age.

Characteristic	Value
Syntax	DURATION   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the maximum age of records in the retro changelog. Older records are purged.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## retro-cl-max-entry-count

DS server instance configuration (SER) property retro-cl-max-entry-count

### Description

The behavior of a Directory Server instance is configured according to server properties such as retro-cl-max-entry-count.

Characteristic	Value
Syntax	INTEGER
Default Value	0
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the maximum number of records in the retro changelog. Older records are purged. The value 0 corresponds to an unlimited number.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## retro-cl-path

---

DS server instance configuration (SER) property retro-cl-path

### Description

The behavior of a Directory Server instance is configured according to server properties such as `retro-cl-path`.

Characteristic	Value
Syntax	PATH
Default Value	<i>instance-path/db/changelog</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the file system directory in which the changelog is created.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

---

## retro-cl-suffix-dn

DS server instance configuration (SER) property retro-cl-suffix-dn

### Description

The behavior of a Directory Server instance is configured according to server properties such as retro-cl-suffix-dn.

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the suffixes for which retro changelog records are maintained.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## root-dn

DS server instance configuration (SER) property root-dn

### Description

The behavior of a Directory Server instance is configured according to server properties such as `root-dn`.

Characteristic	Value
Syntax	DN
Default Value	<code>cn=Directory Manager</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the Distinguished Name of the Directory Manager user, a user not subject to access controls.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

---

## root-pwd

DS server instance configuration (SER) property root-pwd

### Description

The behavior of a Directory Server instance is configured according to server properties such as `root-pwd`.

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	No
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property shows the password for the Directory Manager user. It shows hashed password according to the password storage scheme used.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## root-pwd-file

DS server instance configuration (SER) property root-pwd-file

### Description

The behavior of a Directory Server instance is configured according to server properties such as `root-pwd-file`.

Characteristic	Value
Syntax	PATH   " "
Default Value	" "
Is readable	No
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the file containing the password for the Directory Manager user. The file is read once, and the password is stored for future use.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

---

## root-pwd-storage-scheme

DS server instance configuration (SER) property root-pwd-storage-scheme

### Description

The behavior of a Directory Server instance is configured according to server properties such as root-pwd-storage-scheme.

Characteristic	Value
Syntax	STRING
Default Value	SSHA
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the algorithm used to encrypt the password for the Directory Manager user. Possible storage schemes are given by DS server instance configuration (SER) property `pwd-supported-storage-scheme`.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## rotation-interval

DS logging configuration (LOG) properties

### Description

Directory Server writes to three main types of log files you can configure, the *INSTANCE\_PATH/logs/access*, *INSTANCE\_PATH/logs/audit*, and *INSTANCE\_PATH/logs/errors* logs, where *INSTANCE\_PATH* is the full path where the server instance is located, such as */local/dsInst*.

When you specify one of these properties with `dsconf get-log-prop` or `dsconf set-log-prop`, you must specify which type of log configuration, *access*, *audit*, or *error*, you want to examine. For example, to see whether audit logging is enabled for a server instance:

```
$ dsconf get-log-prop audit enabled
enabled : off
$
```

### PROPERTY: buffering-enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, not applicable to audit and errors logs
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether Directory Server writes access log entries directly to disk, or use a buffer, by default.

### PROPERTY: enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, off for audit, on for errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether the specified log type is enabled.

**PROPERTY:** level

Characteristic	Value
Syntax	See the description that follows.
Default Value	default
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property defines which kinds of messages get logged. This property is applicable only to `access` and `errors` logs.

**access log levels**

The following settings are supported:

`acc-internal`

Log access information for internal operations.

`default`

Log client access to entries.

`acc-default_plus_referrals`

As default, but also log access to referrals.

`acc-timing`

Use precise timing for microsecond resolution of elapsed times.

**errors log levels**

The following settings are supported:

`default`

Log startup, shutdown, errors, and warnings.

`err-function-calls`

Log when server enters or exits a function.

`err-search-args`

Log search arguments.

`err-connection`

Connection management.

`err-packets`

Log packets sent and received.

`err-search-filter`

Log search filter information.

`err-config-file`

Log information for changes to the configuration file `dse.ldif`.

`err-acl`

Log access control processing information.

`err-ldbm`  
Log information from the ldbm database plugin.

`err-entry-parsing`  
Log LDIF parsing errors.

`err-housekeeping`  
Log event queue information.

`err-replication`  
Log information about replication operations.

`err-entry-cache`  
Log entry cache information.

`err-plugins`  
Log information from server plug-ins.

`err-dsml`  
Log information from DSML front end.

`err-dsml-advanced`  
Debugging information for DSML.

**PROPERTY:** `max-age`

Characteristic	Value
Syntax	DURATION   unlimited
Default Value	1M (one month)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the age beyond which the specified type of log file is deleted.

**PROPERTY:** `max-disk-space-size`

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	500M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum disk space the specified type of log is allowed to consume. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

**PROPERTY:** `max-file-count`

Characteristic	Value
Syntax	Integer
Default Value	10 for access, 2 for errors, 1 for audit
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of log files, including rotated logs, of the specified type that the server allows to be created in the log file directory. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

When you set this property to 1, the specified log is not rotated.

**PROPERTY:** `max-size`

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	100M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum file size for the specified log. When the limit is reached, the server rotates the log file, unless `max-file-count` is set to 1.

**PROPERTY:** `min-free-disk-space-size`

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	5M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum free space allowed on the disk where the specified log is stored. When the limit is reached, the server deletes the oldest log files until enough space is available.

**PROPERTY:** `path`

Characteristic	Value
Syntax	PATH

Characteristic	Value
Default Value	<i>INSTANCE_PATH</i> /logs/access, <i>INSTANCE_PATH</i> /logs/audit, <i>INSTANCE_PATH</i> /logs/errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the full path to the specified log file type.

**PROPERTY:** perm

Characteristic	Value
Syntax	OCTAL_MODE
Default Value	600
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the read, write, and execute permissions on the specified log file.

**PROPERTY:** rotation-interval

Characteristic	Value
Syntax	DURATION   unlimited
Default Value	1d (one day) for access, 1w (one week) for audit and errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the duration between rotations of the specified log file.

**PROPERTY:** rotation-min-file-size

Characteristic	Value
Syntax	MEMORY_SIZE   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum size the specified log file must have before the server rotates it.

**PROPERTY:** rotation-time

Characteristic	Value
Syntax	TIME   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the time of day when the server rotates the specified log file.

**PROPERTY:** verbose-enabled

Characteristic	Value
Syntax	on off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether extra informational messages are written to the `errors` log.

**Syntax Values**

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and milliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [enabled\(5DSCONF\)](#)

## rotation-min-file-size

DS logging configuration (LOG) properties

### Description

Directory Server writes to three main types of log files you can configure, the *INSTANCE\_PATH/logs/access*, *INSTANCE\_PATH/logs/audit*, and *INSTANCE\_PATH/logs/errors* logs, where *INSTANCE\_PATH* is the full path where the server instance is located, such as */local/dsInst*.

When you specify one of these properties with `dsconf get-log-prop` or `dsconf set-log-prop`, you must specify which type of log configuration, *access*, *audit*, or *error*, you want to examine. For example, to see whether audit logging is enabled for a server instance:

```
$ dsconf get-log-prop audit enabled
enabled : off
$
```

### PROPERTY: buffering-enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, not applicable to audit and errors logs
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether Directory Server writes access log entries directly to disk, or use a buffer, by default.

### PROPERTY: enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, off for audit, on for errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether the specified log type is enabled.

**PROPERTY:** level

Characteristic	Value
Syntax	See the description that follows.
Default Value	default
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property defines which kinds of messages get logged. This property is applicable only to `access` and `errors` logs.

**access log levels**

The following settings are supported:

`acc-internal`

Log access information for internal operations.

`default`

Log client access to entries.

`acc-default_plus_referrals`

As default, but also log access to referrals.

`acc-timing`

Use precise timing for microsecond resolution of elapsed times.

**errors log levels**

The following settings are supported:

`default`

Log startup, shutdown, errors, and warnings.

`err-function-calls`

Log when server enters or exits a function.

`err-search-args`

Log search arguments.

`err-connection`

Connection management.

`err-packets`

Log packets sent and received.

`err-search-filter`

Log search filter information.

`err-config-file`

Log information for changes to the configuration file `dse.ldif`.

`err-acl`

Log access control processing information.

`err-ldbm`  
Log information from the ldbm database plugin.

`err-entry-parsing`  
Log LDIF parsing errors.

`err-housekeeping`  
Log event queue information.

`err-replication`  
Log information about replication operations.

`err-entry-cache`  
Log entry cache information.

`err-plugins`  
Log information from server plug-ins.

`err-dsml`  
Log information from DSML front end.

`err-dsml-advanced`  
Debugging information for DSML.

**PROPERTY:** `max-age`

Characteristic	Value
Syntax	DURATION   unlimited
Default Value	1M (one month)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the age beyond which the specified type of log file is deleted.

**PROPERTY:** `max-disk-space-size`

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	500M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum disk space the specified type of log is allowed to consume. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

**PROPERTY:** `max-file-count`

Characteristic	Value
Syntax	Integer
Default Value	10 for access, 2 for errors, 1 for audit
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of log files, including rotated logs, of the specified type that the server allows to be created in the log file directory. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

When you set this property to 1, the specified log is not rotated.

**PROPERTY:** `max-size`

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	100M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum file size for the specified log. When the limit is reached, the server rotates the log file, unless `max-file-count` is set to 1.

**PROPERTY:** `min-free-disk-space-size`

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	5M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum free space allowed on the disk where the specified log is stored. When the limit is reached, the server deletes the oldest log files until enough space is available.

**PROPERTY:** `path`

Characteristic	Value
Syntax	PATH

Characteristic	Value
Default Value	<i>INSTANCE_PATH</i> /logs/access, <i>INSTANCE_PATH</i> /logs/audit, <i>INSTANCE_PATH</i> /logs/errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the full path to the specified log file type.

**PROPERTY:** perm

Characteristic	Value
Syntax	OCTAL_MODE
Default Value	600
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the read, write, and execute permissions on the specified log file.

**PROPERTY:** rotation-interval

Characteristic	Value
Syntax	DURATION   unlimited
Default Value	1d (one day) for access, 1w (one week) for audit and errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the duration between rotations of the specified log file.

**PROPERTY:** rotation-min-file-size

Characteristic	Value
Syntax	MEMORY_SIZE   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum size the specified log file must have before the server rotates it.

**PROPERTY:** rotation-time

Characteristic	Value
Syntax	TIME   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the time of day when the server rotates the specified log file.

**PROPERTY:** verbose-enabled

Characteristic	Value
Syntax	on off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether extra informational messages are written to the `errors` log.

**Syntax Values**

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dsconf\(1M\)](#), [enabled\(5DSCONF\)](#)

---

## rotation-time

DS logging configuration (LOG) properties

### Description

Directory Server writes to three main types of log files you can configure, the *INSTANCE\_PATH/logs/access*, *INSTANCE\_PATH/logs/audit*, and *INSTANCE\_PATH/logs/errors* logs, where *INSTANCE\_PATH* is the full path where the server instance is located, such as */local/dsInst*.

When you specify one of these properties with `dsconf get-log-prop` or `dsconf set-log-prop`, you must specify which type of log configuration, *access*, *audit*, or *error*, you want to examine. For example, to see whether audit logging is enabled for a server instance:

```
$ dsconf get-log-prop audit enabled
enabled : off
$
```

### PROPERTY: buffering-enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, not applicable to audit and errors logs
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether Directory Server writes access log entries directly to disk, or use a buffer, by default.

### PROPERTY: enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, off for audit, on for errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether the specified log type is enabled.

**PROPERTY:** level

Characteristic	Value
Syntax	See the description that follows.
Default Value	default
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property defines which kinds of messages get logged. This property is applicable only to `access` and `errors` logs.

**access log levels**

The following settings are supported:

`acc-internal`

Log access information for internal operations.

`default`

Log client access to entries.

`acc-default_plus_referrals`

As default, but also log access to referrals.

`acc-timing`

Use precise timing for microsecond resolution of elapsed times.

**errors log levels**

The following settings are supported:

`default`

Log startup, shutdown, errors, and warnings.

`err-function-calls`

Log when server enters or exits a function.

`err-search-args`

Log search arguments.

`err-connection`

Connection management.

`err-packets`

Log packets sent and received.

`err-search-filter`

Log search filter information.

`err-config-file`

Log information for changes to the configuration file `dse.ldif`.

`err-acl`

Log access control processing information.

err-ldbm  
Log information from the ldbm database plugin.

err-entry-parsing  
Log LDIF parsing errors.

err-housekeeping  
Log event queue information.

err-replication  
Log information about replication operations.

err-entry-cache  
Log entry cache information.

err-plugins  
Log information from server plug-ins.

err-dsml  
Log information from DSML front end.

err-dsml-advanced  
Debugging information for DSML.

**PROPERTY:** max-age

Characteristic	Value
Syntax	DURATION   unlimited
Default Value	1M (one month)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the age beyond which the specified type of log file is deleted.

**PROPERTY:** max-disk-space-size

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	500M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum disk space the specified type of log is allowed to consume. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

**PROPERTY:** `max-file-count`

Characteristic	Value
Syntax	Integer
Default Value	10 for access, 2 for errors, 1 for audit
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of log files, including rotated logs, of the specified type that the server allows to be created in the log file directory. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

When you set this property to 1, the specified log is not rotated.

**PROPERTY:** `max-size`

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	100M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum file size for the specified log. When the limit is reached, the server rotates the log file, unless `max-file-count` is set to 1.

**PROPERTY:** `min-free-disk-space-size`

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	5M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum free space allowed on the disk where the specified log is stored. When the limit is reached, the server deletes the oldest log files until enough space is available.

**PROPERTY:** `path`

Characteristic	Value
Syntax	PATH

Characteristic	Value
Default Value	<i>INSTANCE_PATH</i> /logs/access, <i>INSTANCE_PATH</i> /logs/audit, <i>INSTANCE_PATH</i> /logs/errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the full path to the specified log file type.

**PROPERTY:** perm

Characteristic	Value
Syntax	OCTAL_MODE
Default Value	600
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the read, write, and execute permissions on the specified log file.

**PROPERTY:** rotation-interval

Characteristic	Value
Syntax	DURATION   unlimited
Default Value	1d (one day) for access, 1w (one week) for audit and errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the duration between rotations of the specified log file.

**PROPERTY:** rotation-min-file-size

Characteristic	Value
Syntax	MEMORY_SIZE   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum size the specified log file must have before the server rotates it.

**PROPERTY:** rotation-time

Characteristic	Value
Syntax	TIME   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the time of day when the server rotates the specified log file.

**PROPERTY:** verbose-enabled

Characteristic	Value
Syntax	on off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether extra informational messages are written to the `errors` log.

**Syntax Values**

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and milliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dsconf\(1M\)](#), [enabled\(5DSCONF\)](#)

## search-size-limit\_5dsconf

DS server instance configuration (SER) property search-size-limit

### Description

The behavior of a Directory Server instance is configured according to server properties such as `search-size-limit`.

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	2000
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the maximum number of entries the server returns for a search operation.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## search-time-limit\_5dsconf

DS server instance configuration (SER) property search-time-limit

### Description

The behavior of a Directory Server instance is configured according to server properties such as `search-time-limit`.

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	3600
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the maximum number of seconds allocated by the server to respond to a search request.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## secure-listen-address

DS server instance configuration (SER) property secure-listen-address

### Description

The behavior of a Directory Server instance is configured according to server properties such as `secure-listen-address`.

Characteristic	Value
Syntax	STRING
Default Value	0.0.0.0
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the IP address at which the server listens for LDAP client requests using the secure LDAP port. You can specify more than one secure listen address for the same port number. The default secure listen address is 0.0.0.0. Changing this property requires that you restart the server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

---

## server

DS server instance configuration (SER) properties

### Description

The behavior of a Directory Server instance is configured according to server properties documented in the reference pages:

```
all-ids-threshold(5DSCONF), check-schema-enabled(5DSCONF),
check-syntax-enabled(5DSCONF), compat-flag_5dsconf(5DSCONF),
config-magic-number(5DSCONF),
db-batched-transaction-count(5DSCONF), db-cache-size(5DSCONF),
db-checkpoint-interval(5DSCONF), db-env-path(5DSCONF),
db-lock-count(5DSCONF), db-log-buf-size(5DSCONF),
db-log-path(5DSCONF), db-path(5DSCONF),
def-repl-manager-pwd(5DSCONF),
def-repl-manager-pwd-file(5DSCONF), dn-cache-count(5DSCONF),
dn-cache-size(5DSCONF), dsml-answer-size(5DSCONF),
dsml-buffer-size(5DSCONF), dsml-client-auth-mode(5DSCONF),
dsml-enabled(5DSCONF), dsml-max-parser-count(5DSCONF),
dsml-min-parser-count(5DSCONF), dsml-port(5DSCONF),
dsml-relative-root-url(5DSCONF), dsml-request-max-size(5DSCONF),
dsml-secure-port(5DSCONF), file-descriptor-count(5DSCONF),
heap-high-threshold-size(5DSCONF),
heap-low-threshold-size(5DSCONF), host-access-dir-path(5DSCONF),
idle-timeout(5DSCONF), import-cache-size(5DSCONF),
instance-path(5DSCONF), ldap-port_5dsconf(5DSCONF),
ldap-secure-port(5DSCONF), listen-address_5dsconf(5DSCONF),
look-through-limit(5DSCONF), max-psearch-count(5DSCONF),
max-thread-count(5DSCONF),
max-thread-per-connection-count(5DSCONF),
mod-tracking-enabled(5DSCONF), moddn-enabled(5DSCONF),
polling-thread-count(5DSCONF),
pwd-accept-hashed-pwd-enabled(5DSCONF),
pwd-check-enabled(5DSCONF), pwd-compat-mode(5DSCONF),
pwd-expire-no-warning-enabled(5DSCONF),
pwd-expire-warning-delay(5DSCONF),
pwd-failure-count-interval(5DSCONF),
pwd-grace-login-limit(5DSCONF),
pwd-keep-last-auth-time-enabled(5DSCONF),
pwd-lockout-duration(5DSCONF), pwd-lockout-enabled(5DSCONF),
pwd-lockout-repl-priority-enabled(5DSCONF), pwd-max-age(5DSCONF),
pwd-max-failure-count(5DSCONF), pwd-max-history-count(5DSCONF),
pwd-min-age(5DSCONF), pwd-min-length(5DSCONF),
pwd-mod-gen-length(5DSCONF), pwd-must-change-enabled(5DSCONF),
pwd-root-dn-bypass-enabled(5DSCONF),
pwd-safe-modify-enabled(5DSCONF), pwd-storage-scheme(5DSCONF),
pwd-strong-check-dictionary-path(5DSCONF),
pwd-strong-check-enabled(5DSCONF),
pwd-strong-check-require-charset(5DSCONF),
pwd-supported-storage-scheme(5DSCONF),
pwd-user-change-enabled(5DSCONF), read-write-mode(5DSCONF),
```

ref-integrity-attr(5DSCONF), ref-integrity-check-delay(5DSCONF),  
ref-integrity-enabled(5DSCONF), referral-url(5DSCONF),  
repl-user-schema-enabled(5DSCONF),  
require-bind-pwd-enabled(5DSCONF),  
retro-cl-deleted-entry-attr(5DSCONF), retro-cl-enabled(5DSCONF),  
retro-cl-ignored-attr(5DSCONF), retro-cl-max-age(5DSCONF),  
retro-cl-max-entry-count(5DSCONF), retro-cl-path(5DSCONF),  
retro-cl-suffix-dn(5DSCONF), root-dn(5DSCONF), root-pwd(5DSCONF),  
root-pwd-file(5DSCONF), root-pwd-storage-scheme(5DSCONF),  
search-size-limit\_5dsconf(5DSCONF), search-time-limit\_  
5dsconf(5DSCONF), secure-listen-address(5DSCONF),  
ssl-cipher-family(5DSCONF), ssl-client-auth-mode(5DSCONF),  
ssl-enabled(5DSCONF), ssl-rsa-cert-name(5DSCONF),  
ssl-rsa-security-device(5DSCONF), ssl-supported-ciphers(5DSCONF),  
thread-count(5DSCONF)

## SYNTAX VALUES

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

### ATTR\_NAME

A valid attribute type name such as `cn` or `objectClass`.

### BOOLEAN

`true` or `false`.

### DN

A valid distinguished name such as `ou=People,dc=example,dc=com`.

### DURATION

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

### EMAIL\_ADDRESS

A valid e-mail address.

### HOST\_NAME

An IP address or host name.

### INTEGER

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

### INTERVAL

An interval value of the form `hhmm-hhmm 0123456`, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#)

---

## ssl-cipher-family

DS server instance configuration (SER) property `ssl-cipher-family`

### Description

The behavior of a Directory Server instance is configured according to server properties such as `ssl-cipher-family`.

Characteristic	Value
Syntax	STRING   all
Default Value	all
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the SSL ciphers the server can use for SSL communications. The default value, `all`, does not mean all the supported SSL ciphers, as supported ciphers with NULL key length are removed from the list.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## ssl-client-auth-mode

DS server instance configuration (SER) property `ssl-client-auth-mode`

### Description

The behavior of a Directory Server instance is configured according to server properties such as `ssl-client-auth-mode`.

Characteristic	Value
Syntax	allowed   required   disabled
Default Value	allowed
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies whether the server allows, requires, or does not allow SSL client authentication, in which the client application authenticates sending its SSL certificate to the server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

---

## ssl-enabled

DS server instance configuration (SER) property ssl-enabled

### Description

The behavior of a Directory Server instance is configured according to server properties such as `ssl-enabled`.

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies whether the server accepts SSL connections.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## ssl-rsa-cert-name

---

DS server instance configuration (SER) property `ssl-rsa-cert-name`

### Description

The behavior of a Directory Server instance is configured according to server properties such as `ssl-rsa-cert-name`.

Characteristic	Value
Syntax	STRING
Default Value	defaultCert
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the name of the SSL certificate for the server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

---

## ssl-rsa-security-device

DS server instance configuration (SER) property ssl-rsa-security-device

### Description

The behavior of a Directory Server instance is configured according to server properties such as `ssl-rsa-security-device`.

Characteristic	Value
Syntax	STRING
Default Value	internal (software)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the name of the security device used by the server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## ssl-supported-ciphers

---

DS server instance configuration (SER) property `ssl-supported-ciphers`

### Description

The behavior of a Directory Server instance is configured according to server properties such as `ssl-supported-ciphers`.

Characteristic	Value
Syntax	STRING
Default Value	Depends on underlying SSL library
Is readable	Yes
Is modifiable	No
Is multi-valued	No

In the preceding table, syntax values shown in lower case or partly in lower case are literal values. Those shown in upper case are syntax types, as described in [server\(5DSCONF\)](#).

This property specifies the full list of SSL ciphers the server can support.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

---

## sub-enabled

DS attribute indexing (IDX) properties

### Description

Directory Server can index attributes, making them faster to search. The `dsconf` command helps you configure five of the six supported index types:

1. Equality indexes to determine expediently whether an attribute value is equal to a specified value
2. Presence indexes to determine whether a specified attribute has any values
3. Substring indexes to determine whether a specified attribute has values containing a specified string, also used to compare regular expressions to attribute values
4. Approximate indexes, based on metaphone approximation and useful for English language strings only, to determine whether a specified attribute has any values that sound like the specified string
5. International indexes, also called matching rule indexes, to expedite sorting and searching in accordance with the language rules of a particular locale

The `dsconf` command does not help you configure virtual list view, also known as browsing, indexes.

The `dsconf` command does help you assign all IDs threshold values to indexes. As the number of entries and attribute values grows in a directory, the number of attribute values to index also grows, as does therefore the size of the indexes. In some deployments a server can end up maintaining index lists so large that the cost of rebuilding an index when attributes are modified or added outweighs the benefit the index provides for searches. All IDs thresholds limit the growth of large indexes by defining the maximum number of entry identifiers Directory Server maintains in an index list. You can define all IDs thresholds for individual indexes and for some types of indexes.

Some indexes are maintained by the server for its own use. These are called system indexes. In general, do not modify or remove systems indexes; such modifications could have severe repercussions on performance.

See *Directory Server Indexing in Reference for Oracle Directory Server Enterprise Edition* for further details about indexing.

**PROPERTY:** `all-ids-threshold`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of entry IDs the server maintains in an index list for the specified attribute type. By default its value is inherited from the `all-ids-threshold` setting for the suffix, whose default value in turn is inherited from the `all-ids-threshold` setting for the server, which by default is 4000. In addition to inheritance of default settings, this property handles settings as follows:

`inherited`

The threshold is inherited from the more global setting.

`<2000`

The threshold value is rounded up to 2000.

`>2000`

The setting is used as a guaranteed minimum threshold. Because of internal mechanisms, the real value can be slightly more than the specified value.

After you modify this property, reindex the attribute for which you changed the threshold. For example:

```
$ dsconf set-index-prop dc=example,dc=com uid all-ids-threshold:5000
$ dsconf reindex -t uid dc=example,dc=com
```

```
## example: Indexing attribute: uid
## example: Finished indexing.
```

```
Task completed (slapd exit code: 0).
```

```
$
```

### PROPERTY: `all-ids-threshold-eq`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for equality indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

### PROPERTY: `all-ids-threshold-pres`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for presence indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

**PROPERTY:** `all-ids-threshold-sub`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for substring indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

**PROPERTY:** `approx-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether approximate indexes are maintained for the specified attribute type. You cannot set an all IDs threshold value for approximate indexes.

**PROPERTY:** `desc`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

Use this optional property to provide a short description of the index configuration.

**PROPERTY:** eq-enabled

Characteristic	Value
Syntax	on off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether equality indexes are maintained for the specified attribute type.

**PROPERTY:** matching-rule

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the matching rule indexes maintained for the specified attribute type.

Values for this property must be valid collation order object identifiers (OIDs). See *Directory Server Internationalized Directory in Directory Server Enterprise Edition Reference* for the OIDs corresponding to supported locales.

**PROPERTY:** pres-enabled

Characteristic	Value
Syntax	on off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether presence indexes are maintained for the specified attribute type.

**PROPERTY:** sub-enabled

Characteristic	Value
Syntax	on off
Default Value	off

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether substring indexes are maintained for the specified attribute type.

**PROPERTY:** `system`

Characteristic	Value
Syntax	<code>true false</code>
Default Value	<code>false</code>
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property identifies whether the specified index is a system index, and therefore should be left alone.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

`ATTR_NAME`

A valid attribute type name such as `cn` or `objectClass`.

`BOOLEAN`

`true` or `false`.

`DN`

A valid distinguished name such as `ou=People,dc=example,dc=com`.

`DURATION`

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

`DURATION` properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

`EMAIL_ADDRESS`

A valid e-mail address.

`HOST_NAME`

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [all-ids-threshold\(5DSCONF\)](#), [desc\(5DSCONF\)](#)

## suffix

DS suffix configuration (SUF) properties

### Description

Each Directory Server suffix you create is configured according to the suffix properties documented here and in the documentation specified under the SEE ALSO section:

`compressed-entries(5DSCONF)`, `compression-mode(5DSCONF)`, `db-name_5dsconf(5DSCONF)`, `db-path(5DSCONF)`, `entry-cache-count(5DSCONF)`, `entry-cache-mode(5DSCONF)`, `entry-cache-preload-enabled(5DSCONF)`, `entry-cache-size(5DSCONF)`, `entry-crc-enabled(5DSCONF)`, `index-filter-analyzer-enabled(5DSCONF)`, `index-filter-analyzer-max-entries(5DSCONF)`, `parent-suffix-dn(5DSCONF)`, `referral-mode(5DSCONF)`, `repl-accept-client-update-enabled(5DSCONF)`, `repl-cl-max-age(5DSCONF)`, `repl-cl-max-entry-count(5DSCONF)`, `repl-id(5DSCONF)`, `repl-manager-bind-dn(5DSCONF)`, `repl-purge-delay(5DSCONF)`, `repl-rewrite-referrals-enabled(5DSCONF)`, `repl-role(5DSCONF)`, `require-index-enabled(5DSCONF)`

**PROPERTY:** `compression-entries`

Characteristic	Value
Syntax	<code>all overflow</code>
Default Value	<code>overflow</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies entry eligibility for compression.

`all`

All the entries will be compressed.

`overflow`

Only entries in overflow pages will be compressed.

**PROPERTY:** `compression-mode`

Characteristic	Value
Syntax	<code>none DSZ</code>
Default Value	None
Is readable	Yes
Is modifiable	Yes

Characteristic	Value
Is multi-valued	No

This property specifies how entries are compressed.

none

No entries compression mechanism will be used.

DSZ

Entries will be compressed using the DSZ method.

#### PROPERTY: db-name

Characteristic	Value
Syntax	STRING
Default Value	<i>suffixName</i>
Is readable	Yes
Is modifiable	No
Is multi-valued	Yes

This property specifies the suffix that is used to process requests involving the database.

#### PROPERTY: db-path

Characteristic	Value
Syntax	PATH
Default Value	<i>server-instance-dir/db/suffix-dir</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute path to the suffix database.

#### PROPERTY: entry-cache-count

Characteristic	Value
Syntax	INTEGER   unlimited
Default Value	unlimited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of entries allowed in the entry cache of the suffix.

**PROPERTY:** `entry-cache-mode`

Characteristic	Value
Syntax	<code>automatic</code>   <code>manual</code>
Default Value	<code>automatic</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the server should automatically manage the entry cache size based on the load.

When you create a SUFFIX, the `entry-cache-mode` property is set to `automatic` by default.

To manually modify cache size, set `entry-cache-mode` to `manual`, and then you can manually manage the SUFFIX properties [entry-cache-count](#) and [entry-cache-size](#).

**PROPERTY:** `entry-cache-preload-enabled`

Characteristic	Value
Syntax	<code>on</code>   <code>off</code>
Default Value	<code>off</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether SUFFIX entry cache is preloaded at server startup.

**PROPERTY:** `entry-cache-size`

Characteristic	Value
Syntax	<code>MEMORY_SIZE</code>
Default Value	<code>20M</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum amount of memory Directory Server requests for the entry cache of the suffix.

**PROPERTY:** entry-count

Characteristic	Value
Syntax	INTEGER
Default Value	0
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the number of entries stored in the suffix.

**PROPERTY:** entry-crc-enabled

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No
Restart needed	No

This property specifies whether a CRC is computed on each entry.

**PROPERTY:** index-filter-analyzer-enabled

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	No
Is multi-valued	No
Restart needed	No

This property specifies whether the index filter analyzer is running.

**PROPERTY:** index-filter-analyzer-max-entries

Characteristic	Value
Syntax	Integer
Default Value	2000
Is readable	Yes
Is modifiable	Yes

Characteristic	Value
Is multi-valued	No
Restart needed	No

This property specifies the maximum number of entries that the index filter analyzer may contain.

**PROPERTY:** `parent-suffix-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	DN of the parent entry
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the DN of the parent entry for the suffix. The value of this property must logically be a parent of the suffix.

For instance, if you have a suffix with DN `dc=com` and a suffix `dc=example, dc=com`, you can set `dc=com` as the `parent-suffix-dn` of `dc=example, dc=com`, and subtree searches with based DN `dc=com` then also travers `dc=example, dc=com`.

**PROPERTY:** `referral-mode`

Characteristic	Value
Syntax	disabled   enabled   only-on-write
Default Value	disabled
Is readable	Yes
Is modifiable	Yes, if the suffix is not replicated
Is multi-valued	No

This property specifies how referrals are used when a client makes a request involving the suffix.

`disabled`  
Handle requests locally; do not return referral URLs.

`enabled`  
Return referral URLs to client requests.

`only-on-write`  
Return referral URLs to client requests only for write operations.

**PROPERTY:** `repl-accept-client-update-enabled`

Characteristic	Value
Syntax	on   off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether the replicated suffix accepts write operations from client applications, or instead returns referral URLs.

**PROPERTY:** `repl-cl-max-age`

Characteristic	Value
Syntax	DURATION   undefined
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age for a record in the replication changelog. Older records are purged.

**PROPERTY:** `repl-cl-max-entry-count`

Characteristic	Value
Syntax	INTEGER
Default Value	0 (meaning undefined)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum number of records in the replication changelog. When the limit is exceeded, older records are purged.

**PROPERTY:** `repl-id`

Characteristic	Value
Syntax	INTEGER
Default Value	None
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication

Characteristic	Value
Is multi-valued	No

This property specifies the replica identification number, 1-65534 for a supplier, 65535 for a consumer or a hub. Once set, this property cannot be modified.

**PROPERTY:** `repl-manager-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the bind DN's of users allowed to bind to perform replication operations on the suffix.

**PROPERTY:** `repl-purge-delay`

Characteristic	Value
Syntax	DURATION   never
Default Value	7d
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the maximum age of tombstone entries used by replication. Tombstone entries are entries marked for deletion that have not yet been removed, and also replication state information associated with the entries. When setting this attribute, ensure that the purge delay is longer than the longest replication cycle in your replication policy to avoid incurring conflict resolution problems and divergence between replicas.

**PROPERTY:** `repl-rewrite-referrals-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies whether referrals you set can be automatically overwritten by the server to reference replicas.

**PROPERTY:** `repl-role`

Characteristic	Value
Syntax	<code>not-replicated</code>   <code>master</code>   <code>hub</code>   <code>consumer</code>
Default Value	<code>not-replicated</code>
Is readable	Yes
Is modifiable	Yes, using the subcommands to manage replication
Is multi-valued	No

This property specifies the role played by the suffix in a replicated topology.

`not-replicated`

The suffix is not part of a replicated topology.

`master`

This suffix is a supplier of replication updates in a replicated topology. It can accept both read and write operations.

`hub`

This suffix is a supplier of replication updates in a replicated topology. It can accept read operations and replication updates.

`consumer`

This suffix is a dedicated consumer of replication updates in a replicated topology. It can accept read operations and replication updates, but not writes from clients.

To promote a replica, use the `dsconf promote-repl` command. To demote a replica, use the `dsconf demote-repl` command.

**PROPERTY:** `require-index-enabled`

Characteristic	Value
Syntax	<code>on</code>   <code>off</code>
Default Value	<code>off</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether unindexed searches are allowed. When `on`, unindexed searches return `LDAP_UNWILLING_TO_PERFORM`.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple

specifiers. However, `MEMORY_SIZE` properties allow decimal values, for example, 1.5M.

#### NAME

A valid `cn` (common name).

#### OCTAL\_MODE

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus `640` specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

#### PASSWORD\_FILE

The full path to the file from which the bind password should be read.

#### PATH

A valid, absolute file system path.

#### STRING

A `DirectoryString` value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

#### SUPPORTED\_SSL\_CIPHER

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

#### SUPPORTED\_SSL\_PROTOCOL

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

#### TIME

A time of the form `hhmm` in 24-hour format, where `hh` stands for hours and `mm` stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

`dsconf(1M)`, `all-ids-threshold(5DSCONF)`, `db-path(5DSCONF)`, `enabled(5DSCONF)`, `moddn-enabled(5DSCONF)`, `referral-url(5DSCONF)`

---

## system

DS attribute indexing (IDX) properties

### Description

Directory Server can index attributes, making them faster to search. The `dsconf` command helps you configure five of the six supported index types:

1. Equality indexes to determine expediently whether an attribute value is equal to a specified value
2. Presence indexes to determine whether a specified attribute has any values
3. Substring indexes to determine whether a specified attribute has values containing a specified string, also used to compare regular expressions to attribute values
4. Approximate indexes, based on metaphone approximation and useful for English language strings only, to determine whether a specified attribute has any values that sound like the specified string
5. International indexes, also called matching rule indexes, to expedite sorting and searching in accordance with the language rules of a particular locale

The `dsconf` command does not help you configure virtual list view, also known as browsing, indexes.

The `dsconf` command does help you assign all IDs threshold values to indexes. As the number of entries and attribute values grows in a directory, the number of attribute values to index also grows, as does therefore the size of the indexes. In some deployments a server can end up maintaining index lists so large that the cost of rebuilding an index when attributes are modified or added outweighs the benefit the index provides for searches. All IDs thresholds limit the growth of large indexes by defining the maximum number of entry identifiers Directory Server maintains in an index list. You can define all IDs thresholds for individual indexes and for some types of indexes.

Some indexes are maintained by the server for its own use. These are called system indexes. In general, do not modify or remove systems indexes; such modifications could have severe repercussions on performance.

See *Directory Server Indexing* in *Reference for Oracle Directory Server Enterprise Edition* for further details about indexing.

**PROPERTY:** `all-ids-threshold`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of entry IDs the server maintains in an index list for the specified attribute type. By default its value is inherited from the `all-ids-threshold` setting for the suffix, whose default value in turn is inherited from the `all-ids-threshold` setting for the server, which by default is 4000. In addition to inheritance of default settings, this property handles settings as follows:

`inherited`

The threshold is inherited from the more global setting.

`<2000`

The threshold value is rounded up to 2000.

`>2000`

The setting is used as a guaranteed minimum threshold. Because of internal mechanisms, the real value can be slightly more than the specified value.

After you modify this property, reindex the attribute for which you changed the threshold. For example:

```
$ dsconf set-index-prop dc=example,dc=com uid all-ids-threshold:5000
$ dsconf reindex -t uid dc=example,dc=com
```

```
## example: Indexing attribute: uid
## example: Finished indexing.
```

```
Task completed (slapd exit code: 0).
$
```

### PROPERTY: `all-ids-threshold-eq`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for equality indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

### PROPERTY: `all-ids-threshold-pres`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for presence indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

**PROPERTY:** `all-ids-threshold-sub`

Characteristic	Value
Syntax	INTEGER   inherited
Default Value	inherited
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the all IDs threshold for substring indexes of the specified attribute. By default its value is inherited from the `all-ids-threshold` setting for the attribute type. See [all-ids-threshold\(5DSCONF\)](#) for more information.

**PROPERTY:** `approx-enabled`

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether approximate indexes are maintained for the specified attribute type. You cannot set an all IDs threshold value for approximate indexes.

**PROPERTY:** `desc`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

Use this optional property to provide a short description of the index configuration.

**PROPERTY:** eq-enabled

Characteristic	Value
Syntax	on off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether equality indexes are maintained for the specified attribute type.

**PROPERTY:** matching-rule

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the matching rule indexes maintained for the specified attribute type.

Values for this property must be valid collation order object identifiers (OIDs). See *Directory Server Internationalized Directory in Directory Server Enterprise Edition Reference* for the OIDs corresponding to supported locales.

**PROPERTY:** pres-enabled

Characteristic	Value
Syntax	on off
Default Value	on
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether presence indexes are maintained for the specified attribute type.

**PROPERTY:** sub-enabled

Characteristic	Value
Syntax	on off
Default Value	off

Characteristic	Value
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether substring indexes are maintained for the specified attribute type.

**PROPERTY:** `system`

Characteristic	Value
Syntax	<code>true false</code>
Default Value	<code>false</code>
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property identifies whether the specified index is a system index, and therefore should be left alone.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w`, `7d`, `168h`, `10080m`, or `604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [all-ids-threshold\(5DSCONF\)](#), [desc\(5DSCONF\)](#)

---

## thread-count

DS server instance configuration (SER) property thread-count

### Description

The behavior of a Directory Server instance is configured according to server properties such as `thread-count`.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dsconf\(1M\)](#), [server\(5DSCONF\)](#)

## transport-compression

---

DS replication agreement configuration (RAG) properties

### Description

A replication agreement governs how a Directory Server supplier updates a Directory Server consumer. Although this configuration element is called an agreement, it concerns the configuration only of the supplier.

**PROPERTY:** `auth-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the bind DN used by the supplier to bind to the consumer in order to perform replication-related updates. This bind DN must be present on the consumer.

**PROPERTY:** `auth-protocol`

Characteristic	Value
Syntax	<code>clear ssl-simple ssl-client</code>
Default Value	<code>clear</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the protocol used by the supplier to bind to the consumer in order to perform replication-related updates. The default is to bind with simple authentication in clear text without securing the connection, as most replications connections are made on an internal network. You may however configure replication to use SSL and simple authentication to protect the connection from malicious snooping, or SSL with client authentication to further protect the connection.

**PROPERTY:** `auth-pwd`

Characteristic	Value
Syntax	STRING
Default Value	None

Characteristic	Value
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the password used by the supplier to bind to the consumer. You provide it using `auth-pwd-file`.

**PROPERTY:** `auth-pwd-file`

Characteristic	Value
Syntax	PATH
Default Value	" "
Is readable	No
Is modifiable	Yes
Is multi-valued	No

This property specifies the file from which the bind password for replication is read to create the replication agreement. The file is read once on replication agreement creation, and the password is stored for future use.

**PROPERTY:** `repl-fractional-exclude-attr`

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the list of attributes not to replicate. This property is mutually exclusive with `repl-fractional-include-attr`.

**PROPERTY:** `repl-fractional-include-attr`

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the list of attributes to replicate. This property is mutually exclusive with `repl-fractional-exclude-attr`.

**PROPERTY:** `repl-schedule`

Characteristic	Value
Syntax	INTERVAL   always
Default Value	always
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the times and days when replication can take place.

**PROPERTY:** `transport-compression`

Characteristic	Value
Syntax	best-compression   best-speed   default-compression   no-compression
Default Value	no-compression
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the level of `libz` compression used on replication updates from the supplier to the consumer. Supported settings are as follows.

`no-compression`  
No compression

`default-compression`  
Default zlib compression (zlib numeric value = -1)

`best-speed`  
Fastest zlib compression (zlib numeric value = 1)

`best-compression`  
Strongest zlib compression (zlib numeric value = 9)

If the bottleneck for replication in your environment is network bandwidth, this property can potentially help you tune the replication protocol for better performance.

**PROPERTY:** `transport-group-size`

Characteristic	Value
Syntax	INTEGER
Default Value	1
Is readable	Yes

Characteristic	Value
Is modifiable	Yes
Is multi-valued	No

This property specifies how many replication messages are grouped on the supplier before being sent to the consumer. Valid range is 1 to 255.

If the bottleneck for replication in your environment is network bandwidth, this property can potentially help you tune the replication protocol for better performance.

#### **PROPERTY:** transport-window-size

Characteristic	Value
Syntax	INTEGER
Default Value	10
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of replication messages sent from the supplier to the consumer before waiting for a response from the consumer to continue. Valid range is 1 to 65535.

If the bottleneck for replication in your environment is network latency or network bandwidth, this property can potentially help you tune the replication protocol for better performance.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

#### ATTR\_NAME

A valid attribute type name such as `cn` or `objectClass`.

#### BOOLEAN

`true` or `false`.

#### DN

A valid distinguished name such as `ou=People,dc=example,dc=com`.

#### DURATION

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [desc\(5DSCONF\)](#), [enabled\(5DSCONF\)](#)

## transport-group-size

DS replication agreement configuration (RAG) properties

### Description

A replication agreement governs how a Directory Server supplier updates a Directory Server consumer. Although this configuration element is called an agreement, it concerns the configuration only of the supplier.

**PROPERTY:** `auth-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the bind DN used by the supplier to bind to the consumer in order to perform replication-related updates. This bind DN must be present on the consumer.

**PROPERTY:** `auth-protocol`

Characteristic	Value
Syntax	clear ssl-simple ssl-client
Default Value	clear
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the protocol used by the supplier to bind to the consumer in order to perform replication-related updates. The default is to bind with simple authentication in clear text without securing the connection, as most replications connections are made on an internal network. You may however configure replication to use SSL and simple authentication to protect the connection from malicious snooping, or SSL with client authentication to further protect the connection.

**PROPERTY:** `auth-pwd`

Characteristic	Value
Syntax	STRING
Default Value	None

Characteristic	Value
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the password used by the supplier to bind to the consumer. You provide it using `auth-pwd-file`.

**PROPERTY:** `auth-pwd-file`

Characteristic	Value
Syntax	PATH
Default Value	" "
Is readable	No
Is modifiable	Yes
Is multi-valued	No

This property specifies the file from which the bind password for replication is read to create the replication agreement. The file is read once on replication agreement creation, and the password is stored for future use.

**PROPERTY:** `repl-fractional-exclude-attr`

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the list of attributes not to replicate. This property is mutually exclusive with `repl-fractional-include-attr`.

**PROPERTY:** `repl-fractional-include-attr`

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the list of attributes to replicate. This property is mutually exclusive with `repl-fractional-exclude-attr`.

**PROPERTY:** `repl-schedule`

Characteristic	Value
Syntax	INTERVAL   always
Default Value	always
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the times and days when replication can take place.

**PROPERTY:** `transport-compression`

Characteristic	Value
Syntax	best-compression   best-speed   default-compression   no-compression
Default Value	no-compression
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the level of `libz` compression used on replication updates from the supplier to the consumer. Supported settings are as follows.

`no-compression`  
No compression

`default-compression`  
Default zlib compression (zlib numeric value = -1)

`best-speed`  
Fastest zlib compression (zlib numeric value = 1)

`best-compression`  
Strongest zlib compression (zlib numeric value = 9)

If the bottleneck for replication in your environment is network bandwidth, this property can potentially help you tune the replication protocol for better performance.

**PROPERTY:** `transport-group-size`

Characteristic	Value
Syntax	INTEGER
Default Value	1
Is readable	Yes

Characteristic	Value
Is modifiable	Yes
Is multi-valued	No

This property specifies how many replication messages are grouped on the supplier before being sent to the consumer. Valid range is 1 to 255.

If the bottleneck for replication in your environment is network bandwidth, this property can potentially help you tune the replication protocol for better performance.

#### **PROPERTY:** transport-window-size

Characteristic	Value
Syntax	INTEGER
Default Value	10
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of replication messages sent from the supplier to the consumer before waiting for a response from the consumer to continue. Valid range is 1 to 65535.

If the bottleneck for replication in your environment is network latency or network bandwidth, this property can potentially help you tune the replication protocol for better performance.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

#### ATTR\_NAME

A valid attribute type name such as `cn` or `objectClass`.

#### BOOLEAN

`true` or `false`.

#### DN

A valid distinguished name such as `ou=People,dc=example,dc=com`.

#### DURATION

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [desc\(5DSCONF\)](#), [enabled\(5DSCONF\)](#)

---

## transport-window-size

DS replication agreement configuration (RAG) properties

### Description

A replication agreement governs how a Directory Server supplier updates a Directory Server consumer. Although this configuration element is called an agreement, it concerns the configuration only of the supplier.

**PROPERTY:** `auth-bind-dn`

Characteristic	Value
Syntax	DN   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the bind DN used by the supplier to bind to the consumer in order to perform replication-related updates. This bind DN must be present on the consumer.

**PROPERTY:** `auth-protocol`

Characteristic	Value
Syntax	clear ssl-simple ssl-client
Default Value	clear
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the protocol used by the supplier to bind to the consumer in order to perform replication-related updates. The default is to bind with simple authentication in clear text without securing the connection, as most replications connections are made on an internal network. You may however configure replication to use SSL and simple authentication to protect the connection from malicious snooping, or SSL with client authentication to further protect the connection.

**PROPERTY:** `auth-pwd`

Characteristic	Value
Syntax	STRING
Default Value	None

Characteristic	Value
Is readable	Yes
Is modifiable	No
Is multi-valued	No

This property specifies the password used by the supplier to bind to the consumer. You provide it using `auth-pwd-file`.

**PROPERTY:** `auth-pwd-file`

Characteristic	Value
Syntax	PATH
Default Value	" "
Is readable	No
Is modifiable	Yes
Is multi-valued	No

This property specifies the file from which the bind password for replication is read to create the replication agreement. The file is read once on replication agreement creation, and the password is stored for future use.

**PROPERTY:** `repl-fractional-exclude-attr`

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the list of attributes not to replicate. This property is mutually exclusive with `repl-fractional-include-attr`.

**PROPERTY:** `repl-fractional-include-attr`

Characteristic	Value
Syntax	ATTR_NAME   " "
Default Value	" "
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the list of attributes to replicate. This property is mutually exclusive with `repl-fractional-exclude-attr`.

**PROPERTY:** `repl-schedule`

Characteristic	Value
Syntax	INTERVAL   always
Default Value	always
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies the times and days when replication can take place.

**PROPERTY:** `transport-compression`

Characteristic	Value
Syntax	best-compression   best-speed   default-compression   no-compression
Default Value	no-compression
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the level of `libz` compression used on replication updates from the supplier to the consumer. Supported settings are as follows.

`no-compression`  
No compression

`default-compression`  
Default zlib compression (zlib numeric value = -1)

`best-speed`  
Fastest zlib compression (zlib numeric value = 1)

`best-compression`  
Strongest zlib compression (zlib numeric value = 9)

If the bottleneck for replication in your environment is network bandwidth, this property can potentially help you tune the replication protocol for better performance.

**PROPERTY:** `transport-group-size`

Characteristic	Value
Syntax	INTEGER
Default Value	1
Is readable	Yes

Characteristic	Value
Is modifiable	Yes
Is multi-valued	No

This property specifies how many replication messages are grouped on the supplier before being sent to the consumer. Valid range is 1 to 255.

If the bottleneck for replication in your environment is network bandwidth, this property can potentially help you tune the replication protocol for better performance.

#### **PROPERTY:** transport-window-size

Characteristic	Value
Syntax	INTEGER
Default Value	10
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the number of replication messages sent from the supplier to the consumer before waiting for a response from the consumer to continue. Valid range is 1 to 65535.

If the bottleneck for replication in your environment is network latency or network bandwidth, this property can potentially help you tune the replication protocol for better performance.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

#### ATTR\_NAME

A valid attribute type name such as `cn` or `objectClass`.

#### BOOLEAN

`true` or `false`.

#### DN

A valid distinguished name such as `ou=People,dc=example,dc=com`.

#### DURATION

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [desc\(5DSCONF\)](#), [enabled\(5DSCONF\)](#)

---

## type

DS plug-in configuration (PLG) properties

### Description

Directory Server implements some key functionality as plug-ins. Plug-ins take the form of libraries loaded when the server starts, and called at different points in the processing of client application requests. When you create custom plug-ins, you must configure the server to load and use them, then restart Directory Server to load the newly configured plug-ins.

**PROPERTY:** `argument`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies arguments passed to the plug-in when it is loaded by Directory Server. Arguments are passed in the order you specify them. Updating the list of arguments replaces all the existing arguments previously specified when the plug-in is loaded again.

**PROPERTY:** `depends-on-named`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies names of plug-ins that must be available and loaded before Directory Server loads the current plug-in.

**PROPERTY:** `depends-on-type`

Characteristic	Value
Syntax	STRING (See the description that follows.)
Default Value	None
Is readable	Yes

Characteristic	Value
Is modifiable	Yes
Is multi-valued	Yes

This property specifies types of plug-ins that must be available and loaded before Directory Server loads the current plug-in. The value must be the value of a plug-in `type` property.

**PROPERTY:** `feature`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in identifier from the `Slapi_PluginDesc` structure.

**PROPERTY:** `init-func`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the name of function called by Directory Server to initialize the plug-in.

**PROPERTY:** `lib-path`

Characteristic	Value
Syntax	PATH
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute file system path to the library containing plug-in.

**PROPERTY:** type

Characteristic	Value
Syntax	STRING (See the description that follows.)
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in type. The following plug-in types are supported.

ldbentryfetchstore

Entry store and fetch plug-in

extendedop

Extended operation plug-in

passwordcheck

Password check plug-in

postoperation

Post-operation plug-in

preoperation

Pre-operation plug-in

internalpostoperation

Internal post-operation plug-in

internalpreoperation

Internal pre-operation plug-in

matchingrule

Matching rule plug-in for extensible match search filters

object

Generic plug-in type, sometimes used to register other plug-ins

passwordcheck

Strong password check plug-in

pwdstorage scheme

Password storage scheme plug-in

**PROPERTY:** vendor

Characteristic	Value
Syntax	STRING
Default Value	Vendor name in plug-in configuration
Is readable	Yes
Is modifiable	Yes

Characteristic	Value
Is multi-valued	No

This property specifies the plug-in vendor from the `Slapi_PluginDesc` structure.

**PROPERTY:** `version`

Characteristic	Value
Syntax	STRING
Default Value	Version string in plug-in configuration
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in version from the `Slapi_PluginDesc` structure.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

---

TIME

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Stable

## See Also

[dsconf\(1M\)](#), [desc\(5DSCONF\)](#), [enabled\(5DSCONF\)](#)

---

## useAuthzIdForAuditAttrs

record proxied authorization information

### Description

Specifies whether Directory Server records the authentication ID, such as the bind DN, of the proxy acting on behalf of the user, or the authorization ID of the user for whom the proxy is requesting the operation.

When `useAuthzIdForAuditAttrs` is set to `on`, Directory Server records the authorization ID in the `creatorsName` or `modifiersName` during a write operation on an entry. By default Directory Server records the authentication ID.

#### Entry DN

`cn=config`

#### Valid range

`on` | `off`

#### Default value

`off`

#### Syntax

DirectoryString

#### Example

`useAuthzIdForAuditAttrs: on`

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

### See Also

[dse.ldif\(4\)](#)

---

## vendor

DS plug-in configuration (PLG) properties

### Description

Directory Server implements some key functionality as plug-ins. Plug-ins take the form of libraries loaded when the server starts, and called at different points in the processing of client application requests. When you create custom plug-ins, you must configure the server to load and use them, then restart Directory Server to load the newly configured plug-ins.

**PROPERTY:** `argument`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies arguments passed to the plug-in when it is loaded by Directory Server. Arguments are passed in the order you specify them. Updating the list of arguments replaces all the existing arguments previously specified when the plug-in is loaded again.

**PROPERTY:** `depends-on-named`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies names of plug-ins that must be available and loaded before Directory Server loads the current plug-in.

**PROPERTY:** `depends-on-type`

Characteristic	Value
Syntax	STRING (See the description that follows.)
Default Value	None
Is readable	Yes

Characteristic	Value
Is modifiable	Yes
Is multi-valued	Yes

This property specifies types of plug-ins that must be available and loaded before Directory Server loads the current plug-in. The value must be the value of a plug-in `type` property.

**PROPERTY:** `feature`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in identifier from the `Slapi_PluginDesc` structure.

**PROPERTY:** `init-func`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the name of function called by Directory Server to initialize the plug-in.

**PROPERTY:** `lib-path`

Characteristic	Value
Syntax	PATH
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute file system path to the library containing plug-in.

**PROPERTY:** type

Characteristic	Value
Syntax	STRING (See the description that follows.)
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in type. The following plug-in types are supported.

ldbentryfetchstore

Entry store and fetch plug-in

extendedop

Extended operation plug-in

passwordcheck

Password check plug-in

postoperation

Post-operation plug-in

preoperation

Pre-operation plug-in

internalpostoperation

Internal post-operation plug-in

internalpreoperation

Internal pre-operation plug-in

matchingrule

Matching rule plug-in for extensible match search filters

object

Generic plug-in type, sometimes used to register other plug-ins

passwordcheck

Strong password check plug-in

pwdstoragescheme

Password storage scheme plug-in

**PROPERTY:** vendor

Characteristic	Value
Syntax	STRING
Default Value	Vendor name in plug-in configuration
Is readable	Yes
Is modifiable	Yes

Characteristic	Value
Is multi-valued	No

This property specifies the plug-in vendor from the `Slapi_PluginDesc` structure.

**PROPERTY:** `version`

Characteristic	Value
Syntax	STRING
Default Value	Version string in plug-in configuration
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in version from the `Slapi_PluginDesc` structure.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

**DURATION** properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

TIME

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Stable

## See Also

[dsconf\(1M\)](#), [desc\(5DSCONF\)](#), [enabled\(5DSCONF\)](#)

---

## verbose-enabled

DS logging configuration (LOG) properties

### Description

Directory Server writes to three main types of log files you can configure, the *INSTANCE\_PATH/logs/access*, *INSTANCE\_PATH/logs/audit*, and *INSTANCE\_PATH/logs/errors* logs, where *INSTANCE\_PATH* is the full path where the server instance is located, such as */local/dsInst*.

When you specify one of these properties with `dsconf get-log-prop` or `dsconf set-log-prop`, you must specify which type of log configuration, *access*, *audit*, or *error*, you want to examine. For example, to see whether audit logging is enabled for a server instance:

```
$ dsconf get-log-prop audit enabled
enabled : off
$
```

### PROPERTY: buffering-enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, not applicable to audit and errors logs
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether Directory Server writes access log entries directly to disk, or use a buffer, by default.

### PROPERTY: enabled

Characteristic	Value
Syntax	on   off
Default Value	on for access, off for audit, on for errors
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property indicates whether the specified log type is enabled.

**PROPERTY:** level

Characteristic	Value
Syntax	See the description that follows.
Default Value	default
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property defines which kinds of messages get logged. This property is applicable only to `access` and `errors` logs.

**access log levels**

The following settings are supported:

`acc-internal`

Log access information for internal operations.

`default`

Log client access to entries.

`acc-default_plus_referrals`

As default, but also log access to referrals.

`acc-timing`

Use precise timing for microsecond resolution of elapsed times.

**errors log levels**

The following settings are supported:

`default`

Log startup, shutdown, errors, and warnings.

`err-function-calls`

Log when server enters or exits a function.

`err-search-args`

Log search arguments.

`err-connection`

Connection management.

`err-packets`

Log packets sent and received.

`err-search-filter`

Log search filter information.

`err-config-file`

Log information for changes to the configuration file `dse.ldif`.

`err-acl`

Log access control processing information.

err-ldbm  
Log information from the ldbm database plugin.

err-entry-parsing  
Log LDIF parsing errors.

err-housekeeping  
Log event queue information.

err-replication  
Log information about replication operations.

err-entry-cache  
Log entry cache information.

err-plugins  
Log information from server plug-ins.

err-dsml  
Log information from DSML front end.

err-dsml-advanced  
Debugging information for DSML.

**PROPERTY:** max-age

Characteristic	Value
Syntax	DURATION   unlimited
Default Value	1M (one month)
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the age beyond which the specified type of log file is deleted.

**PROPERTY:** max-disk-space-size

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	500M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum disk space the specified type of log is allowed to consume. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

**PROPERTY:** `max-file-count`

Characteristic	Value
Syntax	Integer
Default Value	10 for access, 2 for errors, 1 for audit
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum number of log files, including rotated logs, of the specified type that the server allows to be created in the log file directory. When the limit is reached, the server deletes the oldest log file to reclaim disk space.

When you set this property to 1, the specified log is not rotated.

**PROPERTY:** `max-size`

Characteristic	Value
Syntax	MEMORY_SIZE   unlimited
Default Value	100M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the maximum file size for the specified log. When the limit is reached, the server rotates the log file, unless `max-file-count` is set to 1.

**PROPERTY:** `min-free-disk-space-size`

Characteristic	Value
Syntax	MEMORY_SIZE
Default Value	5M
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum free space allowed on the disk where the specified log is stored. When the limit is reached, the server deletes the oldest log files until enough space is available.

**PROPERTY:** `path`

Characteristic	Value
Syntax	PATH

Characteristic	Value
Default Value	<i>INSTANCE_PATH/logs/access, INSTANCE_PATH/logs/audit, INSTANCE_PATH/logs/errors</i>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the full path to the specified log file type.

**PROPERTY:** `perm`

Characteristic	Value
Syntax	<code>OCTAL_MODE</code>
Default Value	<code>600</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the read, write, and execute permissions on the specified log file.

**PROPERTY:** `rotation-interval`

Characteristic	Value
Syntax	<code>DURATION   unlimited</code>
Default Value	<code>1d (one day) for access, 1w (one week) for audit and errors</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the duration between rotations of the specified log file.

**PROPERTY:** `rotation-min-file-size`

Characteristic	Value
Syntax	<code>MEMORY_SIZE   undefined</code>
Default Value	<code>undefined</code>
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the minimum size the specified log file must have before the server rotates it.

**PROPERTY:** rotation-time

Characteristic	Value
Syntax	TIME   undefined
Default Value	undefined
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property defines the time of day when the server rotates the specified log file.

**PROPERTY:** verbose-enabled

Characteristic	Value
Syntax	on   off
Default Value	off
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property determines whether extra informational messages are written to the errors log.

**Syntax Values**

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as cn or objectClass.

**BOOLEAN**

true or false.

**DN**

A valid distinguished name such as ou=People, dc=example, dc=com.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and milliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as 1w, 7d, 168h, 10080m, or 604800s. You can also specify one week as 1w0d0h0m0s.

DURATION properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike **DURATION** properties, **MEMORY\_SIZE** properties cannot combine multiple specifiers. However, **MEMORY\_SIZE** properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

**TIME**

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsconf\(1M\)](#), [enabled\(5DSCONF\)](#)

---

## version

DS plug-in configuration (PLG) properties

### Description

Directory Server implements some key functionality as plug-ins. Plug-ins take the form of libraries loaded when the server starts, and called at different points in the processing of client application requests. When you create custom plug-ins, you must configure the server to load and use them, then restart Directory Server to load the newly configured plug-ins.

**PROPERTY:** `argument`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies arguments passed to the plug-in when it is loaded by Directory Server. Arguments are passed in the order you specify them. Updating the list of arguments replaces all the existing arguments previously specified when the plug-in is loaded again.

**PROPERTY:** `depends-on-named`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	Yes

This property specifies names of plug-ins that must be available and loaded before Directory Server loads the current plug-in.

**PROPERTY:** `depends-on-type`

Characteristic	Value
Syntax	STRING (See the description that follows.)
Default Value	None
Is readable	Yes

Characteristic	Value
Is modifiable	Yes
Is multi-valued	Yes

This property specifies types of plug-ins that must be available and loaded before Directory Server loads the current plug-in. The value must be the value of a plug-in `type` property.

**PROPERTY:** `feature`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in identifier from the `Slapi_PluginDesc` structure.

**PROPERTY:** `init-func`

Characteristic	Value
Syntax	STRING
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the name of function called by Directory Server to initialize the plug-in.

**PROPERTY:** `lib-path`

Characteristic	Value
Syntax	PATH
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the absolute file system path to the library containing plug-in.

**PROPERTY:** type

Characteristic	Value
Syntax	STRING (See the description that follows.)
Default Value	None
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in type. The following plug-in types are supported.

ldbentryfetchstore

Entry store and fetch plug-in

extendedop

Extended operation plug-in

passwordcheck

Password check plug-in

postoperation

Post-operation plug-in

preoperation

Pre-operation plug-in

internalpostoperation

Internal post-operation plug-in

internalpreoperation

Internal pre-operation plug-in

matchingrule

Matching rule plug-in for extensible match search filters

object

Generic plug-in type, sometimes used to register other plug-ins

passwordcheck

Strong password check plug-in

pwdstoragescheme

Password storage scheme plug-in

**PROPERTY:** vendor

Characteristic	Value
Syntax	STRING
Default Value	Vendor name in plug-in configuration
Is readable	Yes
Is modifiable	Yes

Characteristic	Value
Is multi-valued	No

This property specifies the plug-in vendor from the `Slapi_PluginDesc` structure.

**PROPERTY:** `version`

Characteristic	Value
Syntax	STRING
Default Value	Version string in plug-in configuration
Is readable	Yes
Is modifiable	Yes
Is multi-valued	No

This property specifies the plug-in version from the `Slapi_PluginDesc` structure.

## Syntax Values

Syntax values shown in lower case or partly in lower case are literal values.

Those shown in upper case are syntax types, defined as follows:

**ATTR\_NAME**

A valid attribute type name such as `cn` or `objectClass`.

**BOOLEAN**

`true` or `false`.

**DN**

A valid distinguished name such as `ou=People,dc=example,dc=com`.

**DURATION**

A duration specified in months (M), weeks (w), days (d), hours (h), minutes (m), seconds (s), and miliseconds (ms), or some combination with multiple specifiers. For example, you can specify one week as `1w, 7d, 168h, 10080m, or 604800s`. You can also specify one week as `1w0d0h0m0s`.

**DURATION** properties typically do not each support all duration specifiers (Mwdhms). Examine the output of `dsconf help-properties` for the property to determine which duration specifiers are supported.

**EMAIL\_ADDRESS**

A valid e-mail address.

**HOST\_NAME**

An IP address or host name.

**INTEGER**

A positive integer value between 0 and the maximum supported integer value in the system address space. On 32-bit systems, 2147483647. On 64-bit systems, 9223372036854775807.

**INTERVAL**

An interval value of the form *hhmm-hhmm 0123456*, where the first element specifies the starting hour, the next element the finishing hour in 24-hour time format, from 0000-2359, and the second specifies days, starting with Sunday (0) to Saturday (6).

**IP\_RANGE**

An IP address or range of address in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted decimal quads.
- All address. A catch-all for clients that are not placed into other, higher priority groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

**LDAP\_URL**

A valid LDAP URL as specified by RFC 2255 (<http://www.ietf.org/rfc/rfc2255.txt>).

**MEMORY\_SIZE**

A memory size specified in gigabytes (G), megabytes (M), kilobytes (k), or bytes (b). Unlike DURATION properties, MEMORY\_SIZE properties cannot combine multiple specifiers. However, MEMORY\_SIZE properties allow decimal values, for example, 1.5M.

**NAME**

A valid cn (common name).

**OCTAL\_MODE**

A three-digit, octal file permissions specifier. The first digit specifies permissions for the server user ID, the second for the server group ID, the last for other users. Each digit consists of a bitmask defining read (4), write (2), execute (1), or no access (0) permissions, thus 640 specifies read-write access for the server user, read-only access for other users of the server group, and no access for other users.

**PASSWORD\_FILE**

The full path to the file from which the bind password should be read.

**PATH**

A valid, absolute file system path.

**STRING**

A DirectoryString value, as specified by RFC 2252 (<http://www.ietf.org/rfc/rfc2252.txt>).

**SUPPORTED\_SSL\_CIPHER**

An SSL cipher supported by the server. See the Reference for a list of supported ciphers.

**SUPPORTED\_SSL\_PROTOCOL**

An SSL protocol supported by the server. See the Reference for a list of supported protocols.

TIME

A time of the form *hhmm* in 24-hour format, where *hh* stands for hours and *mm* stands for minutes.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Stable

## See Also

[dsconf\(1M\)](#), [desc\(5DSCONF\)](#), [enabled\(5DSCONF\)](#)

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## Directory Proxy Server Configuration

This section describes Directory Proxy Server configuration properties. You set these properties using the `dpconf` command.

## Intro\_4DPconf

introduction to Directory Proxy Server configuration properties

### Description

This section describes Directory Proxy Server configuration properties. You set these properties using the `dpconf` command.

### LIST OF PROPERTIES

This reference manual section includes the following pages.

**[aci-data-view\(5DPCONF\)](#)**

Directory Proxy Server configuration property

**[aci-manager-bind-dn\(5DPCONF\)](#)**

Directory Proxy Server configuration property

**[aci-manager-bind-pwd\(5DPCONF\)](#)**

Directory Proxy Server configuration property

**[aci-manager-bind-pwd-file\(5DPCONF\)](#)**

Directory Proxy Server configuration property

**[aci-source\(5DPCONF\)](#)**

Directory Proxy Server configuration property

**[action\(5DPCONF\)](#)**

Directory Proxy Server configuration property

**[add-weight\(5DPCONF\)](#)**

Directory Proxy Server configuration property

**[allow-add-operations\(5DPCONF\)](#)**

Directory Proxy Server configuration property

**[allow-bind-operations\(5DPCONF\)](#)**

Directory Proxy Server configuration property

**[allow-cert-based-auth\(5DPCONF\)](#)**

Directory Proxy Server configuration property

**[allow-compare-operations\(5DPCONF\)](#)**

Directory Proxy Server configuration property

**[allow-delete-operations\(5DPCONF\)](#)**

Directory Proxy Server configuration property

**[allow-extended-operations\(5DPCONF\)](#)**

Directory Proxy Server configuration property

**[allow-extended-operations\(5DPCONF\)](#)**

Directory Proxy Server configuration property

**[allow-heuristic-search\(5DPCONF\)](#)**

Directory Proxy Server configuration property

**allow-inequality-search-operations(5DPCONF)**

Directory Proxy Server configuration property

**allow-ldapv2-clients(5DPCONF)**

Directory Proxy Server configuration property

**allow-modify-operations(5DPCONF)**

Directory Proxy Server configuration property

**allow-partial-search(5DPCONF)**

Directory Proxy Server configuration property

**allow-persistent-searches(5DPCONF)**

Directory Proxy Server configuration property

**allow-rename-operations(5DPCONF)**

Directory Proxy Server configuration property

**allow-sasl-external-authentication(5DPCONF)**

Directory Proxy Server configuration property

**allow-search-operations(5DPCONF)**

Directory Proxy Server configuration property

**allow-unauthenticated-operations-mode(5DPCONF)**

Directory Proxy Server configuration property

**allow-unauthenticated-operations(5DPCONF)**

Directory Proxy Server configuration property

**allowed-auth-methods(5DPCONF)**

Directory Proxy Server configuration property

**allowed-comparable-attrs(5DPCONF)**

Directory Proxy Server configuration property

**allowed-ldap-controls(5DPCONF)**

Directory Proxy Server configuration property

**allowed-ldap-ports(5DPCONF)**

Directory Proxy Server configuration property

**allowed-search-scopes(5DPCONF)**

Directory Proxy Server configuration property

**allowed-subtrees(5DPCONF)**

Directory Proxy Server configuration property

**alternate-search-base-dn(5DPCONF)**

Directory Proxy Server configuration property

**attr-name(5DPCONF)**

Directory Proxy Server configuration property

**attr-name-mappings(5DPCONF)**

Directory Proxy Server configuration property

**attrs(5DPCONF)**

Directory Proxy Server configuration property

**base-dn\_5dpconf(5DPCONF)**

Directory Proxy Server configuration property

**bind-dn\_5dpconf(5DPCONF)**

Directory Proxy Server configuration property

**bind-dn-filters(5DPCONF)**

Directory Proxy Server configuration property

**bind-pwd-attr(5DPCONF)**

Directory Proxy Server configuration property

**bind-pwd(5DPCONF)**

Directory Proxy Server configuration property

**bind-pwd-file(5DPCONF)**

Directory Proxy Server configuration property

**bind-weight(5DPCONF)**

Directory Proxy Server configuration property

**cert-data-view-routing-custom-list(5DPCONF)**

Directory Proxy Server configuration property

**cert-data-view-routing-policy(5DPCONF)**

Directory Proxy Server configuration property

**cert-search-attr-mappings(5DPCONF)**

Directory Proxy Server configuration property

**cert-search-base-dn(5DPCONF)**

Directory Proxy Server configuration property

**cert-search-bind-dn(5DPCONF)**

Directory Proxy Server configuration property

**cert-search-bind-pwd(5DPCONF)**

Directory Proxy Server configuration property

**cert-search-bind-pwd-file(5DPCONF)**

Directory Proxy Server configuration property

**cert-search-user-attr(5DPCONF)**

Directory Proxy Server configuration property

**client-affinity-bind-dn-filters(5DPCONF)**

Directory Proxy Server configuration property

**client-affinity-criteria(5DPCONF)**

Directory Proxy Server configuration property

**client-affinity-ip-address-filters(5DPCONF)**

Directory Proxy Server configuration property

---

**client-affinity-policy(5DPCONF)**  
Directory Proxy Server configuration property

**client-affinity-timeout(5DPCONF)**  
Directory Proxy Server configuration property

**client-cred-mode(5DPCONF)**  
Directory Proxy Server configuration property

**compare-weight(5DPCONF)**  
Directory Proxy Server configuration property

**compat-flag\_5dpconf(5DPCONF)**  
Directory Proxy Server configuration property

**configuration-manager-bind-dn(5DPCONF)**  
Directory Proxy Server configuration property

**configuration-manager-bind-pwd(5DPCONF)**  
Directory Proxy Server configuration property

**configuration-manager-bind-pwd-file(5DPCONF)**  
Directory Proxy Server configuration property

**connect-timeout(5DPCONF)**  
Directory Proxy Server configuration property

**connect-to-parent(5DPCONF)**  
Directory Proxy Server configuration property

**connection-idle-timeout(5DPCONF)**  
Directory Proxy Server configuration property

**connection-pool-wait-interval(5DPCONF)**  
Directory Proxy Server configuration property

**connection-pool-wait-timeout(5DPCONF)**  
Directory Proxy Server configuration property

**connection-read-data-timeout(5DPCONF)**  
Directory Proxy Server configuration property

**connection-write-data-timeout(5DPCONF)**  
Directory Proxy Server configuration property

**contains-shared-entries(5DPCONF)**  
Directory Proxy Server configuration property

**coordinated-data-view(5DPCONF)**  
Directory Proxy Server configuration property

**custom-distribution-algorithm(5DPCONF)**  
Directory Proxy Server configuration property

**data-source-read-timeout(5DPCONF)**  
Directory Proxy Server configuration property

**data-view-automatic-routing-mode(5DPCONF)**

Directory Proxy Server configuration property

**data-view-routing-custom-list(5DPCONF)**

Directory Proxy Server configuration property

**data-view-routing-policy(5DPCONF)**

Directory Proxy Server configuration property

**db-name\_5dpconf(5DPCONF)**

Directory Proxy Server configuration property

**db-pwd(5DPCONF)**

Directory Proxy Server configuration property

**db-pwd-encryption(5DPCONF)**

Directory Proxy Server configuration property

**db-pwd-file(5DPCONF)**

Directory Proxy Server configuration property

**db-url(5DPCONF)**

Directory Proxy Server configuration property

**db-user(5DPCONF)**

Directory Proxy Server configuration property

**db-vendor(5DPCONF)**

Directory Proxy Server configuration property

**default-log-level(5DPCONF)**

Directory Proxy Server configuration property

**delete-weight(5DPCONF)**

Directory Proxy Server configuration property

**description\_5dpconf(5DPCONF)**

Directory Proxy Server configuration property

**distribution-algorithm(5DPCONF)**

Directory Proxy Server configuration property

**dn-join-rule(5DPCONF)**

Directory Proxy Server configuration property

**dn-mapping-attrs(5DPCONF)**

Directory Proxy Server configuration property

**dn-mapping-source-base-dn(5DPCONF)**

Directory Proxy Server configuration property

**dn-pattern(5DPCONF)**

Directory Proxy Server configuration property

**domain-name-filters(5DPCONF)**

Directory Proxy Server configuration property

**driver-class(5DPCONF)**

Directory Proxy Server configuration property

**driver-url(5DPCONF)**

Directory Proxy Server configuration property

**email-alerts-enabled(5DPCONF)**

Directory Proxy Server configuration property

**email-alerts-message-from-address(5DPCONF)**

Directory Proxy Server configuration property

**email-alerts-message-subject(5DPCONF)**

Directory Proxy Server configuration property

**email-alerts-message-subject-includes-alert-code(5DPCONF)**

Directory Proxy Server configuration property

**email-alerts-message-to-address(5DPCONF)**

Directory Proxy Server configuration property

**email-alerts-smtp-host(5DPCONF)**

Directory Proxy Server configuration property

**email-alerts-smtp-port(5DPCONF)**

Directory Proxy Server configuration property

**enable-client-affinity(5DPCONF)**

Directory Proxy Server configuration property

**enable-data-view-affinity(5DPCONF)**

Directory Proxy Server configuration property

**enable-log-rotation(5DPCONF)**

Directory Proxy Server configuration property

**enable-remote-user-mapping(5DPCONF)**

Directory Proxy Server configuration property

**enable-user-mapping(5DPCONF)**

Directory Proxy Server configuration property

**enabled-admin-alerts(5DPCONF)**

Directory Proxy Server configuration property

**enabled-ssl-cipher-suites(5DPCONF)**

Directory Proxy Server configuration property

**enabled-ssl-protocols(5DPCONF)**

Directory Proxy Server configuration property

**encrypt-configuration(5DPCONF)**

Directory Proxy Server configuration property

**excluded-subtrees(5DPCONF)**

Directory Proxy Server configuration property

**extension-jar-file-url(5DPCONF)**  
Directory Proxy Server configuration property

**filter-join-rule(5DPCONF)**  
Directory Proxy Server configuration property

**group-dn-filters(5DPCONF)**  
Directory Proxy Server configuration property

**group-search-bind-dn(5DPCONF)**  
Directory Proxy Server configuration property

**group-search-bind-pwd(5DPCONF)**  
Directory Proxy Server configuration property

**group-search-bind-pwd-file(5DPCONF)**  
Directory Proxy Server configuration property

**internal-value(5DPCONF)**  
Directory Proxy Server configuration property

**ip-address-filters(5DPCONF)**  
Directory Proxy Server configuration property

**is-enabled(5DPCONF)**  
Directory Proxy Server configuration property

**is-read-only(5DPCONF)**  
Directory Proxy Server configuration property

**is-restart-required(5DPCONF)**  
Directory Proxy Server configuration property

**is-routable(5DPCONF)**  
Directory Proxy Server configuration property

**is-single-row-table(5DPCONF)**  
Directory Proxy Server configuration property

**is-ssl-mandatory(5DPCONF)**  
Directory Proxy Server configuration property

**jdbc-attr-date-format(5DPCONF)**  
Directory Proxy Server configuration property

**jdbc-attr-time-format(5DPCONF)**  
Directory Proxy Server configuration property

**jdbc-attr-timestamp-format(5DPCONF)**  
Directory Proxy Server configuration property

**jdbc-data-source-pool(5DPCONF)**  
Directory Proxy Server configuration property

**join-rule-control-enabled(5DPCONF)**  
Directory Proxy Server configuration property

**ldap-address(5DPCONF)**

Directory Proxy Server configuration property

**ldap-data-source-pool(5DPCONF)**

Directory Proxy Server configuration property

**ldap-port\_5dpconf(5DPCONF)**

Directory Proxy Server configuration property

**ldap-syntax(5DPCONF)**

Directory Proxy Server configuration property

**ldaps-port(5DPCONF)**

Directory Proxy Server configuration property

**ldif-data-source(5DPCONF)**

Directory Proxy Server configuration property

**lexicographic-attrs(5DPCONF)**

Directory Proxy Server configuration property

**lexicographic-lower-bound(5DPCONF)**

Directory Proxy Server configuration property

**lexicographic-upper-bound(5DPCONF)**

Directory Proxy Server configuration property

**listen-address\_5dpconf(5DPCONF)**

Directory Proxy Server configuration property

**listen-port(5DPCONF)**

Directory Proxy Server configuration property

**load-balancing-algorithm(5DPCONF)**

Directory Proxy Server configuration property

**log-buffer-size(5DPCONF)**

Directory Proxy Server configuration property

**log-etimes-in-seconds(5DPCONF)**

Directory Proxy Server configuration property

**log-file-name(5DPCONF)**

Directory Proxy Server configuration property

**log-file-perm(5DPCONF)**

Directory Proxy Server configuration property

**log-level-bind(5DPCONF)**

Directory Proxy Server configuration property

**log-level-client-connections(5DPCONF)**

Directory Proxy Server configuration property

**log-level-client-disconnections(5DPCONF)**

Directory Proxy Server configuration property

**log-level-client-operations(5DPCONF)**

Directory Proxy Server configuration property

**log-level-configuration(5DPCONF)**

Directory Proxy Server configuration property

**log-level-connection-handlers(5DPCONF)**

Directory Proxy Server configuration property

**log-level-data-source(5DPCONF)**

Directory Proxy Server configuration property

**log-level-data-sources(5DPCONF)**

Directory Proxy Server configuration property

**log-level-data-sources-detailed(5DPCONF)**

Directory Proxy Server configuration property

**log-level-internal(5DPCONF)**

Directory Proxy Server configuration property

**log-level-operation-decode(5DPCONF)**

Directory Proxy Server configuration property

**log-level-operation-processing(5DPCONF)**

Directory Proxy Server configuration property

**log-level-plugin(5DPCONF)**

Directory Proxy Server configuration property

**log-level-shutdown(5DPCONF)**

Directory Proxy Server configuration property

**log-level-startup(5DPCONF)**

Directory Proxy Server configuration property

**log-min-size(5DPCONF)**

Directory Proxy Server configuration property

**log-rotation-frequency(5DPCONF)**

Directory Proxy Server configuration property

**log-rotation-policy(5DPCONF)**

Directory Proxy Server configuration property

**log-rotation-size(5DPCONF)**

Directory Proxy Server configuration property

**log-rotation-start-day(5DPCONF)**

Directory Proxy Server configuration property

**log-rotation-start-time(5DPCONF)**

Directory Proxy Server configuration property

**log-search-filters(5DPCONF)**

Directory Proxy Server configuration property

**mapped-bind-dn(5DPCONF)**

Directory Proxy Server configuration property

**mapped-bind-pwd(5DPCONF)**

Directory Proxy Server configuration property

**mapped-bind-pwd-file(5DPCONF)**

Directory Proxy Server configuration property

**max-age\_5dpconf(5DPCONF)**

Directory Proxy Server configuration property

**max-client-connections(5DPCONF)**

Directory Proxy Server configuration property

**max-connection-queue-size(5DPCONF)**

Directory Proxy Server configuration property

**max-connections(5DPCONF)**

Directory Proxy Server configuration property

**max-ldap-message-size(5DPCONF)**

Directory Proxy Server configuration property

**max-log-files(5DPCONF)**

Directory Proxy Server configuration property

**max-op-count-per-interval(5DPCONF)**

Directory Proxy Server configuration property

**max-simultaneous-operations-per-connection(5DPCONF)**

Directory Proxy Server configuration property

**max-size\_5dpconf(5DPCONF)**

Directory Proxy Server configuration property

**max-total-operations-per-connection(5DPCONF)**

Directory Proxy Server configuration property

**min-free-disk-space-size\_5dpconf(5DPCONF)**

Directory Proxy Server configuration property

**minimum-search-filter-substring-length(5DPCONF)**

Directory Proxy Server configuration property

**minimum-total-weight(5DPCONF)**

Directory Proxy Server configuration property

**model(5DPCONF)**

Directory Proxy Server configuration property

**modify-dn-weight(5DPCONF)**

Directory Proxy Server configuration property

**modify-weight(5DPCONF)**

Directory Proxy Server configuration property

**monitoring-bind-dn(5DPCONF)**  
Directory Proxy Server configuration property

**monitoring-bind-pwd(5DPCONF)**  
Directory Proxy Server configuration property

**monitoring-bind-pwd-file(5DPCONF)**  
Directory Proxy Server configuration property

**monitoring-bind-timeout(5DPCONF)**  
Directory Proxy Server configuration property

**monitoring-entry-dn(5DPCONF)**  
Directory Proxy Server configuration property

**monitoring-entry-timeout(5DPCONF)**  
Directory Proxy Server configuration property

**monitoring-inactivity-timeout(5DPCONF)**  
Directory Proxy Server configuration property

**monitoring-interval(5DPCONF)**  
Directory Proxy Server configuration property

**monitoring-mode(5DPCONF)**  
Directory Proxy Server configuration property

**monitoring-search-filter(5DPCONF)**  
Directory Proxy Server configuration property

**non-viewable-attr(5DPCONF)**  
Directory Proxy Server configuration property

**non-writable-attr(5DPCONF)**  
Directory Proxy Server configuration property

**num-bind-incr(5DPCONF)**  
Directory Proxy Server configuration property

**num-bind-init(5DPCONF)**  
Directory Proxy Server configuration property

**num-bind-limit(5DPCONF)**  
Directory Proxy Server configuration property

**number-of-psearch-threads(5DPCONF)**  
Directory Proxy Server configuration property

**num-connection-incr(5DPCONF)**  
Directory Proxy Server configuration property

**num-connection-init(5DPCONF)**  
Directory Proxy Server configuration property

**num-connection-limit(5DPCONF)**  
Directory Proxy Server configuration property

**num-read-incr(5DPCONF)**

Directory Proxy Server configuration property

**num-read-init(5DPCONF)**

Directory Proxy Server configuration property

**num-read-limit(5DPCONF)**

Directory Proxy Server configuration property

**num-write-incr(5DPCONF)**

Directory Proxy Server configuration property

**num-write-init(5DPCONF)**

Directory Proxy Server configuration property

**num-write-limit(5DPCONF)**

Directory Proxy Server configuration property

**number-of-search-threads(5DPCONF)**

Directory Proxy Server configuration property

**number-of-threads(5DPCONF)**

Directory Proxy Server configuration property

**number-of-worker-threads(5DPCONF)**

Directory Proxy Server configuration property

**numeric-attrs(5DPCONF)**

Directory Proxy Server configuration property

**numeric-default-data-view(5DPCONF)**

Directory Proxy Server configuration property

**numeric-lower-bound(5DPCONF)**

Directory Proxy Server configuration property

**numeric-upper-bound(5DPCONF)**

Directory Proxy Server configuration property

**one-level-search-base-dn(5DPCONF)**

Directory Proxy Server configuration property

**op-count-per-interval-timeout(5DPCONF)**

Directory Proxy Server configuration property

**pattern-matching-base-dn-regular-expression(5DPCONF)**

Directory Proxy Server configuration property

**pattern-matching-base-object-search-filter(5DPCONF)**

Directory Proxy Server configuration property

**pattern-matching-dn-regular-expression(5DPCONF)**

Directory Proxy Server configuration property

**pattern-matching-one-level-search-filter(5DPCONF)**

Directory Proxy Server configuration property

**pattern-matching-subtree-search-filter(5DPCONF)**

Directory Proxy Server configuration property

**perform-distinct-select(5DPCONF)**

Directory Proxy Server configuration property

**primary-table(5DPCONF)**

Directory Proxy Server configuration property

**primary-view(5DPCONF)**

Directory Proxy Server configuration property

**priority(5DPCONF)**

Directory Proxy Server configuration property

**process-bind(5DPCONF)**

Directory Proxy Server configuration property

**prohibited-comparable-attrs(5DPCONF)**

Directory Proxy Server configuration property

**prohibited-subtrees(5DPCONF)**

Directory Proxy Server configuration property

**proxied-auth-check-timeout(5DPCONF)**

Directory Proxy Server configuration property

**proxied-auth-use-v1(5DPCONF)**

Directory Proxy Server configuration property

**referral-bind-policy(5DPCONF)**

Directory Proxy Server configuration property

**referral-hop-limit(5DPCONF)**

Directory Proxy Server configuration property

**referral-policy(5DPCONF)**

Directory Proxy Server configuration property

**remote-user-mapping-bind-dn-attr(5DPCONF)**

Directory Proxy Server configuration property

**replication-role(5DPCONF)**

Directory Proxy Server configuration property

**request-filtering-policy(5DPCONF)**

Directory Proxy Server configuration property

**require-data-view-availability(5DPCONF)**

Directory Proxy Server configuration property

**resource-limits-policy(5DPCONF)**

Directory Proxy Server configuration property

**revert-add-on-failure(5DPCONF)**

Directory Proxy Server configuration property

**routing-policy(5DPCONF)**

Directory Proxy Server configuration property

**rule-action(5DPCONF)**

Directory Proxy Server configuration property

**search-retry-count(5DPCONF)**

Directory Proxy Server configuration property

**schema-check-enabled(5DPCONF)**

Directory Proxy Server configuration property

**scriptable-alerts-command(5DPCONF)**

Directory Proxy Server configuration property

**scriptable-alerts-enabled(5DPCONF)**

Directory Proxy Server configuration property

**search-mode(5DPCONF)**

Directory Proxy Server configuration property

**search-size-limit\_5dpconf(5DPCONF)**

Directory Proxy Server configuration property

**search-time-limit\_5dpconf(5DPCONF)**

Directory Proxy Server configuration property

**search-wait-timeout(5DPCONF)**

Directory Proxy Server configuration property

**search-weight(5DPCONF)**

Directory Proxy Server configuration property

**secondary-table(5DPCONF)**

Directory Proxy Server configuration property

**secondary-view(5DPCONF)**

Directory Proxy Server configuration property

**sql-column(5DPCONF)**

Directory Proxy Server configuration property

**sql-syntax(5DPCONF)**

Directory Proxy Server configuration property

**sql-table(5DPCONF)**

Directory Proxy Server configuration property

**ssl-client-cert-alias(5DPCONF)**

Directory Proxy Server configuration property

**ssl-policy(5DPCONF)**

Directory Proxy Server configuration property

**ssl-server-cert-alias(5DPCONF)**

Directory Proxy Server configuration property

**subtree-search-base-dn(5DPCONF)**

Directory Proxy Server configuration property

**super-class(5DPCONF)**

Directory Proxy Server configuration property

**supported-ssl-cipher-suites(5DPCONF)**

Directory Proxy Server configuration property

**supported-ssl-protocols(5DPCONF)**

Directory Proxy Server configuration property

**syslog-alerts-enabled(5DPCONF)**

Directory Proxy Server configuration property

**syslog-alerts-facility(5DPCONF)**

Directory Proxy Server configuration property

**syslog-alerts-host(5DPCONF)**

Directory Proxy Server configuration property

**target-attr-value-assertions(5DPCONF)**

Directory Proxy Server configuration property

**target-dn-regular-expressions(5DPCONF)**

Directory Proxy Server configuration property

**target-dns(5DPCONF)**

Directory Proxy Server configuration property

**time-resolution(5DPCONF)**

Directory Proxy Server configuration property

**use-cert-subject-as-bind-dn(5DPCONF)**

Directory Proxy Server configuration property

**use-external-schema(5DPCONF)**

Directory Proxy Server configuration property

**use-read-connections-for-writes(5DPCONF)**

Directory Proxy Server configuration property

**use-tcp-keep-alive(5DPCONF)**

Directory Proxy Server configuration property

**use-tcp-no-delay(5DPCONF)**

Directory Proxy Server configuration property

**user-bind-dn(5DPCONF)**

Directory Proxy Server configuration property

**user-bind-pwd(5DPCONF)**

Directory Proxy Server configuration property

**user-bind-pwd-file(5DPCONF)**

Directory Proxy Server configuration property

**user-filter(5DPCONF)**

Directory Proxy Server configuration property

**user-mapping-anonymous-bind-dn(5DPCONF)**

Directory Proxy Server configuration property

**user-mapping-anonymous-bind-pwd(5DPCONF)**

Directory Proxy Server configuration property

**user-mapping-anonymous-bind-pwd-file(5DPCONF)**

Directory Proxy Server configuration property

**user-mapping-default-bind-dn(5DPCONF)**

Directory Proxy Server configuration property

**user-mapping-default-bind-pwd(5DPCONF)**

Directory Proxy Server configuration property

**user-mapping-default-bind-pwd-file(5DPCONF)**

Directory Proxy Server configuration property

**verify-certs(5DPCONF)**

Directory Proxy Server configuration property

**view-value(5DPCONF)**

Directory Proxy Server configuration property

**viewable-attr(5DPCONF)**

Directory Proxy Server configuration property

**vlv-control-enabled(5DPCONF)**

Directory Proxy Server configuration property

**vlv-control-page-size(5DPCONF)**

Directory Proxy Server configuration property

**vlv-control-sorting-attr(5DPCONF)**

Directory Proxy Server configuration property

**warning-op-count-per-interval(5DPCONF)**

Directory Proxy Server configuration property

**writable-attr(5DPCONF)**

Directory Proxy Server configuration property

## aci-data-view

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dnReference
Default value	disabled
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the data view that Directory Proxy Server uses to store access controls.

The value of this property is the name of one of the following configuration entities: coordinator-data-view, jdbc-data-view, join-data-view, ldap-data-view, ldif-data-view.

The default behavior for this property is as follows: No virtual access control policy.

This property is used to configure the following features:

`virtual-aci`

The virtual ACI contains pools of access controls applicable to all entries. This will be used for the purpose of virtualization.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## aci-manager-bind-dn

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dn
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the distinguished name of the identity used by Directory Proxy Server to access the access control data view.

This property takes a Distinguished Name (DN) value.

The default behavior for this property is as follows: Proxy uses an anonymous access to access the access control data view.

This property is used to configure the following features:

`virtual-aci`

The virtual ACI contains pools of access controls applicable to all entries. This will be used for the purpose of virtualization.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## aci-manager-bind-pwd

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	No
Is multivalued	No
Requires restart	No

This property specifies the password of the identity used by Directory Proxy Server to access the access control data view.

This property is read-only. To change the password, use the `aci-manager-bind-pwd-file` property.

The default behavior for this property is as follows: Proxy uses an anonymous access to access the access control data view.

This property is used to configure the following features:

`virtual-aci`

The virtual ACI contains pools of access controls applicable to all entries. This will be used for the purpose of virtualization.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## aci-manager-bind-pwd-file

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	password
Default value	No default is defined.
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the file from which to read the password of the identity used by Directory Proxy Server to access the access control data view. The temporary file is read once, and the password is stored for future use.

This property takes a path to a file that contains the password value.

This property is used to configure the following features:

`virtual-aci`

The virtual ACI contains pools of access controls applicable to all entries. This will be used for the purpose of virtualization.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## aci-source

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the name of the set of access controls that will apply to the connection handler.

The default behavior for this property is as follows: ACIs are unset. Proxy will reject WRITE operations on non-LDAP data views.

This property is used to configure the following features:

`connection-handler`

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## action

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	Default behavior is not defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property defines the transformation action. A transformation action describe what the transformation does to its target entry or entries.

This property can take the following values in addition to the default.

`add-attr`

Add an attribute

`remove-attr`

Remove an attribute

`add-attr-value`

Add a value to an attribute

`def-value`

Set a default value

`remove-attr-value`

Remove a value of an attribute

`attr-value-mapping`

Attribute value mapping

This property is used to configure the following features:

`virtual-transformation`

Virtual data transformations create a virtual data view from a physical data view. Practically, you never define a virtual data view. Instead, you specify the transformations that you require and define these on an existing physical data view. A transformation performs a specific action in a certain direction. The direction of a transformation determines the transformation model. When you define a virtual data transformation, you create a virtual attribute that exists only in the context of the virtual data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

action

---

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## add-weight

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	disabled
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the proportion of add requests that are sent to the attached data source.

This property takes an integer.

The value of this property must be at least 1.

This property can also take the following values:

`disabled`

Do not forward any add requests to the data source

This property is used to configure the following features:

`attached-ldap-data-source`

A data source can be attached to one or more data source pools for load balancing and failover. When attached to a data source pool, a data source is called an attached data source.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## allow-add-operations

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not associated connection handlers accept LDAP add operations.

This property is `true` or `false`.

This property is used to configure the following features:

`request-filtering-policy`

Request filtering policies control what data can be accessed by clients.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## allow-bind-operations

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not associated connection handlers accept LDAP bind operations.

This property is `true` or `false`.

This property is used to configure the following features:

`request-filtering-policy`

Request filtering policies control what data can be accessed by clients.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## allow-cert-based-auth

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	allow
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not clients must present their own certificates when establishing connections to Directory Proxy Server.

This property can take the following values in addition to the default.

deny

Clients are not allowed to use certificate based authentication

allow

Clients are allowed to use certificate based authentication

require

Clients must use certificate based authentication

This property is used to configure the following features:

server

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## allow-compare-operations

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not associated connection handlers accept LDAP compare operations.

This property is `true` or `false`.

This property is used to configure the following features:

`request-filtering-policy`

Request filtering policies control what data can be accessed by clients.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## allow-delete-operations

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not associated connection handlers accept LDAP delete operations.

This property is `true` or `false`.

This property is used to configure the following features:

`request-filtering-policy`

Request filtering policies control what data can be accessed by clients.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## allowed-auth-methods

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	anonymous
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies a set of authentication methods. Clients must use one of the specified authentication methods in order for the connection to be accepted by the connection handler.

This property can take the following values in addition to the default.

`anonymous`

Anonymous authentication

`simple`

Simple authentication

`sasl`

SASL/External authentication

This property is used to configure the following features:

`connection-handler`

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## allowed-comparable-attribs

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	all
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies a set of LDAP attribute types that can be compared in an LDAP search filter or compare operation.

The default behavior for this property is as follows: All attribute types can be compared

This property is used to configure the following features:

`request-filtering-policy`

Request filtering policies control what data can be accessed by clients.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## allowed-ldap-controls

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	oid
Default value	Default behavior is not defined.
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies a set of LDAP control OIDs. The control OIDs determine which LDAP controls are forwarded by Directory Proxy Server.

This property can take the following values in addition to the default.

proxy-auth-v1  
Proxy authorization v1

proxy-auth-v2  
Proxy authorization v2

persistent-search  
Persistent search

manage-dsa  
Manage DSA

auth-request  
Authentication request

real-attributes-only  
Real attributes only

chaining-loop-detection  
Chaining loop detection

vlv-request  
Virtual list view (VLV) request

server-side-sorting  
Server side sorting

get-effective-rights  
Get effective rights

This property is used to configure the following features:

server

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

---

## allowed-ldap-ports

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	ldap
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies a set of IP port numbers. A client connection must come through one of the specified ports in order for the connection to be accepted by the connection handler.

This property can take the following values in addition to the default.

ldap

The LDAP port of Directory Proxy Server

ldaps

The LDAPS port of Directory Proxy Server

This property is used to configure the following features:

connection-handler

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## allowed-search-scopes

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	base
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies a set of LDAP search scopes that are accepted by associated connection handlers.

This property can take the following values in addition to the default.

base

Base entry searches

one-level

Base + first level searches

subtree

Subtree searches

This property is used to configure the following features:

request-filtering-policy

Request filtering policies control what data can be accessed by clients.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## allowed-subtrees

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dn
Default value	
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies a set of subtrees that can be accessed by clients.

This property takes a Distinguished Name (DN) value.

This property is used to configure the following features:

`request-filtering-policy`

Request filtering policies control what data can be accessed by clients.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## allow-extended-operations

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not associated connection handlers accept LDAP extended operations.

This property is `true` or `false`.

This property is used to configure the following features:

`request-filtering-policy`

Request filtering policies control what data can be accessed by clients.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## allow-heuristic-search

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies whether server is allowed to perform initial search on the secondary view.

This property is `true` or `false`.

This property is used to configure the following features:

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## allow-inequality-search-operations

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not associated connection handlers accept LDAP searches based on inequality filters.

This property is `true` or `false`.

This property is used to configure the following features:

`request-filtering-policy`

Request filtering policies control what data can be accessed by clients.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## allow-ldapv2-clients

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not clients can connect to Directory Proxy Server by using LDAPv2.

This property is `true` or `false`.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## allow-modify-operations

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not associated connection handlers accept LDAP modify operations.

This property is `true` or `false`.

This property is used to configure the following features:

`request-filtering-policy`

Request filtering policies control what data can be accessed by clients.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## allow-partial-search

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies whether server is allowed to return partial search result from primary view if secondary view is unreachable.

This property is `true` or `false`.

This property is used to configure the following features:

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## allow-persistent-searches

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not Directory Proxy Server allows clients to use persistent searches. As persistent searches can also be (dis)allowed using their control id, the server will keep them synchronized.

This property is `true` or `false`.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## allow-rename-operations

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not associated connection handlers accept LDAP modify DN operations.

This property is `true` or `false`.

This property is used to configure the following features:

`request-filtering-policy`

Request filtering policies control what data can be accessed by clients.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## allow-sasl-external-authentication

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not clients can authenticate to Directory Proxy Server by using SASL/External authentication.

This property is `true` or `false`.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## allow-search-operations

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not associated connection handlers accept LDAP search operations.

This property is `true` or `false`.

This property is used to configure the following features:

`request-filtering-policy`

Request filtering policies control what data can be accessed by clients.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## allow-unauthenticated-operations

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not Directory Proxy Server accepts unauthenticated operations. The mode used to treat the bind operation is specified by [allow-unauthenticated-operations-mode\(5DPCONF\)](#).

This property is true or false.

This property is used to configure the following features:

server

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## allow-unauthenticated-operations-mode

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	anonymous-and-dn-identified
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property indicates how to Directory Proxy Server treats operations without bind password when [allow-unauthenticated-operations\(5DPCONF\)](#) is set to `true`

This property can take the following values in addition to the default.

`anonymous-only`

When no password is specified, only anonymous binds are allowed

`dn-identified-only`

When no password is specified, only binds with a DN specified are allowed

`anonymous-and-dn-identified`

When no password is specified, anonymous binds and binds with a DN specified are allowed

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## alternate-search-base-dn

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dn
Default value	Default behavior is not defined.
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies the DN of an alternate search base.

When an alternate search base is specified in a subordinate data view, search operations targeted at the superior data view are performed in both the superior data view and the subordinate data view.

By default, Directory Proxy Server automatically configures the alternate search base in the subordinate data view. However, the automatic configuration can be disabled and the feature can be configured manually.

This property takes a Distinguished Name (DN) value.

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**[dpconf\(1M\)](#)

## attr-name

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	Default behavior is not defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property provides the name of a virtual attribute.

This property is used to configure the following features:

`jdbc-attr`

JDBC attributes map LDAP attributes to entries in relational database tables. The definition of a JDBC attribute includes the name of the LDAP attribute, and the relational database table and column in which the corresponding information is located.

`virtual-transformation`

Virtual data transformations create a virtual data view from a physical data view. Practically, you never define a virtual data view. Instead, you specify the transformations that you require and define these on an existing physical data view. A transformation performs a specific action in a certain direction. The direction of a transformation determines the transformation model. When you define a virtual data transformation, you create a virtual attribute that exists only in the context of the virtual data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## attr-name-mappings

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property defines a list of attribute name mappings.

When a client makes a request, the mapped attributes are renamed to match the names on the server side. When the result is returned to the client, the attributes are renamed back to match the names on the client side.

The syntax of this string is <client-attr>#<source-attr>[#<qualifier>].

An attribute mapping of the form <client attribute>#<source attribute>[#qualifiers]

The value of this property must match the pattern

```
^[a-zA-Z][-a-zA-Z0-9]*#[a-zA-Z][-a-zA-Z0-9]*+(#[-a-zA-Z0-9]+)?$.
```

The default behavior for this property is as follows: No attribute name mappings

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dpconf\(1M\)](#)

## attrs

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies a list of attributes for a search data hiding rule. The [rule-action\(5DPCONF\)](#) property defines whether the specified attributes are filtered out of the search result, or whether the unspecified attributes are filtered out of the search result.

The syntax of this string is ATTR\_NAME.

An attribute name

The value of this property must match the pattern `^[a-zA-Z] [-a-zA-Z0-9] *$`.

The default behavior for this property is as follows: No filtering is applied.

This property is used to configure the following features:

`search-data-hiding-rule`

Search data hiding rules determine what parts of the result of a search operation are returned to a client. Search data hiding rules are defined for a given request filtering policy.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## base-dn\_5dpconf

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dn
Default value	Default behavior is not defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the DN of the subtree represented by the data view.

This property takes a Distinguished Name (DN) value.

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**[dpconf\(1M\)](#)

## bind-dn\_5dpconf

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dn
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the DN used by the proxy to bind to the LDAP data source when this data source is configured to use proxy authorization.

This property takes a Distinguished Name (DN) value.

The default behavior for this property is as follows: Proxy does not bind to the LDAP data source.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## bind-dn-filters

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	any
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies a set of regular expressions. The bind DN of a client must match at least one regular expression in order for the connection to be accepted by the connection handler.

The default behavior for this property is as follows: All client bind DNs are accepted

This property is used to configure the following features:

`connection-handler`

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## bind-pwd

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	No
Is multivalued	No
Requires restart	No

This property specifies the password used by the proxy to bind to the LDAP data source when this data source is configured to use proxy authorization.

This property is read-only. To change the password, use the `bind-pwd-file` property.

The default behavior for this property is as follows: The proxy will not use any password to bind to the LDAP data source

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## bind-pwd-attr

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	userPassword
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the name of the attribute used to contain authentication passwords.

This property is used to configure the following features:

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## bind-pwd-file

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	password
Default value	No default is defined.
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the file from which to read the password for proxy authorization. The temporary file is read once, and the password is stored for future use.

This property takes a path to a file that contains the password value.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## bind-weight

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	disabled
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the proportion of bind requests that are sent to the attached data source.

This property takes an integer.

The value of this property must be at least 1.

This property can also take the following values:

`disabled`

Do not forward any bind requests to the data source

This property is used to configure the following features:

`attached-ldap-data-source`

A data source can be attached to one or more data source pools for load balancing and failover. When attached to a data source pool, a data source is called an attached data source.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## cert-data-view-routing-custom-list

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dnReference
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies the set of data views that Directory Proxy Server uses to find certificates if the [cert-data-view-routing-policy\(5DPCONF\)](#) property is set to `custom`.

The value of this property is the name of one of the following configuration entities: `coordinator-data-view`, `jdbc-data-view`, `join-data-view`, `ldap-data-view`, `ldif-data-view`.

The default behavior for this property is as follows: If the `cert-data-view-routing-policy` is `custom`, proxy has no route to map the certificate.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## cert-data-view-routing-policy

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	all-routable
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag that indicates whether or not Directory Proxy Server should use all routable data views or the list of data views specified by [cert-data-view-routing-custom-list\(5DPCONF\)](#) when searching for certificates.

This property can take the following values in addition to the default.

all-routable  
All routable data views

custom  
Customized set of data views

This property is used to configure the following features:

server

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## cert-search-attr-mappings

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies mappings that map attributes in the certificate subject to attributes in the LDAP server.

The syntax of this string is <subject-attr>:<user-attr>.

An attribute mapping of the form <subject attribute>:<user attribute>

The value of this property must match the pattern

`^[a-zA-Z] [-a-zA-Z0-9] * : [a-zA-Z] [-a-zA-Z0-9] *$`.

The default behavior for this property is as follows: No attributes in the certificate subject are mapped

This property is used to configure the following features:

server

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## cert-search-base-dn

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dn
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the base DN of a search operation that finds user entries when a user's name is not specified in their certificate.

This property takes a Distinguished Name (DN) value.

The default behavior for this property is as follows: This property is required when proxy should not use a user certificate subject as the user DN.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## cert-search-bind-dn

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dn
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies an optional identity to be used when searching for certificates.

This property takes a Distinguished Name (DN) value.

The default behavior for this property is as follows: Proxy uses an anonymous access to bind when searching for certificates.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## cert-search-bind-pwd

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	No
Is multivalued	No
Requires restart	No

This property specifies the password of the optional identity to be used when searching for certificates.

This property is read-only. To change the password, use the `cert-search-bind-pwd-file` property.

The default behavior for this property is as follows: Proxy uses an anonymous access to bind when searching for certificates.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## cert-search-bind-pwd-file

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	password
Default value	No default is defined.
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the file from which to read the password of the optional identity used when searching for certificates. The temporary file is read once, and the password is stored for future use.

This property takes a path to a file that contains the password value.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## cert-search-user-attr

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	userCertificate
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is the name of an LDAP attribute used to contain certificates in user entries.

This property is used to configure the following features:

server

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## client-affinity-bind-dn-filters

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	any
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies a set of regular expressions. The bind DN of the connection must match at least one regular expression in order to consider that requests come from the same client.

The default behavior for this property is as follows: All client bind DN's are accepted

This property is used to configure the following features:

`ldap-data-source-pool`

One or more data sources are attached to a data source pool for load balancing and failover.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## client-affinity-criteria

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	connection
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the criteria used to determine if requests come from the same client.

This property can take the following values in addition to the default.

`connection`

Requests coming from the same connection are considered as coming from the same client.

`bind-dn`

Requests using the same bind DN are considered as coming from the same client.

`ip-address`

Requests coming from the same IP Address are considered as coming from the same client.

`ip-address-and-bind-dn`

Requests coming from the same IP Address and using the same bind DN are considered as coming from the same client.

This property is used to configure the following features:

`ldap-data-source-pool`

One or more data sources are attached to a data source pool for load balancing and failover.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

## client-affinity-ip-address-filters

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	ipAddressMask
Default value	any
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies a set of IPv4 or IPv6 address that the IP address of the connection must match to consider that requests come from the same client. The IP address can be in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted-decimal quads.
- All addresses, a catch-all for clients that are not placed into other, higher priority, groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

This property takes an IP address such as 168.192.0.\*.

The default behavior for this property is as follows: All IP addresses are accepted

This property is used to configure the following features:

`ldap-data-source-pool`

One or more data sources are attached to a data source pool for load balancing and failover.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## client-affinity-policy

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	write-affinity-after-write
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the algorithm that determines when requests from the same client should be directed to the same LDAP data source.

This property can take the following values in addition to the default.

`write-affinity-after-write`

Affinity for write requests after the first write request

`read-write-affinity-after-write`

Affinity for all requests after the first write request

`read-write-affinity-after-any`

Affinity for all requests after the first read request or write request

`read-affinity-after-write`

Affinity for the first read request after a write request

This property is used to configure the following features:

`ldap-data-source-pool`

One or more data sources are attached to a data source pool for load balancing and failover.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## client-affinity-timeout

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	duration
Default value	20000
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the duration of the client affinity.

The duration is expressed in milliseconds.

This property is used to configure the following features:

`ldap-data-source-pool`

One or more data sources are attached to a data source pool for load balancing and failover.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## client-cred-mode

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	use-client-identity
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies how client credentials are used to authenticate the client to an LDAP data source.

This property can take the following values in addition to the default.

`use-specific-identity`

Use the identity specified by the [bind-dn\\_5dpconf\(5DPCONF\)](#) and [bind-pwd\(5DPCONF\)](#) properties.

`use-client-identity`

Use the identity provided by the client.

`use-proxy-auth`

Use the identity specified by the [bind-dn\\_5dpconf\(5DPCONF\)](#) and [bind-pwd\(5DPCONF\)](#) properties, and include the client identity in the proxyAuth control.

`use-proxy-auth-for-write`

Use the identity specified by the [bind-dn\\_5dpconf\(5DPCONF\)](#) and [bind-pwd\(5DPCONF\)](#) properties, and include the client identity in the proxyAuth control for write operations only.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

## close-client-connection

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not the connection handler should close the client connection when no data source is available.

This property is `true` or `false`.

This property is used to configure the following features:

`connection-handler`

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## compare-weight

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	disabled
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the proportion of compare requests that are sent to the attached data source.

This property takes an integer.

The value of this property must be at least 1.

This property can also take the following values:

`disabled`

Do not forward any compare requests to the data source

This property is used to configure the following features:

`attached-ldap-data-source`

A data source can be attached to one or more data source pools for load balancing and failover. When attached to a data source pool, a data source is called an attached data source.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## compat-flag\_5dpconf

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	Yes

This property specifies the flags that force a server to behave as in previous releases, for compatibility reasons. The Regular Expression distribution algorithm is the only feature that is impacted by this property.

This property can take the following values in addition to the default.

`pattern-matching-algo-6`

When the value `pattern-matching-algo-6` is set, the server loads the algorithm that was supported in version 6 release. The list of properties depends on the loaded algorithm. When the `pattern-matching-algo-6` property is added or removed from the `compat-flag` property, verify the values of the `pattern-matching-one-level-search-filter`, `pattern-matching-base-object-search-filter`, `pattern-matching-dn-regular-expression`, `pattern-matching-subtree-search-filter`, and `pattern-matching-base-dn-regular-expression` properties.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## configuration-manager-bind-dn

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dn
Default value	Default behavior is not defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the distinguished name of the Proxy Manager that is the user allowed to manage the configuration of Directory Proxy Server.

This property takes a Distinguished Name (DN) value.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## configuration-manager-bind-pwd

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	No default is defined.
Must be set	No
Is modifiable	No
Is multivalued	No
Requires restart	No

This property specifies the password of the Proxy Manager that is the user allowed to manage the configuration of Directory Proxy Server.

This property is read-only. To change the password, use the `configuration-manager-bind-pwd-file` property.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## configuration-manager-bind-pwd-file

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	password
Default value	No default is defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the file from which to read the Proxy manager bind password. The temporary file is read once, and the password is stored for future use.

This property takes a path to a file that contains the password value of at least 8 characters in length.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## connection-idle-timeout

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	duration
Default value	inherited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum length of time a client connection can remain idle before being closed.

The duration is expressed in seconds.

This property is used to configure the following features:

`ldap-listener`

The LDAP listener represents the network interface of Directory Proxy Server.

`ldaps-listener`

The LDAP listener represents the network interface of Directory Proxy Server.

`resource-limits-policy`

Resource limit policies define the maximum resources that Directory Proxy Server can process for a given connection handler.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## connection-pool-wait-interval

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	duration
Default value	100
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the interval of time that Directory Proxy Server waits when looking for a connection to an LDAP server to become available if a connection pool is empty when a request is made.

The duration is expressed in milliseconds.

The value of this property must be at least 1.

This property is used to configure the following features:

server

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## connection-pool-wait-timeout

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	duration
Default value	3000
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum length of time that Directory Proxy Server waits for a connection to an LDAP server to become available if a connection pool is empty when a request is made.

The duration is expressed in milliseconds.

The value of this property must be at least 1.

This property is used to configure the following features:

server

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## connection-read-data-timeout

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	duration
Default value	2000
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum length of time that the listener can wait for new data to be available.

The duration is expressed in milliseconds.

This property is used to configure the following features:

`ldap-listener`

The LDAP listener represents the network interface of Directory Proxy Server.

`ldaps-listener`

The LDAP listener represents the network interface of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## connection-write-data-timeout

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	<code>duration</code>
Default value	3600000
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum length of time that the listener can wait to send results back to clients.

The duration is expressed in milliseconds.

This property is used to configure the following features:

`ldap-listener`

The LDAP listener represents the network interface of Directory Proxy Server.

`ldaps-listener`

The LDAP listener represents the network interface of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## connect-timeout

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	duration
Default value	5000
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum length of time that a connection between Directory Proxy Server and a data source is attempted before the connection attempt fails.

The duration is expressed in milliseconds.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## connect-to-parent

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	No default is defined.
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

Specifies whether the data view handles searches whose search base is handled by another data view.

This property is `true` or `false`.

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

## contains-shared-entries

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property determines what should be done if an entry in a secondary data view is used by more than one entry in a primary data view.

This property is applicable to secondary data views only.

If it is set to `TRUE`, the secondary data view entry is deleted when the virtual entry is deleted. If the entry does not exist in the secondary data view, it is created when the virtual entry is created.

This property is `true` or `false`.

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`jdbc-table`

A JDBC table is created for each relational database table that will be used in the JDBC data view. When you create a JDBC table you specify the name of the table in the relational database, and the name you want to assign to this table in the JDBC data view.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dpconf\(1M\)](#)

## coordinated-data-view

---

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	Default behavior is not defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property defines the Data views that are coordinated by the coordinator data view.

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## custom-distribution-algorithm

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the class name to use for custom distribution algorithm. This property can be set only if `distribution-algorithm` property is set to `none`.

This property accepts the string value that contains Java class name. String value in `PackageName.AlgoClassName` format is valid.

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

---

## data-source-read-timeout

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	duration
Default value	20000
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the maximum length of time that Directory Proxy Server waits for a data source to complete a read request.

The duration is expressed in milliseconds.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## data-view-automatic-routing-mode

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	automatic
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag that indicates whether Directory Proxy Server automatically routes requests, or whether Directory Proxy Server relies on manual routing configuration.

This property can take the following values in addition to the default.

`automatic`

Directory Proxy Server automatically routes requests and ignores data view exclusion bases and alternate search bases.

`limited`

Directory Proxy Server automatically routes requests but will take into consideration data view exclusion bases if present.

`manual`

Directory Proxy Server does not automatically route requests. Instead, Directory Proxy Server routes requests according to the exclusion bases and alternate search bases specified in the data views.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## data-view-routing-custom-list

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dnReference
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies the list of data views to which Directory Proxy Server routes client requests if [data-view-routing-policy\(5DPCONF\)](#) is `custom`.

The value of this property is the name of one of the following configuration entities: `coordinator-data-view`, `jdbc-data-view`, `join-data-view`, `ldap-data-view`, `ldif-data-view`.

The default behavior for this property is as follows: Proxy does not route requests.

This property is used to configure the following features:

`connection-handler`

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## data-view-routing-policy

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	Default behavior is not defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether Directory Proxy Server routes client requests to all routable data views or to a custom set of data views.

This property can take the following values in addition to the default.

`all-routable`

All routable data views

`custom`

Customized set of data views

This property is used to configure the following features:

`connection-handler`

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## data-view-use-internal-client-identity

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating the need to not always use incoming client identity at binding to a remote ldap server.

This property is `true` or `false`.

This property is used to configure the following features:

`connection-handler`

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## db-name\_5dpconf

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	Default behavior is not defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the database name of the JDBC data source.

This property is used to configure the following features:

`jdbc-data-source`

A JDBC data source is defined for each relational database to which you want LDAP clients to have access. Currently, only one JDBC data source is supported per JDBC data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## db-pwd

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	No
Is multivalued	No
Requires restart	No

This property specifies the database user password of the JDBC data source.

This property is read-only. To change the password, use the `db-pwd-file` property.

The default behavior for this property is as follows: The proxy will not use any password to connect to the JDBC data source.

This property is used to configure the following features:

`jdbc-data-source`

A JDBC data source is defined for each relational database to which you want LDAP clients to have access. Currently, only one JDBC data source is supported per JDBC data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## db-pwd-encryption

---

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	ssha
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the mechanism used to store authentication passwords.

This property can take the following values in addition to the default.

`clear-text`

Passwords are stored in the clear

`crypt`

Passwords are stored using crypt

`sha`

Passwords are stored using SHA

`ssha`

Passwords are stored using SSHA

`sha512`

Passwords are stored using SHA512

This property is used to configure the following features:

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## db-pwd-file

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	password
Default value	No default is defined.
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the file from which to read the database user password of the JDBC data source. The temporary file is read once, and the password is stored for future use.

This property takes a path to a file that contains the password value.

This property is used to configure the following features:

`jdbc-data-source`

A JDBC data source is defined for each relational database to which you want LDAP clients to have access. Currently, only one JDBC data source is supported per JDBC data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## db-url

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	Default behavior is not defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the database URL of the JDBC data source.

This property is used to configure the following features:

`jdbc-data-source`

A JDBC data source is defined for each relational database to which you want LDAP clients to have access. Currently, only one JDBC data source is supported per JDBC data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## db-user

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the database user of the JDBC data source.

The default behavior for this property is as follows: No user.

This property is used to configure the following features:

`jdbc-data-source`

A JDBC data source is defined for each relational database to which you want LDAP clients to have access. Currently, only one JDBC data source is supported per JDBC data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## db-vendor

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	generic
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the vendor name of the JDBC data source. This should be set if a 3rd party jdbc driver, which is other than the one provided by the DB Vendor, is used to connect to the RDBMS back-end. This data is used to construct vendor specific sql statements when possible which would improve performance.

This property can take the following values in addition to the default.

`mysql`

RDBMS back-end is MySQL

`derby`

RDBMS back-end is Apache Derby/Java DB

`db2`

RDBMS back-end is DB2

`oracle`

RDBMS back-end is Oracle

`ms-sql-server`

RDBMS back-end is Microsoft SQL Server

`generic`

RDBMS back-end is not defined. DPS would, if possible, determine the vendor name from the db-url defined in jdbc-data-source

This property is used to configure the following features:

`jdbc-data-source`

A JDBC data source is defined for each relational database to which you want LDAP clients to have access. Currently, only one JDBC data source is supported per JDBC data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**[dpconf\(1M\)](#)

## default-log-level

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	info
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property sets the default log level for all categories of log message.

This property can take the following values in addition to the default.

error

Error logging

warning

Warning logging

info

Informational logging

all

All logging levels

none

All logging disabled

This property is used to configure the following features:

access-log

The access log contains information about the requests being processed by the Directory Proxy Server.

bind-log

The bind log contains information about the successful bind operations

connection-log

The connection log contains information about the connections established to the Directory Proxy Server.

error-log

The error logs contain information about the health of the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**[dpconf\(1M\)](#)

## delete-weight

---

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	disabled
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the proportion of delete requests that are sent to the attached data source.

This property takes an integer.

The value of this property must be at least 1.

This property can also take the following values:

`disabled`

Do not forward any delete requests to the data source

This property is used to configure the following features:

`attached-ldap-data-source`

A data source can be attached to one or more data source pools for load balancing and failover. When attached to a data source pool, a data source is called an attached data source.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## denied-presence-filter-attr

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	all
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies the list of attributes that make search requests denied when present in presence filter. This property requires to have the property [denied-presence-filter-enabled\(5DPCONF\)](#) set to true.

The default behavior for this property is as follows: All attributes, part of a presence filter, make the request denied.

This property is used to configure the following features:

[resource-limits-policy](#)

Resource limit policies define the maximum resources that Directory Proxy Server can process for a given connection handler.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## denied-presence-filter-enabled

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether to deny access when the search presence filter contains attributes specified by `denied-presence-filter-attr`.

This property is `true` or `false`.

This property is used to configure the following features:

`resource-limits-policy`

Resource limit policies define the maximum resources that Directory Proxy Server can process for a given connection handler.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## description\_5dpconf

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	Default behavior is not defined.
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property enables you to attach a description to the feature.

This property is used to configure the following features:

`connection-handler`

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-source`

A JDBC data source is defined for each relational database to which you want LDAP clients to have access. Currently, only one JDBC data source is supported per JDBC data view.

`jdbc-data-source-pool`

Requests from clients are distributed to a JDBC data source pool. A JDBC data source pool is defined for each JDBC data source.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-source`

The common name of the LDAP data source

`ldap-data-source-pool`

One or more data sources are attached to a data source pool for load balancing and failover.

**ldap-data-view**

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

**ldif-data-view**

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

**request-filtering-policy**

Request filtering policies control what data can be accessed by clients.

**resource-limits-policy**

Resource limit policies define the maximum resources that Directory Proxy Server can process for a given connection handler.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dpconf\(1M\)](#)

---

## distribution-algorithm

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the built-in algorithm used to distribute operations to data views that have the same base DN.

This property can take the following values in addition to the default.

`pattern-matching`

Requests are distributed to data views based on the match between the parameters of the requests and one or more patterns.

`lexicographic`

Requests are distributed to data views based on the lexicographic value of the RDN specified in the request. Lexicographic bounds are taken from the value of the first RDN beneath the base DN of the data view.

`numeric`

Requests are distributed to data views based on the numeric value of the RDN specified in the request. The numeric value is taken from the value of the first RDN beneath the base DN of the data view.

`replication`

Requests are distributed to data views based on the role of the data view in replication. The algorithm forces all write operations to be sent to all data sources in the data source pool, and all read operations to be sent to a single data source.

The default behavior for this property is as follows: No distribution algorithm is enabled

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

**join-data-view**

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

**ldap-data-view**

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

**ldif-data-view**

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dpconf\(1M\)](#)

## dn-join-rule

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property determines how the DN of entries in the secondary data view are constructed.

To be taken in account by the server, this property must be set on join data view if the `join-rule-control-enabled` property for join data view is set to `true`; otherwise it must be set on secondary data views. Only one DN join rule can be defined.

The default behavior for this property is as follows: No DN join rule is enabled

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dpconf\(1M\)](#)

## dn-mapping-attrs

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property defines a list of attributes that contain DN's of entries.

When a DN is renamed by setting the `dn-mapping-source-base-dn` property, attributes in the portion of the DIT affected by renaming must also be renamed if those attributes contain DN's.

The default behavior for this property is as follows: No DN valued attributes to be mapped

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dpconf\(1M\)](#)

## dn-mapping-source-base-dn

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dn
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property defines a DN mapping.

When a client makes a request, the DN is rewritten to match that on the server side. When the result is returned to the client, the DN is changed back to match the client side.

This property takes a Distinguished Name (DN) value.

The default behavior for this property is as follows: No source suffix - do not perform DN mapping

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

## dn-pattern

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	Default behavior is not defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies a DN pattern that controls how DN's are constructed in the data view.

This property is used to configure the following features:

`jdbc-object-class`

A JDBC object class maps an LDAP object class to one or more relational database tables. A JDBC object class can obtain its information from more than one table. However, one table must be defined as the primary table, and additional tables are defined as secondary tables.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## domain-name-filters

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	any
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies a set of domain name suffixes. A client's network domain must match at least one of the suffixes in order for the connection to be accepted by the connection handler.

The domain name can be in one of the following formats:

- Full name. For example, box.eng.sun.com.
- Suffix name. For example, .eng.sun.com.
- Fully qualified name of the local host.

The default behavior for this property is as follows: All domains are accepted

This property is used to configure the following features:

`connection-handler`

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## down-monitoring-interval

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	duration
Default value	inherited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the polling interval. When a connection is found to be down, the availability monitor polls the connection at this interval to detect its recovery. If not specified, the value of the monitoring-interval property is used.

The duration is expressed in seconds.

The value of this property must be at least 1.

The value of this property cannot be unlimited.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## driver-class

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	Default behavior is not defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the JDBC driver class of the JDBC data source.

This property is used to configure the following features:

`jdbc-data-source`

A JDBC data source is defined for each relational database to which you want LDAP clients to have access. Currently, only one JDBC data source is supported per JDBC data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## driver-url

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	Yes
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies the JDBC driver jar of the JDBC data source.

The default behavior for this property is as follows: The proxy will not use any password to connect to the JDBC data source.

This property is used to configure the following features:

`jdbc-data-source`

A JDBC data source is defined for each relational database to which you want LDAP clients to have access. Currently, only one JDBC data source is supported per JDBC data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## email-alerts-enabled

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not Directory Proxy Server should use email based alert notification.

This property is `true` or `false`.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## email-alerts-message-from-address

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	local
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the from-address that alert messages should use.

The syntax of this string is EMAIL\_ADDRESS.

A valid email address

The value of this property must match the pattern `^.+@.+$.`

The default behavior for this property is as follows: The default sender is `dps@localhost`

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## email-alerts-message-subject

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	Proxy Server Administrative Alert
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the subject line that alert messages should use.

This property is used to configure the following features:

server

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## email-alerts-message-subject-includes-alert-code

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not Directory Proxy Server should add the alert code to the subject line for alert messages.

This property is `true` or `false`.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## email-alerts-message-to-address

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	root@localhost
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies the to-address that alert messages should use.

The syntax of this string is EMAIL\_ADDRESS.

A valid email address

The value of this property must match the pattern `^.+@.+$.`

This property is used to configure the following features:

server

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## email-alerts-smtp-host

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	ipAddress
Default value	localhost
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the host name of the SMTP server to which alert messages should be sent.

This property takes an IP address or host name.

This property is used to configure the following features:

server

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## email-alerts-smtp-port

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	smtp
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the port number of the SMTP server to which alert messages should be sent.

This property takes an integer.

The value of this property must be at least 1.

The value of this property must be no greater than 65535.

This property can also take the following values:

smtp

Standard smtp port

smtps

Standard smtp over SSL port

This property is used to configure the following features:

server

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## enable-client-affinity

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag that indicates whether or not consecutive requests from the same client should be directed to the same LDAP data source.

This property is `true` or `false`.

This property is used to configure the following features:

`ldap-data-source-pool`

One or more data sources are attached to a data source pool for load balancing and failover.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## enabled-admin-alerts

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	all
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies the list of enabled administration alerts. The administration alerts are raised when the property `email-alerts-enabled` is set to true.

This property can take the following values in addition to the default.

`info-server-startup`  
Server startup

`info-server-shutdown-clean`  
Clean server shutdown

`error-server-shutdown-abrupt`  
Abrupt server shutdown

`info-configuration-reload`  
Configuration reloaded

`warning-configuration-reload-failure-no-impact`  
Configuration reload failure due to bad configuration - run-time configuration not impacted

`error-configuration-reload-failure-with-impact`  
Configuration reload failure due to bad configuration - run-time configuration possibly impacted

`warning-data-source-unavailable`  
Data source is currently unavailable

`info-data-source-available`  
Data source is available again

`warning-listener-unavailable`  
Unable to listen for incoming connections or requests

`warning-data-sources-inconsistent`  
Inconsistency detected between data sources

error-resource-limit-exceeded

An Error Resource Limit has been exceeded

warning-resource-limit-exceeded

The Warning Resource Limit has been exceeded

The default behavior for this property is as follows: All administration alerts are enabled

This property is used to configure the following features:

server

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

## Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

## enable-data-view-affinity

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not consecutive requests from the same client should be directed exclusively to the same data view.

This property is `true` or `false`.

This property is used to configure the following features:

`connection-handler`

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## enabled-ssl-cipher-suites

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	selectionEnumeration
Default value	JRE
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies the list of enabled SSL cipher suites.

This property takes its possible values from an external component.

The default behavior for this property is as follows: All SSL cipher suites enabled by the Java Run Time running the proxy.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## enabled-ssl-protocols

---

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	selectionEnumeration
Default value	JRE
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies the list of enabled SSL protocols.

This property takes its possible values from an external component.

The default behavior for this property is as follows: All SSL protocols enabled by the Java Run Time running the proxy.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## enable-log-rotation

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies whether log files are rotated or not.

This property is `true` or `false`.

This property is used to configure the following features:

`access-log`

The access log contains information about the requests being processed by the Directory Proxy Server.

`bind-log`

The bind log contains information about the successful bind operations

`connection-log`

The connection log contains information about the connections established to the Directory Proxy Server.

`error-log`

The error logs contain information about the health of the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## enable-remote-user-mapping

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not Directory Proxy Server should map the bind DN of a user to an alternate bind DN. The identity mapping is configured in the user entry in a remote LDAP server.

This property is `true` or `false`.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## enable-user-mapping

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not Directory Proxy Server should map the user identity to the identity of an alternate user. The identity mapping is configured in the Directory Proxy Server.

This property is `true` or `false`.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## encrypt-configuration

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not Directory Proxy Server should encrypt passwords that are stored in the configuration.

This property is `true` or `false`.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## excluded-subtrees

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dn
Default value	Default behavior is not defined.
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies the DNs of subtrees which are excluded by a data view.

When a subordinate data view is created, Directory Proxy Server automatically excludes the subordinate subtree from the superior data view. However, the automatic configuration can be disabled and the feature can be configured manually.

This property takes a Distinguished Name (DN) value.

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Stability Level	Evolving

**See Also**

[dpconf\(1M\)](#)

---

## extension-jar-file-url

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies the jar file that contains custom plugins, such as custom distribution plugins.

The default behavior for this property is as follows: Proxy uses no extension jar file.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## filter-join-rule

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property defines the relationship between the primary and secondary data views.

A filter join rule indicates how an entry should be retrieved from the secondary data view based on something in the primary data view.

For example, `uid=\${primary-view-name.uid}` is a valid property value.

To be taken in account by the server, this property must be set on join data view if the `join-rule-control-enabled` property for join data view is set to `true`; otherwise it must be set on secondary data views.

A filter join rule takes the form of an LDAP filter that is used to construct an attribute from one or more attributes from the primary data view.

The default behavior for this property is as follows: No filter join rule is applied

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`jdbc-table`

A JDBC table is created for each relational database table that will be used in the JDBC data view. When you create a JDBC table you specify the name of the table in the relational database, and the name you want to assign to this table in the JDBC data view.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

#### ldap-data-view

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

#### ldif-data-view

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

## Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

## group-dn-filters

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dn
Default value	any
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies the Distinguished Name of the group that bind DN of the client must be member of for the connection to be accepted by the connection handler.

This property takes a Distinguished Name (DN) value.

This property is used to configure the following features:

`connection-handler`

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## group-search-bind-dn

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dn
Default value	any
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the Distinguished Name used for binding to a data source to search the group member.

This property takes a Distinguished Name (DN) value.

This property is used to configure the following features:

`connection-handler`

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## group-search-bind-pwd

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	No
Is multivalued	No
Requires restart	No

This property specifies the Password for binding to a data source to search the group members.

This property is read-only. To change the password, use the `group-search-bind-pwd-file` property.

The default behavior for this property is as follows: The proxy will not use any password to connect to the data source.

This property is used to configure the following features:

`connection-handler`

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## group-search-bind-pwd-file

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	password
Default value	No default is defined.
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the file from which to read the password for binding to a data source to search the group members. The temporary file is read once, and the password is stored for future use.

This property takes a path to a file that contains the password value.

This property is used to configure the following features:

`connection-handler`

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## internal-value

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property defines the physical value of the attribute.

The default behavior for this property is as follows: For some transformations, this property is required for the proxy to apply the transformation.

This property is used to configure the following features:

`virtual-transformation`

Virtual data transformations create a virtual data view from a physical data view. Practically, you never define a virtual data view. Instead, you specify the transformations that you require and define these on an existing physical data view. A transformation performs a specific action in a certain direction. The direction of a transformation determines the transformation model. When you define a virtual data transformation, you create a virtual attribute that exists only in the context of the virtual data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## ip-address-filters

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	ipAddressMask
Default value	any
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies a set of IPv4 or IPv6 address masks. The IP address of a client connection must match at least one of the masks in order for the connection to be accepted by the connection handler. The IP address can be in one of the following formats:

- IP address in dotted decimal form.
- IP address and bits, in the form of network number/mask bits.
- IP address and quad, in the form of a pair of dotted-decimal quads.
- All addresses, a catch-all for clients that are not placed into other, higher priority, groups.
- 0.0.0.0. This address is for groups to which initial membership is not considered. For example, for groups that clients switch to after their initial bind.
- IP address of the local host.

This property takes an IP address such as 168.192.0.\*.

The default behavior for this property is as follows: All IP addresses are accepted

This property is used to configure the following features:

`connection-handler`

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

---

## is-enabled

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not the data view is accepting requests.

This property is `true` or `false`.

This property is used to configure the following features:

`connection-handler`

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-source`

A JDBC data source is defined for each relational database to which you want LDAP clients to have access. Currently, only one JDBC data source is supported per JDBC data view.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-source`

The common name of the LDAP data source

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldap-listener`

The LDAP listener represents the network interface of Directory Proxy Server.

`ldaps-listener`

The LDAP listener represents the network interface of Directory Proxy Server.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

---

## is-read-only

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not the data view should accept read operations only.

This property is `true` or `false`.

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-source`

A JDBC data source is defined for each relational database to which you want LDAP clients to have access. Currently, only one JDBC data source is supported per JDBC data view.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-source`

The common name of the LDAP data source

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

---

## is-restart-required

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	No
Is modifiable	No
Is multivalued	No
Requires restart	No

This property is a flag indicating whether Directory Proxy Server must be restarted in order for configuration changes to take effect.

This property is `true` or `false`.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## is-routable

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not the data view can be accessed by a connection handler if the `data-view-routing-policy(5DPCONF)` property of the connection handler is `all-routable`.

This property is `true` or `false`.

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

## is-single-row-table

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies that an LDAP entry has only one matching row in the relational database table.

This property is `true` or `false`.

This property is used to configure the following features:

`jdbc-table`

A JDBC table is created for each relational database table that will be used in the JDBC data view. When you create a JDBC table you specify the name of the table in the relational database, and the name you want to assign to this table in the JDBC data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## is-ssl-mandatory

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not client connections must use SSL in order for them to be accepted by the connection handler.

This property is `true` or `false`.

This property is used to configure the following features:

`connection-handler`

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## jdbc-attr-date-format

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dateFormat
Default value	yyyy-MM-dd
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the date format returned to the client and expected from the client.

This property is used to configure the following features:

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## jdbc-attr-time-format

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dateFormat
Default value	hh:mm:ss
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the time format returned to the client and expected from the client.

This property is used to configure the following features:

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## jdbc-attr-timestamp-format

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dateFormat
Default value	yyyy-MM-dd hh:mm:ss
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the timestamp format returned to the client and expected from the client.

This property is used to configure the following features:

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## jdbc-data-source-pool

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dnReference
Default value	Default behavior is not defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the JDBC data source pool that should be used by the JDBC data view.

This property has as its value the name of a `jdbc-data-source-pool` configuration entity.

This property is used to configure the following features:

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## join-rule-control-enabled

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies whether Server uses "filter-join-rule" and "dn-join-rule" property values stored on join views.

This property is true or false.

This property is used to configure the following features:

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## ldap-address

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	ipAddress
Default value	Default behavior is not defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the address of the LDAP data source.

This property takes an IP address or host name.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## ldap-data-source-pool

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dnReference
Default value	Default behavior is not defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the name of the LDAP data source pool to be used by the LDAP data view.

This property has as its value the name of a `ldap-data-source-pool` configuration entity.

This property is used to configure the following features:

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## ldap-port\_5dpconf

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	ldap
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the LDAP port of the LDAP data source.

This property takes an integer.

The value of this property must be at least 1.

The value of this property must be no greater than 65535.

This property can also take the following values:

ldap  
Standard ldap port

ldaps  
Standard ldaps port

This property is used to configure the following features:

ldap-data-source  
The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## ldaps-port

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	ldaps
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the LDAPS port of the LDAP data source.

This property takes an integer.

The value of this property must be at least 1.

The value of this property must be no greater than 65535.

This property can also take the following values:

ldap

Standard ldap port

ldaps

Standard ldaps port

This property is used to configure the following features:

ldap-data-source

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## ldap-syntax

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	cis
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property defines the syntax used to construct the LDAP attribute from an entry in the relational database table.

This property is used to configure the following features:

`jdbc-attr`

JDBC attributes map LDAP attributes to entries in relational database tables. The definition of a JDBC attribute includes the name of the LDAP attribute, and the relational database table and column in which the corresponding information is located.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## ldif-data-source

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	Default behavior is not defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the name of a file on the Directory Proxy Server filesystem where the LDIF data is contained.

This property is used to configure the following features:

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## lexicographic-attrs

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	all
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies the set of attributes that are examined by the distribution algorithm when `distribution-algorithm(5DPCONF)` is `lexicographic`.

The default behavior for this property is as follows: All attributes

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

## lexicographic-lower-bound

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the lower bound of the distribution when [distribution-algorithm\(5DPCONF\)](#) is lexicographic.

For example, consider a configuration with a first data view that handles [A-M] inclusive, and a second data view that handles [N-Z] inclusive. For the first data view, you set the lower bound to A, and the upper bound to M. For the second data view, you set the lower bound to N, and the upper bound to Z.

The default behavior for this property is as follows: No lower limit

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dpconf\(1M\)](#)

---

## lexicographic-upper-bound

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the upper bound of the distribution when [distribution-algorithm\(5DPCONF\)](#) is `lexicographic`.

For example, consider a configuration with a first data view that handles [A-M] inclusive, and a second data view that handles [N-Z] inclusive. For the first data view, you set the lower bound to A, and the upper bound to M. For the second data view, you set the lower bound to N, and the upper bound to Z.

The default behavior for this property is as follows: No upper limit

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dpconf\(1M\)](#)

## listen-address\_5dpconf

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	ipAddress
Default value	0.0.0.0
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the IP address that Directory Proxy Server should listen on.

This property takes an IP address or host name.

This property is used to configure the following features:

`ldap-listener`

The LDAP listener represents the network interface of Directory Proxy Server.

`ldaps-listener`

The LDAP listener represents the network interface of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## listen-port

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	Default behavior is not defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the IP port that Directory Proxy Server should listen on.

This property takes an integer.

The value of this property must be at least 1.

The value of this property must be no greater than 65535.

This property can also take the following values:

ldap

Standard ldap port

ldaps

Standard ldaps port

This property is used to configure the following features:

ldap-listener

The LDAP listener represents the network interface of Directory Proxy Server.

ldaps-listener

The LDAP listener represents the network interface of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## load-balancing-algorithm

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	proportional
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the algorithm that determines how operations are distributed to the data sources attached to a data source pool.

This property can take the following values in addition to the default.

`failover`

Requests are distributed exclusively to the data source with the highest weight. If that data source fails, requests are distributed exclusively to the data source with the next highest weight.

`saturation`

Requests are distributed to the data source with the highest weight until the data source approaches its saturation level. Requests are then sent to the data source with the next highest weight .

When the data source with the highest weight drops below its saturation level, Directory Proxy Server resumes sending requests to that data source.

`proportional`

Requests are distributed to data sources in proportion to the weight of a data source and its cumulative load.

`operational-affinity`

Requests are allocated a hash value according to the type of the request and the properties of the request. Hash values are allocated to data sources in proportion to the weight of a data source and its cumulative load.

`fastest-server`

Requests are distributed to the data source with the quickest response time.

`adaptive-failover`

Requests are distributed to N active data sources with the highest weights so that the sum of the active data sources weights reach the configured processing power value.

This property is used to configure the following features:

ldap-data-source-pool

One or more data sources are attached to a data source pool for load balancing and failover.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

## log-buffer-size

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dataSize
Default value	0b
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the size of the error log buffer. When the buffer is full, it is flushed to disk.

This property is expressed in bytes.

The value of this property must be at least 0b.

The value of this property must be no greater than 10m.

This property is used to configure the following features:

`access-log`

The access log contains information about the requests being processed by the Directory Proxy Server. The default buffer size for access log is 1M.

`bind-log`

The bind log contains information about the successful bind operations

`connection-log`

The connection log contains information about the connections established to the Directory Proxy Server.

`error-log`

The error logs contain information about the health of the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## log-etimes-in-seconds

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property is a flag indicating whether or not etimes in Directory Proxy Server access logs are expressed in seconds or milliseconds.

This property is `true` or `false`.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## log-file-compression

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	no-compression
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

The compression level applied to a log file after it is rotated. It is strongly recommended to use no-compression or best-speed compression.

This property can take the following values in addition to the default.

`no-compression`

Log files are not compressed after a rotation.

`best-speed`

Fastest zlib compression.

`default-compression`

Default zlib compression.

`best-compression`

Strongest zlib compression.

This property is used to configure the following features:

`access-log`

The access log contains information about the requests being processed by the Directory Proxy Server.

`bind-log`

The bind log contains information about the successful bind operations

`connection-log`

The connection log contains information about the connections established to the Directory Proxy Server.

`error-log`

The error logs contain information about the health of the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dpconf\(1M\)](#)

---

## log-file-name

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	Default behavior is not defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the path name to the log file.

This property is used to configure the following features:

`access-log`

The access log contains information about the requests being processed by the Directory Proxy Server.

`bind-log`

The bind log contains information about the successful bind operations

`connection-log`

The connection log contains information about the connections established to the Directory Proxy Server.

`error-log`

The error logs contain information about the health of the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## log-file-perm

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	600
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the permissions on the log file.

The syntax of this string is OCTAL\_MODE.

A unix style octal permission, for example, 600.

The value of this property must match the pattern `^[0-7][0-7][0-7]$`.

This property is used to configure the following features:

`access-log`

The access log contains information about the requests being processed by the Directory Proxy Server.

`bind-log`

The bind log contains information about the successful bind operations

`connection-log`

The connection log contains information about the connections established to the Directory Proxy Server.

`error-log`

The error logs contain information about the health of the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## log-level-bind

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	inherited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the log level for events related to client connections.

This property can take the following values in addition to the default.

info  
Informational logging

all  
All logging levels

inherited  
Use the global logging level

none  
All logging disabled

This property is used to configure the following features:

bind-log  
The bind log contains information about the successful bind operations

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## log-level-client-connections

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	inherited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the log level for events related to client connections.

This property can take the following values in addition to the default.

`info`

Informational logging

`all`

All logging levels

`inherited`

Use the global logging level

`none`

All logging disabled

This property is used to configure the following features:

`access-log`

The access log contains information about the requests being processed by the Directory Proxy Server.

`connection-log`

The connection log contains information about the connections established to the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

## log-level-client-disconnections

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	inherited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the log level for events related to client disconnections.

This property can take the following values in addition to the default.

`info`

Informational logging

`all`

All logging levels

`inherited`

Use the global logging level

`none`

All logging disabled

This property is used to configure the following features:

`access-log`

The access log contains information about the requests being processed by the Directory Proxy Server.

`connection-log`

The connection log contains information about the connections established to the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dpconf\(1M\)](#)

## log-level-client-operations

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	accessLogLevel170
Default value	inherited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the log level for events related to client operations.

This property is used to configure the following features:

`access-log`

The access log contains information about the requests being processed by the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## log-level-configuration

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	logLevel170
Default value	inherited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the logging level for events related to configuration.

This property is used to configure the following features:

`error-log`

The error logs contain information about the health of the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## log-level-connection-handlers

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	accessLogLevel170
Default value	inherited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the log level for events related to connection handlers.

This property is used to configure the following features:

`access-log`

The access log contains information about the requests being processed by the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## log-level-data-source

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	logLevel170
Default value	inherited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the logging level for events related to data sources.

This property is used to configure the following features:

`error-log`

The error logs contain information about the health of the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## log-level-data-sources

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	accessLogLevel170
Default value	inherited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the log level for events related to data sources.

This property is used to configure the following features:

`access-log`

The access log contains information about the requests being processed by the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## log-level-data-sources-detailed

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	accessLogLevel170
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the log level for detailed events related to data sources.

This property is used to configure the following features:

`access-log`

The access log contains information about the requests being processed by the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## log-level-internal

---

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	logLevel170
Default value	inherited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

The logging level for events related to problems with the internal server.

This property is used to configure the following features:

`error-log`

The error logs contain information about the health of the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## log-level-operation-decode

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	logLevel170
Default value	inherited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the logging level for events related to client operation decoding.

This property is used to configure the following features:

`error-log`

The error logs contain information about the health of the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## log-level-operation-processing

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	logLevel170
Default value	inherited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the logging level for events related to client operation processing.

This property is used to configure the following features:

`error-log`

The error logs contain information about the health of the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## log-level-plugin

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	logLevel170
Default value	inherited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the logging level for events related to plugins.

This property is used to configure the following features:

`error-log`

The error logs contain information about the health of the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## log-level-shutdown

---

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	logLevel170
Default value	inherited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the logging level for events related to server shutdown.

This property is used to configure the following features:

`error-log`

The error logs contain information about the health of the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## log-level-startup

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	logLevel170
Default value	inherited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the logging level for events related to server startup.

This property is used to configure the following features:

`error-log`

The error logs contain information about the health of the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## log-min-size

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dataSize
Default value	0b
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

If the [log-rotation-policy\(5DPCONF\)](#) is *periodic*, this property specifies a minimum file size. The log files are rotated at the specified interval if the file size is bigger than the specified size.

This property is expressed in bytes.

The value of this property must be at least 0b.

The value of this property must be no greater than 2g.

This property is used to configure the following features:

`access-log`

The access log contains information about the requests being processed by the Directory Proxy Server.

`bind-log`

The bind log contains information about the successful bind operations

`connection-log`

The connection log contains information about the connections established to the Directory Proxy Server.

`error-log`

The error logs contain information about the health of the Directory Proxy Server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## log-rotation-frequency

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	1h
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the interval at which log files are rotated when [log-rotation-policy\(5DPCONF\)](#) is `periodic`.

This property is set in conjunction with the following properties: [log-rotation-start-time\(5DPCONF\)](#) and [log-rotation-start-day\(5DPCONF\)](#).

The syntax of this string is `<count> [mwdh]`.

The value for [log-rotation-frequency\(5DPCONF\)](#) is a time period of the form `<count>[mwdh]`. For example, a value of `2w` means that the logs are rotated every 2 weeks.

The value of this property must match the pattern `^[0-9]+[mMwWdDhH]$`.

This property is used to configure the following features:

`access-log`

The access log contains information about the requests being processed by the Directory Proxy Server.

`bind-log`

The bind log contains information about the successful bind operations

`connection-log`

The connection log contains information about the connections established to the Directory Proxy Server.

`error-log`

The error logs contain information about the health of the Directory Proxy Server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Stability Level	Evolving

**See Also**

[dpconf\(1M\)](#)

---

## log-rotation-policy

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	Default behavior is not defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the policy used to rotate log files.

This property can take the following values in addition to the default.

`size`

Rotate log files when they reach the size specified by the [log-rotation-size\(5DPCONF\)](#) property.

`periodic`

Rotate log files at the time and interval specified by the following properties:

- [log-rotation-start-time\(5DPCONF\)](#)
- [log-rotation-start-day\(5DPCONF\)](#)
- [log-rotation-frequency\(5DPCONF\)](#)

If the rotation policy is `periodic` and [log-rotation-size\(5DPCONF\)](#) is set, the log file is rotated at the specified interval IF the file size is bigger than the specified size.

This property is used to configure the following features:

`access-log`

The access log contains information about the requests being processed by the Directory Proxy Server.

`bind-log`

The bind log contains information about the successful bind operations

`connection-log`

The connection log contains information about the connections established to the Directory Proxy Server.

`error-log`

The error logs contain information about the health of the Directory Proxy Server.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dpconf\(1M\)](#)

## log-rotation-size

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dataSize
Default value	100m
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

If the [log-rotation-policy\(5DPCONF\)](#) is `size`, this property specifies the file size at which log files are automatically rotated.

This property is expressed in bytes.

The value of this property must be at least 1m.

The value of this property must be no greater than 2g.

This property is used to configure the following features:

`access-log`

The access log contains information about the requests being processed by the Directory Proxy Server.

`bind-log`

The bind log contains information about the successful bind operations

`connection-log`

The connection log contains information about the connections established to the Directory Proxy Server.

`error-log`

The error logs contain information about the health of the Directory Proxy Server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## log-rotation-start-day

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	Default behavior is not defined.
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the day-of-the-week or day-of-the-month that log file rotation starts when [log-rotation-policy\(5DPCONF\)](#) is `periodic`.

This property is set in conjunction with the following properties: [log-rotation-start-time\(5DPCONF\)](#) and [log-rotation-frequency\(5DPCONF\)](#).

This property takes an integer.

The value of this property must be at least 1.

The value of this property must be no greater than 31.

This property is used to configure the following features:

`access-log`

The access log contains information about the requests being processed by the Directory Proxy Server.

`bind-log`

The bind log contains information about the successful bind operations

`connection-log`

The connection log contains information about the connections established to the Directory Proxy Server.

`error-log`

The error logs contain information about the health of the Directory Proxy Server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dpconf\(1M\)](#)

## log-rotation-start-time

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	Default behavior is not defined.
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the time of day at which log file rotation starts when the [log-rotation-policy\(5DPCONF\)](#) is `periodic`.

This property is set in conjunction with the following properties: [log-rotation-start-day\(5DPCONF\)](#) and [log-rotation-frequency\(5DPCONF\)](#).

The syntax of this string is `TIME`.

The value for `log-rotation-start-time` is a time of day of the form `hhmm`.

The value of this property must match the pattern  
`^((2[0-3])|([0-1][0-9]))[0-5][0-9]$`.

This property is used to configure the following features:

`access-log`

The access log contains information about the requests being processed by the Directory Proxy Server.

`bind-log`

The bind log contains information about the successful bind operations

`connection-log`

The connection log contains information about the connections established to the Directory Proxy Server.

`error-log`

The error logs contain information about the health of the Directory Proxy Server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

## log-search-filters

---

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies whether or not search filters are included in log messages.

This property is `true` or `false`.

This property is used to configure the following features:

`access-log`

The access log contains information about the requests being processed by the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## mapped-bind-dn

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dn
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the distinguished name of the user that the client is mapped to if [enable-user-mapping\(5DPCONF\)](#) is true.

The distinguished name of the client is specified by [user-bind-dn\(5DPCONF\)](#).

This property takes a Distinguished Name (DN) value.

The default behavior for this property is as follows: The proxy maps to the identity defined as the anonymous mapping.

This property is used to configure the following features:

`user-mapping`

In user mapping, a client identity is mapped to the identity of an alternate user. After a BIND operation, the Directory Proxy Server submits subsequent operations as the alternate user.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## mapped-bind-pwd

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	No
Is multivalued	No
Requires restart	No

This property specifies the password of the user that the client is mapped to if [enable-user-mapping\(5DPCONF\)](#) is true.

The password of the client is specified by [user-bind-pwd\(5DPCONF\)](#).

This property is read-only. To change the password, use the [mapped-bind-pwd-file](#) property.

The default behavior for this property is as follows: The proxy will not use any password associated to this mapping

This property is used to configure the following features:

[user-mapping](#)

In user mapping, a client identity is mapped to the identity of an alternate user. After a BIND operation, the Directory Proxy Server submits subsequent operations as the alternate user.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## mapped-bind-pwd-file

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	password
Default value	No default is defined.
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the file from which to read the password of the user that the client is mapped to if [enable-user-mapping\(5DPCONF\)](#) is true.

The password of the client is specified by [user-bind-pwd\(5DPCONF\)](#). The temporary file is read once, and the password is stored for future use.

This property takes a path to a file that contains the password value.

This property is used to configure the following features:

`user-mapping`

In user mapping, a client identity is mapped to the identity of an alternate user. After a BIND operation, the Directory Proxy Server submits subsequent operations as the alternate user.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## max-age\_5dpconf

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	duration
Default value	unlimited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum age (in months, weeks or days) that a log file can reach before it is deleted.

The duration is expressed in seconds.

The value of this property must be at least 1d.

This property is used to configure the following features:

`access-log`

The access log contains information about the requests being processed by the Directory Proxy Server.

`bind-log`

The bind log contains information about the successful bind operations

`connection-log`

The connection log contains information about the connections established to the Directory Proxy Server.

`error-log`

The error logs contain information about the health of the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## max-client-connections

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	unlimited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum number of simultaneous connections from a single client permitted by associated connection handlers.

This property takes an integer.

The value of this property must be at least 1.

The default behavior for this property is as follows: No limit

This property is used to configure the following features:

`resource-limits-policy`

Resource limit policies define the maximum resources that Directory Proxy Server can process for a given connection handler.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## max-connection-queue-size

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	128
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum size of the listener's new connection queue. When the queue is full, new connections are rejected.

This property takes an integer.

The value of this property must be at least 1.

This property is used to configure the following features:

`ldap-listener`

The LDAP listener represents the network interface of Directory Proxy Server.

`ldaps-listener`

The LDAP listener represents the network interface of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## max-connections

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	unlimited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum number of simultaneous connections permitted by associated connection handlers.

This property takes an integer.

The value of this property must be at least 1.

The default behavior for this property is as follows: No limit

This property is used to configure the following features:

`resource-limits-policy`

Resource limit policies define the maximum resources that Directory Proxy Server can process for a given connection handler.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## max-ldap-message-size

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dataSize
Default value	unlimited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum size of an LDAP message. Messages above the maximum size are not accepted by the listener.

This property is expressed in bytes.

The value of this property must be at least 4k.

The value of this property must be no greater than 2g.

This property is used to configure the following features:

`ldap-listener`

The LDAP listener represents the network interface of Directory Proxy Server.

`ldaps-listener`

The LDAP listener represents the network interface of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## max-log-files

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	10
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum number of log files that are preserved.

This property takes an integer.

The value of this property must be at least 0.

This property is used to configure the following features:

`access-log`

The access log contains information about the requests being processed by the Directory Proxy Server.

`bind-log`

The bind log contains information about the successful bind operations

`connection-log`

The connection log contains information about the connections established to the Directory Proxy Server.

`error-log`

The error logs contain information about the health of the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## max-op-count-per-interval

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	unlimited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum number of operations, allowed by the connection handler, per interval of time. The interval of time is defined by the property: [op-count-per-interval-timeout\(5DPCONF\)](#).

This property takes an integer.

The value of this property must be at least 1.

The default behavior for this property is as follows: Feature is disabled

This property is used to configure the following features:

`resource-limits-policy`

Resource limit policies define the maximum resources that Directory Proxy Server can process for a given connection handler.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## max-simultaneous-operations-per-connection

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	unlimited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum number of simultaneous operations per connection that is allowed by the associated connection handlers.

This property takes an integer.

The value of this property must be at least 1.

The default behavior for this property is as follows: No limit

This property is used to configure the following features:

`resource-limits-policy`

Resource limit policies define the maximum resources that Directory Proxy Server can process for a given connection handler.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## max-size\_5dpconf

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dataSize
Default value	unlimited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum log size in bytes, kilobytes, Megabytes or Gigabytes.

This property is expressed in bytes.

The value of this property must be at least 1M.

This property is used to configure the following features:

`access-log`

The access log contains information about the requests being processed by the Directory Proxy Server.

`bind-log`

The bind log contains information about the successful bind operations

`connection-log`

The connection log contains information about the connections established to the Directory Proxy Server.

`error-log`

The error logs contain information about the health of the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## max-total-operations-per-connection

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	unlimited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum number of operations per connection that is allowed by the associated connection handlers.

This property takes an integer.

The value of this property must be at least 1.

The default behavior for this property is as follows: No limit

This property is used to configure the following features:

`resource-limits-policy`

Resource limit policies define the maximum resources that Directory Proxy Server can process for a given connection handler.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## min-free-disk-space-size\_5dpconf

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dataSize
Default value	1M
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the minimum allowed free disk space for logs in bytes, kilobytes, Megabytes, or Gigabytes.

This property is expressed in bytes.

The value of this property must be at least 1M.

The value of this property cannot be unlimited.

This property is used to configure the following features:

`access-log`

The access log contains information about the requests being processed by the Directory Proxy Server.

`bind-log`

The bind log contains information about the successful bind operations

`connection-log`

The connection log contains information about the connections established to the Directory Proxy Server.

`error-log`

The error logs contain information about the health of the Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## minimum-search-filter-substring-length

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	unlimited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the minimum length of a substring in a search filter.

This property takes an integer.

The value of this property must be at least 1.

This property can also take the following values:

unlimited

No limit

prohibited

Substring filters prohibited

This property is used to configure the following features:

resource-limits-policy

Resource limit policies define the maximum resources that Directory Proxy Server can process for a given connection handler.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## minimum-total-weight

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	100
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

In the adaptive-failover load-balancing algorithm, the traffic is routed to N data sources so that the sum of their respective weights is at least equals to the minimum total weight.

This property takes an integer.

The value of this property must be at least 1.

This property is used to configure the following features:

`ldap-data-source-pool`

One or more data sources are attached to a data source pool for load balancing and failover.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## model

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	Default behavior is not defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property defines the transformation model. The transformation model is determined by the direction of a transformation, in other words, whether the transformation is applied during the request, during the response, or both.

This property can take the following values in addition to the default.

mapping

Mapping

write

Store and forget

read

Default virtual value

This property is used to configure the following features:

virtual-transformation

Virtual data transformations create a virtual data view from a physical data view. Practically, you never define a virtual data view. Instead, you specify the transformations that you require and define these on an existing physical data view. A transformation performs a specific action in a certain direction. The direction of a transformation determines the transformation model. When you define a virtual data transformation, you create a virtual attribute that exists only in the context of the virtual data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

## modify-dn-weight

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	disabled
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the proportion of modify DN requests that are sent to the attached data source.

This property takes an integer.

The value of this property must be at least 1.

This property can also take the following values:

`disabled`

Do not forward any modify DN requests to the data source

This property is used to configure the following features:

`attached-ldap-data-source`

A data source can be attached to one or more data source pools for load balancing and failover. When attached to a data source pool, a data source is called an attached data source.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## modify-weight

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	disabled
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the proportion of modify requests that are sent to the attached data source.

This property takes an integer.

The value of this property must be at least 1.

This property can also take the following values:

`disabled`

Do not forward any modify requests to the data source

This property is used to configure the following features:

`attached-ldap-data-source`

A data source can be attached to one or more data source pools for load balancing and failover. When attached to a data source pool, a data source is called an attached data source.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## monitoring-bind-dn

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dn
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the DN used for binding to an LDAP data source to check the data source's availability.

This property takes a Distinguished Name (DN) value.

The default behavior for this property is as follows: Proxy uses an anonymous access to access the LDAP data source.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## monitoring-bind-pwd

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	No
Is multivalued	No
Requires restart	No

This property specifies the password used for binding to an LDAP data source to check the data source's availability.

This property is read-only. To change the password, use the `monitoring-bind-pwd-file` property.

The default behavior for this property is as follows: Proxy uses an anonymous access to access the LDAP data source.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## monitoring-bind-pwd-file

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	password
Default value	No default is defined.
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the file from which to read the password used for binding to an LDAP data source to check the data source's availability. The DN used for binding to an LDAP data source to check the data source's availability is specified by [monitoring-bind-pwd\(5DPCONF\)](#). The temporary file is read once, and the password stored for future use.

This property takes a path to a file that contains the password value.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## monitoring-bind-timeout

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	duration
Default value	5000
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum length of time that the availability monitor waits to establish a connection to the LDAP data source.

The duration is expressed in milliseconds.

The value of this property must be at least 1.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## monitoring-entry-dn

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dn
Default value	
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the DN of a target entry in a search operation. The availability monitor uses the search operation to test a connection to the data source.

This property takes a Distinguished Name (DN) value.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## monitoring-entry-timeout

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	<code>duration</code>
Default value	5000
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum length of time that the availability monitor tries to retrieve the target entry in a search operation. The availability monitor uses the search operation to test a connection to the data source.

The duration is expressed in milliseconds.

The value of this property must be at least 1.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## monitoring-inactivity-timeout

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	duration
Default value	120
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

The availability monitor polls inactive connections to keep them alive. This property specifies how long a connection can be inactive before the availability monitor performs a search on the idle connection to keep it alive.

The duration is expressed in seconds.

The value of this property must be at least 1.

This property is used to configure the following features:

`jdbc-data-source`

A JDBC data source is defined for each relational database to which you want LDAP clients to have access. Currently, only one JDBC data source is supported per JDBC data view.

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## monitoring-interval

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	duration
Default value	30
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the polling interval. When a connection is up, respectively down, the availability monitor polls the connection at this interval to detect its possible failure, respectively recovery.

The duration is expressed in seconds.

The value of this property must be at least 1.

The value of this property cannot be unlimited.

This property is used to configure the following features:

`jdbc-data-source`

A JDBC data source is defined for each relational database to which you want LDAP clients to have access. Currently, only one JDBC data source is supported per JDBC data view.

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## monitoring-mode

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	proactive
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the monitoring mode of a data source.

This property can take the following values in addition to the default.

`proactive`

The availability monitor checks the availability of the data source continuously.

`reactive`

The availability monitor checks the availability of the data source only after a client request times out, or when an I/O error has been detected.

This property is used to configure the following features:

`jdbc-data-source`

A JDBC data source is defined for each relational database to which you want LDAP clients to have access. Currently, only one JDBC data source is supported per JDBC data view.

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## monitoring-retry-count

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	3
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the number of times that the availability monitor polls the connection when it is first detected as down. This allows the connection to be flagged as up faster. If the connection still fails after the specified number of retries, the value of the down-monitor-interval property is then used as the polling interval.

This property takes an integer.

The value of this property must be at least 1.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## monitoring-search-filter

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	(objectClass=*)
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the filter used in a search operation. The availability monitor uses the search operation to test a connection to the data source.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## monitoring-search-scope

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	base
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the scope used in a search operation. The availability monitor uses the search operation to test a connection to the data source.

This property can take the following values in addition to the default.

base

Base search

one

One-level search

sub

Subtree search

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## non-viewable-attr

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property provides a list of attributes that are not exposed by the data view.

The default behavior for this property is as follows: No restriction is applied on the list of viewable attributes.

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

---

## non-writable-attr

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property provides a list of attributes that cannot be written through the data view. The default behavior for this property is as follows: No restriction is applied on the list of writable attributes.

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

---

## number-of-psearch-threads

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	5
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the number of threads available for processing persistent searches.

This property takes an integer.

The value of this property must be at least 1.

This property is used to configure the following features:

server

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## number-of-search-threads

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	20
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the number of connections that should be made to a data source so that search operations can be performed in parallel.

This property takes an integer.

The value of this property must be at least 1.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## number-of-threads

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	2
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the number of threads allocated to the listener to handle simultaneous client connections and requests.

This property takes an integer.

The value of this property must be at least 1.

The value of this property must be no greater than 64.

This property is used to configure the following features:

`ldap-listener`

The LDAP listener represents the network interface of Directory Proxy Server.

`ldaps-listener`

The LDAP listener represents the network interface of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## number-of-worker-threads

---

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	100
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the number of worker threads available for processing operations in the work queue.

This property takes an integer.

The value of this property must be at least 1.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## num-bind-incr

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	10
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the number of new connections that are created when the server needs more connections for bind operations.

This property takes an integer.

The value of this property must be at least 1.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## num-bind-init

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	2
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the initial number of connections that should be made to an LDAP data source to perform bind operations.

This property takes an integer.

The value of this property must be at least 0.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## num-bind-limit

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	1024
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum number of connections that can be made to an LDAP data source to perform bind operations.

This property takes an integer.

The value of this property must be at least 1.

This property can also take the following values:

`unlimited`

This value means no limit is set for this property.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## num-connection-incr

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	5
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the number of new connections that are created when the server needs more connections for operations.

This property takes an integer.

The value of this property must be at least 1.

This property is used to configure the following features:

`jdbc-data-source`

A JDBC data source is defined for each relational database to which you want LDAP clients to have access. Currently, only one JDBC data source is supported per JDBC data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## num-connection-init

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	5
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the initial number of connections that should be made to a JDBC data source to perform operations.

This property takes an integer.

The value of this property must be at least 0.

This property is used to configure the following features:

`jdbc-data-source`

A JDBC data source is defined for each relational database to which you want LDAP clients to have access. Currently, only one JDBC data source is supported per JDBC data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## num-connection-limit

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	30
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum number of connections that can be made to a JDBC data source to perform operations.

This property takes an integer.

The value of this property must be at least 1.

This property can also take the following values:

`unlimited`

This value means no limit is set for this property.

This property is used to configure the following features:

`jdbc-data-source`

A JDBC data source is defined for each relational database to which you want LDAP clients to have access. Currently, only one JDBC data source is supported per JDBC data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## numeric-attrs

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	all
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies the set of attributes that are examined by the distribution algorithm when the `distribution-algorithm(5DPCONF)` is `numeric`.

The default behavior for this property is as follows: All attributes

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

---

## numeric-default-data-view

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not the associated data view should act as a default data view in the numeric distribution set and handle requests that contain non-numeric target RDNs.

This property is `true` or `false`.

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

---

## numeric-lower-bound

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	long
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the lower bound of distribution when the [distribution-algorithm\(5DPCONF\)](#) is numeric.

The default behavior for this property is as follows: No lower limit

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

## numeric-upper-bound

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	long
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the upper bound of distribution when the [distribution-algorithm\(5DPCONF\)](#) is numeric.

The default behavior for this property is as follows: No upper limit

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

---

## num-read-incr

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	10
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the number of new connections that are created when the server needs more connections for read operations.

This property takes an integer.

The value of this property must be at least 1.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## num-read-init

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	2
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the initial number of connections that should be made to an LDAP data source to perform read operations.

This property takes an integer.

The value of this property must be at least 0.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## num-read-limit

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	1024
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum number of connections that can be made to an LDAP data source to perform read operations.

This property takes an integer.

The value of this property must be at least 1.

This property can also take the following values:

`unlimited`

This value means no limit is set for this property.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## num-write-incr

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	10
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the number of new connections that are created when the server needs more connections for write operations.

This property takes an integer.

The value of this property must be at least 1.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## num-write-init

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	2
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the initial number of connections that should be made to an LDAP data source to perform write operations.

This property takes an integer.

The value of this property must be at least 0.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## num-write-limit

---

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	1024
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum number of connections that can be made to an LDAP data source to perform write operations.

This property takes an integer.

The value of this property must be at least 1.

This property can also take the following values:

`unlimited`

This value means no limit is set for this property.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## one-level-search-base-dn

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dn
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies the list of one-level search bases to which the search-size-limit property applies. Custom search limits are defined for a specific resource limits policy.

This property takes a Distinguished Name (DN) value.

The default behavior for this property is as follows: The search-size-limit property does not apply to any one-level search.

This property is used to configure the following features:

`custom-search-size-limit`

Custom search limits are used to restrict the maximum size of a search result. Custom search limits are defined for a specific resource limits policy.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## op-count-per-interval-timeout

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	duration
Default value	1000ms
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the duration of the interval used to count operation. The maximum number of operations, allowed by the connection handler, per interval is defined by the property: [max-op-count-per-interval\(5DPCONF\)](#).

The duration is expressed in milliseconds.

The value of this property must be at least 1ms.

The value of this property cannot be unlimited.

This property is used to configure the following features:

[resource-limits-policy](#)

Resource limit policies define the maximum resources that Directory Proxy Server can process for a given connection handler.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## pattern-matching-base-dn-regular-expression

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	all
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies a pattern for a regular expression. The target base DN of a non search request must match this pattern in order for the data view to handle the request. The pattern is relative to the base DN of the data view.

The default behavior for this property is as follows: Match all operation target base DNs

This property is explicitly ordered multivalued. You must specify an explicit order for each regular expression. The value of the property must match the syntax: `integer:regex` where `integer` is the explicit order and `regex` is the pattern.

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dpconf\(1M\)](#)

## pattern-matching-base-object-search-filter

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	all
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies a pattern for a search filter. The filter of a base-level search request must match the specified pattern for the request to be handled by the data view.

This property is explicitly ordered multivalued. You must specify an explicit order for each regular expression. The value of the property must match the syntax: `integer:regex` where `integer` is the explicit order and `regex` is the pattern.

The default behavior for this property is as follows: Match all base-object search filters

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dpconf\(1M\)](#)

## pattern-matching-dn-regular-expression

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	all
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies a pattern for a regular expression. The target DN of a request must match this pattern in order for the data view to handle the request. The pattern is relative to the base DN of the data view.

This property is explicitly ordered multivalued. You must specify an explicit order for each regular expression. The value of the property must match the syntax: `integer:regex` where `integer` is the explicit order and `regex` is the pattern.

The default behavior for this property is as follows: Match all operation target DN's

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dpconf\(1M\)](#)

## pattern-matching-one-level-search-filter

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	all
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies a pattern for a search filter. The filter of a one-level search request must match the specified pattern for the request to be handled by the data view.

This property is explicitly ordered multivalued. You must specify an explicit order for each regular expression. The value of the property must match the syntax: `integer:regex` where `integer` is the explicit order and `regex` is the pattern.

The default behavior for this property is as follows: Match all one-level search filters

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dpconf\(1M\)](#)

## pattern-matching-subtree-search-filter

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	all
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies a pattern for a search filter. The filter of a subtree-level search request must match the specified pattern for the request to be handled by the data view.

This property is explicitly ordered multivalued. You must specify an explicit order for each regular expression. The value of the property must match the syntax: `integer:regex` where `integer` is the explicit order and `regex` is the pattern.

The default behavior for this property is as follows: Match all subtree search filters

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dpconf\(1M\)](#)

## perform-distinct-select

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies whether distinct select is performed to not return duplicate entries when data source contains duplicate entries.

This property is `true` or `false`.

This property is used to configure the following features:

`jdbc-object-class`

A JDBC object class maps an LDAP object class to one or more relational database tables. A JDBC object class can obtain its information from more than one table. However, one table must be defined as the primary table, and additional tables are defined as secondary tables.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## primary-table

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	Default behavior is not defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the primary JDBC table from which the object class obtains its list of entries.

This property is used to configure the following features:

`jdbc-object-class`

A JDBC object class maps an LDAP object class to one or more relational database tables. A JDBC object class can obtain its information from more than one table. However, one table must be defined as the primary table, and additional tables are defined as secondary tables.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## primary-view

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dnReference
Default value	Default behavior is not defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property defines the primary data view that forms the source of a join data view.

The value of this property is the name of one of the following configuration entities: `coordinator-data-view`, `jdbc-data-view`, `join-data-view`, `ldap-data-view`, `ldif-data-view`.

This property is used to configure the following features:

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## priority

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	99
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the priority of the connection handler. A connection is evaluated against connection handlers in order of the priority of the connection handler, as follows:

- Priority 1 is the highest priority connection handler.
- Priority 100 is the lowest priority connection handler. Priority 100 is reserved for the default connection handler.

This property takes an integer.

The value of this property must be at least 1.

The value of this property must be no greater than 99.

This property is used to configure the following features:

`connection-handler`

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## process-bind

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	No default is defined.
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies whether binds are permitted on a data view.

This property is `true` or `false`.

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

---

## processing-power

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	100
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

In the throughput load-balancing algorithm, the traffic is routed to N data sources so that the sum of their respective weights is at least equals to the processing power.

This property takes an integer.

The value of this property must be at least 1.

This property is used to configure the following features:

`ldap-data-source-pool`

One or more data sources are attached to a data source pool for load balancing and failover.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## prohibited-comparable-attrs

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies a set of LDAP attribute types that cannot be compared in an LDAP search filter or compare operation.

The default behavior for this property is as follows: None - all attribute types can be compared

This property is used to configure the following features:

`request-filtering-policy`

Request filtering policies control what data can be accessed by clients.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## prohibited-subtrees

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dn
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies a set of subtrees that cannot be accessed by clients.

This property takes a Distinguished Name (DN) value.

The default behavior for this property is as follows: No subtrees are prohibited

This property is used to configure the following features:

`request-filtering-policy`

Request filtering policies control what data can be accessed by clients.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## proportion

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	100
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

In the fastest-server load-balancing algorithm, the proportion indicated that a ratio of 1/proportion operations are sent to a random server instead of going to the best one. This is used to keep the response times updated when a server is not in activity. A value of 0 disables this capability.

This property takes an integer.

The value of this property must be at least 0.

This property is used to configure the following features:

`ldap-data-source-pool`

One or more data sources are attached to a data source pool for load balancing and failover.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## proxied-auth-check-timeout

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	duration
Default value	1800000
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies a timeout used during proxy authorization.

When a client operation contains a proxy authorization control, Directory Proxy Server checks that the `clientDN` has the right to impersonate the `clientPauthDN`.

If `client-cred-mode(5DPCONF)` is set to `use-proxy-auth`, Directory Proxy Server checks that the `clientDN` has the relevant ACIs in the LDAP server by using the `getEffectiveRights` command.

The result is cached in the Directory Proxy Server and renewed when `proxied-auth-check-timeout` expires.

The duration is expressed in milliseconds.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## proxied-auth-use-v1

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether Directory Proxy Server will use proxy authorization control version 1 or version 2, as follows:

- If the flag is `true`, Directory Proxy Server uses proxy authorization control v1.
- If the flag is `false`, Directory Proxy Server uses proxy authorization control v2.

This property is `true` or `false`.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## referral-bind-policy

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	default
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the bind policy that is applied when following referrals.

This property can take the following values in addition to the default.

`user`

Use credentials if available

`anonymous`

Always anonymous

The default behavior for this property is as follows: Use the settings specified in the default connection handler.

This property is used to configure the following features:

`resource-limits-policy`

Resource limit policies define the maximum resources that Directory Proxy Server can process for a given connection handler.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## referral-hop-limit

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	default
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum number of hops that are allowed when following referrals.

This property takes an integer.

The value of this property must be at least 1.

This property can also take the following values:

`unlimited`

`No limit`

The default behavior for this property is as follows: Use the settings specified in the default connection handler.

This property is used to configure the following features:

`resource-limits-policy`

Resource limit policies define the maximum resources that Directory Proxy Server can process for a given connection handler.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## referral-policy

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	default
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the policy that is applied when a referral is returned by an LDAP server.

This property can take the following values in addition to the default.

`follow`

Follow referrals

`forward`

Forward referrals to client

`discard`

Discard referrals

The default behavior for this property is as follows: Use the settings specified in the default connection handler

This property is used to configure the following features:

`resource-limits-policy`

Resource limit policies define the maximum resources that Directory Proxy Server can process for a given connection handler.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## remote-user-mapping-bind-dn-attr

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the name of the attribute that contains an alternate bind DN. The attribute is contained in a user entry on a remote LDAP server. The attribute is used to perform remote user mapping when [enable-remote-user-mapping\(5DPCONF\)](#) is true.

The default behavior for this property is as follows: This property is required when proxy performs remote user mapping.

This property is used to configure the following features:

server

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## replication-role

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	master
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the role that the data view plays in replication distribution.

This property can take the following values in addition to the default.

`consumer`

The data view simulates a replication consumer and handles read operations only.

`master`

The data view simulates a replication master and handles read and write operations.

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dpconf\(1M\)](#)

---

## request-filtering-policy

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dnReference
Default value	no-filtering
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the name of a request filtering policy which is to be used by the connection handler.

This property has as its value the name of a `request-filtering-policy` configuration entity.

The default behavior for this property is as follows: No request filtering policy - all requests are permitted.

This property is used to configure the following features:

`connection-handler`

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## request-grouping-size

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	5
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the number of entries to retrieve from the primary data view before searching on secondary view.

This property takes an integer.

The value of this property must be at least 1.

This property is used to configure the following features:

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## require-data-view-availability

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether search requests require all matching data views to be available. This property works only for the top-level data views.

This property is `true` or `false`.

This property is used to configure the following features:

`connection-handler`

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## resource-limits-policy

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dnReference
Default value	no-limits
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the name of a resource limits policy which is to be used by the connection handler.

This property has as its value the name of a `resource-limits-policy` configuration entity.

The default behavior for this property is as follows: No resource limits policy - no resource limits apply.

This property is used to configure the following features:

`connection-handler`

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## revert-add-on-failure

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag that indicates whether the server reverts successful add operations if a failure occurs on one backend source.

This property is `true` or `false`.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## routing-policy

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	all-candidates
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property determines when coordinator data view stops to send requests to coordinated data views.

This property can take the following values in addition to the default.

`all-candidates`

When the routing policy is set to all-candidates, the distribution algorithm (if any) associated with the data views gets the list of candidates and the routing policy forwards the operation to all the candidates sequentially.

`first-match`

When the routing policy is set to first-match :

- bind request is sent to each data view until the target entry is located. Once the target entry is located, the bind response, either success or failure, is returned and the process stops. Note that the subsequent operations sent by the client may fail, for example, add would fail if the target entry does not exist on the first data view.
- add request is sent to the first data view
- modify/delete/compare/modify dn requests are sent to the data view holding the target entry
- search is sent to each data view in a row until at least one entry is returned. Stops at first match.

`mirror`

When the routing policy is set to mirror:

- All operations are forwarded to the first coordinated data view.
- writes requests are forwarded to the others data views as well and possible errors are not reported to the client.
- search requests are forwarded to the first data view only.

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

## Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

---

## rule-action

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	hide-entry
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies how the result of a search operation should be returned.

This property can take the following values in addition to the default.

`hide-entry`

Do not return target entries

`hide-attrs`

Return target entries, filtering out the attributes specified by the `attrs` property

`show-attrs`

Return target entries, filtering out the attributes not specified by the `attrs` property

This property is used to configure the following features:

`search-data-hiding-rule`

Search data hiding rules determine what parts of the result of a search operation are returned to a client. Search data hiding rules are defined for a given request filtering policy.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## sample-size

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	100
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

In the fastest-server load-balancing algorithm, the response time is computed as the mean value of a sample. This property indicates the size of the sample.

This property takes an integer.

The value of this property must be at least 1.

This property is used to configure the following features:

`ldap-data-source-pool`

One or more data sources are attached to a data source pool for load balancing and failover.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## schema-check-enabled

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not the connection handler should perform a schema check.

This property is `true` or `false`.

This property is used to configure the following features:

`connection-handler`

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## scriptable-alerts-command

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	No default is defined.
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the command to use for handling alert messages.

This property is used to configure the following features:

server

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## scriptable-alerts-enabled

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not Directory Proxy Server should use a customizable script for alert notification.

This property is `true` or `false`.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## search-mode

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	sequential
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies how searches that span multiple data sources are performed.

This property can take the following values in addition to the default.

`parallel`

Perform searches in parallel

`sequential`

Perform searches sequentially

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## search-retry-count

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	3
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum number of retries that Directory Proxy Server performs when a search operation fails inadvertently.

This property takes an integer.

The value of this property must be at least 0.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## search-size-limit\_5dpconf

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	unlimited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum number of entries that can be returned by a search operation.

This property takes an integer.

The value of this property must be at least 1.

This property can also take the following values:

`unlimited`

This value means no limit is set for this property.

This property is used to configure the following features:

`custom-search-size-limit`

Custom search limits are used to restrict the maximum size of a search result. Custom search limits are defined for a specific resource limits policy.

`resource-limits-policy`

Resource limit policies define the maximum resources that Directory Proxy Server can process for a given connection handler.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## search-time-limit\_5dpconf

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	<code>duration</code>
Default value	unlimited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum duration of a search operation.

The duration is expressed in milliseconds.

The value of this property cannot be unlimited.

The default behavior for this property is as follows: No limit

This property is used to configure the following features:

`resource-limits-policy`

Resource limit policies define the maximum resources that Directory Proxy Server can process for a given connection handler.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## search-wait-timeout

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	duration
Default value	10000
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the maximum length of time that Directory Proxy Server waits for a search thread to become available.

The duration is expressed in milliseconds.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## search-weight

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	disabled
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the proportion of search requests that are sent to the attached data source.

This property takes an integer.

The value of this property must be at least 1.

This property can also take the following values:

`disabled`

Do not forward any search requests to the data source

This property is used to configure the following features:

`attached-ldap-data-source`

A data source can be attached to one or more data source pools for load balancing and failover. When attached to a data source pool, a data source is called an attached data source.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## secondary-table

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies an optional additional JDBC table from which the object class obtains additional information about its entries.

The default behavior for this property is as follows: No additional JDBC table is considered.

This property is used to configure the following features:

`jdbc-object-class`

A JDBC object class maps an LDAP object class to one or more relational database tables. A JDBC object class can obtain its information from more than one table. However, one table must be defined as the primary table, and additional tables are defined as secondary tables.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## secondary-view

---

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dnReference
Default value	Default behavior is not defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property defines the secondary data view that forms the source of a join data view.

The value of this property is the name of one of the following configuration entities: `coordinator-data-view`, `jdbc-data-view`, `join-data-view`, `ldap-data-view`, `ldif-data-view`.

This property is used to configure the following features:

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## sql-column

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	Default behavior is not defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property provides the column in the relational database table from which the LDAP attribute is obtained.

This property is used to configure the following features:

`jdbc-attr`

JDBC attributes map LDAP attributes to entries in relational database tables. The definition of a JDBC attribute includes the name of the LDAP attribute, and the relational database table and column in which the corresponding information is located.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## sql-syntax

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	VARCHAR
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property defines the syntax used to construct an entry in the relational database table from an LDAP entry.

This property is used to configure the following features:

`jdbc-attr`

JDBC attributes map LDAP attributes to entries in relational database tables. The definition of a JDBC attribute includes the name of the LDAP attribute, and the relational database table and column in which the corresponding information is located.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## sql-table

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	Default behavior is not defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the name of the relational database table.

This property is used to configure the following features:

`jdbc-table`

A JDBC table is created for each relational database table that will be used in the JDBC data view. When you create a JDBC table you specify the name of the table in the relational database, and the name you want to assign to this table in the JDBC data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## ssl-client-cert-alias

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the alias of the certificate used to negotiate SSL connections with data sources.

The default behavior for this property is as follows: Proxy applies chooses an alias based on the public key type and the list of certificate issuer authorities recognized by the peer (if any).

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## ssl-policy

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	never
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies whether SSL should be used for connections between Directory Proxy Server and a data source.

This property can take the following values in addition to the default.

`always`  
Always use SSL

`client`  
Use SSL if the client is using SSL

`never`  
Never use SSL

This property is used to configure the following features:

`ldap-data-source`  
The common name of the LDAP data source

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## ssl-server-cert-alias

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the alias of the certificate used to negotiate SSL connections with clients.

The default behavior for this property is as follows: Proxy applies chooses an alias based on the public key type and the list of certificate issuer authorities recognized by the peer (if any). After instance creation, the value of this property is `defaultServerCert`.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## subtree-search-base-dn

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dn
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies the list of subtree search bases to which the search-size-limit property applies. Custom search limits are defined for a specific resource limits policy.

This property takes a Distinguished Name (DN) value.

The default behavior for this property is as follows: The search-size-limit property does not apply to any subtree search.

This property is used to configure the following features:

`custom-search-size-limit`

Custom search limits are used to restrict the maximum size of a search result. Custom search limits are defined for a specific resource limits policy.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## super-class

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies a list of additional object classes to be returned as part of the `objectclass` attribute.

The default behavior for this property is as follows: No additional object class is returned.

This property is used to configure the following features:

`jdbc-object-class`

A JDBC object class maps an LDAP object class to one or more relational database tables. A JDBC object class can obtain its information from more than one table. However, one table must be defined as the primary table, and additional tables are defined as secondary tables.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## supported-ssl-cipher-suites

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	JRE
Must be set	No
Is modifiable	No
Is multivalued	Yes
Requires restart	No

This property specifies the list of SSL cipher suites that are supported by Directory Proxy Server.

The default behavior for this property is as follows: All SSL cipher suites supported by the Java Run Time running the proxy.

This property is used to configure the following features:

server

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## supported-ssl-protocols

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	JRE
Must be set	No
Is modifiable	No
Is multivalued	Yes
Requires restart	No

This property specifies the list of SSL protocols that are supported by Directory Proxy Server.

The default behavior for this property is as follows: All SSL protocols supported by the Java Run Time running the proxy.

This property is used to configure the following features:

server

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## syslog-alerts-enabled

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property is a flag indicating whether or not Directory Proxy Server should use the system log for alert notification.

This property is `true` or `false`.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## syslog-alerts-facility

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	USER
Must be set	No
Is modifiable	No
Is multivalued	No
Requires restart	No

This property specifies the syslog message category that alert messages should use.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## syslog-alerts-host

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	ipAddress
Default value	localhost
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the host name of the syslogd daemon that alert messages should be sent to.

This property takes an IP address or host name.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## target-attr-value-assertions

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies a list of attribute:value assertions in the form `attrName:attrValue`. The search data hiding rule applies to entries that match one or more of the specified assertions.

The syntax of this string is `<attr>#<value>`.

An attribute value assertion of the form `<attribute>#<value>`

The value of this property must match the pattern `^[a-zA-Z] [-a-zA-Z0-9] *# .+ $`.

The default behavior for this property is as follows: No assertion is defined.

This property is used to configure the following features:

`search-data-hiding-rule`

Search data hiding rules determine what parts of the result of a search operation are returned to a client. Search data hiding rules are defined for a given request filtering policy.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## target-dn-regular-expressions

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies a list of name patterns. The search data hiding rule applies to entries whose name matches one or more of the specified patterns.

The default behavior for this property is as follows: No pattern is defined.

This property is used to configure the following features:

`search-data-hiding-rule`

Search data hiding rules determine what parts of the result of a search operation are returned to a client. Search data hiding rules are defined for a given request filtering policy.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## target-dns

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dn
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property specifies a list of entry names. The search data hiding rule applies to all the listed entries.

This property takes a Distinguished Name (DN) value.

The default behavior for this property is as follows: No DN is defined.

This property is used to configure the following features:

`search-data-hiding-rule`

Search data hiding rules determine what parts of the result of a search operation are returned to a client. Search data hiding rules are defined for a given request filtering policy.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## time-resolution

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	duration
Default value	250
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property specifies the time interval between consecutive system calls that retrieve time from the OS. For details about operations that take less than 250 milliseconds, reduce the `time-resolution` period or change the value of the `time-resolution-mode` property.

If set to 0 milliseconds, the proxy behaves as if the value of the `time-resolution-mode` property was set to `system-milli`.

This property is ignored when the value of the `time-resolution-mode` property is set to `system-milli` or `system-micro`.

The duration is expressed in milliseconds.

The value of this property cannot be unlimited.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## time-resolution-mode

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	enumeration
Default value	system-milli
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the mode used to retrieve time from the OS.

This property can take the following values in addition to the default.

`custom-resolution`

Use a thread performing a system call every time-resolution milliseconds

`system-milli`

Use a system call retrieving time in milliseconds

`system-micro`

Use a system call retrieving time in microseconds

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## use-cert-subject-as-bind-dn

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not Directory Proxy Server should use a user certificate subject as the user DN.

This property is `true` or `false`.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## use-external-schema

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	Yes

This property is a flag indicating whether or not Directory Proxy Server should use an external LDAP schema.

This property is `true` or `false`.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## user-bind-dn

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dn
Default value	none
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the distinguished name of the client that is mapped if [enable-user-mapping\(5DPCONF\)](#) is true.

The distinguished name of the user that the client is mapped to is specified by [mapped-bind-dn\(5DPCONF\)](#).

This property takes a Distinguished Name (DN) value.

The default behavior for this property is as follows: Proxy does not apply user mapping.

This property is used to configure the following features:

`user-mapping`

In user mapping, a client identity is mapped to the identity of an alternate user. After a BIND operation, the Directory Proxy Server submits subsequent operations as the alternate user.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## user-bind-pwd

---

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	No
Is multivalued	No
Requires restart	No

This property specifies the password of the client that is mapped if [enable-user-mapping\(5DPCONF\)](#) is true.

The password of the user to which the client is mapped is specified by [mapped-bind-pwd\(5DPCONF\)](#).

This property is read-only. To change the password, use the `user-bind-pwd-file` property.

The default behavior for this property is as follows: The proxy will not associate any password to the mapped identity.

This property is used to configure the following features:

`user-mapping`

In user mapping, a client identity is mapped to the identity of an alternate user. After a BIND operation, the Directory Proxy Server submits subsequent operations as the alternate user.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## user-bind-pwd-file

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	password
Default value	No default is defined.
Must be set	Yes
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the file from which to read the password of the client that is mapped if [enable-user-mapping\(5DPCONF\)](#) is true.

The password of the user that the client is mapped to is specified by [mapped-bind-pwd\(5DPCONF\)](#). The temporary file is read once, and the password stored for future use.

This property takes a path to a file that contains the password value.

This property is used to configure the following features:

`user-mapping`

In user mapping, a client identity is mapped to the identity of an alternate user. After a BIND operation, the Directory Proxy Server submits subsequent operations as the alternate user.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## use-read-connections-for-writes

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether Directory Proxy Server is allowed to use 'read' connections to process writes when all write connections are busy and vice-versa.

This property is `true` or `false`.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## user-filter

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	any
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies an LDAP search filter. The entry of the bound client must match the LDAP search filter in order for the connection to be accepted by the connection handler.

For example, the following filter could be used as a criteria for a connection handler: "uid>=1000".

Bound clients with a uid that matches the filter can be allocated to the connection handler.

The default behavior for this property is as follows: All users are accepted

This property is used to configure the following features:

`connection-handler`

Connection handlers define the resource limits and filters that apply to a connection, and the data views that are exposed to the connection.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## user-mapping-anonymous-bind-dn

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dn
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the bind DN to which anonymous users are mapped if [enable-user-mapping\(5DPCONF\)](#) is true.

This property takes a Distinguished Name (DN) value.

The default behavior for this property is as follows: No mapping is applied to anonymous users.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## user-mapping-anonymous-bind-pwd

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	No
Is multivalued	No
Requires restart	No

This property specifies the authentication password for anonymous user mapping if [enable-user-mapping\(5DPCONF\)](#) is true.

This property is read-only. To change the password, use the `user-mapping-anonymous-bind-pwd-file` property.

The default behavior for this property is as follows: No mapping is applied to anonymous users.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## user-mapping-anonymous-bind-pwd-file

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	password
Default value	No default is defined.
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the file from which to read the authentication password for anonymous user mapping if [enable-user-mapping\(5DPCONF\)](#) is `true`. The temporary file is read once, and the password is stored for future use.

This property takes a path to a file that contains the password value.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## user-mapping-default-bind-dn

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	dn
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies a default bind DN to which a user identity is mapped if [enable-user-mapping\(5DPCONF\)](#) is true but the mapping fails.

User mapping can fail when a client identity is mapped to a non-existent alternative identity or when there has been a configuration error.

This property takes a Distinguished Name (DN) value.

The default behavior for this property is as follows: No mapping is applied.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## user-mapping-default-bind-pwd

---

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	No
Is multivalued	No
Requires restart	No

This property specifies the default bind password to use if [enable-user-mapping\(5DPCONF\)](#) is true but the mapping fails.

User mapping can fail when a client identity is mapped to a non-existent alternative identity or when there has been a configuration error.

This property is read-only. To change the password, use the `user-mapping-default-bind-pwd-file` property.

The default behavior for this property is as follows: No mapping is applied to anonymous users.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## user-mapping-default-bind-pwd-file

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	password
Default value	No default is defined.
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the file from which to read the default bind password if [enable-user-mapping\(5DPCONF\)](#) is true but the mapping fails. The temporary file is read once, and the password is stored for future use.

This property takes a path to a file that contains the password value.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## use-tcp-keep-alive

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not `SO_KEEPALIVE` should be enabled for connections between clients and listener.

This property is `true` or `false`.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

`ldap-listener`

The LDAP listener represents the network interface of Directory Proxy Server.

`ldaps-listener`

The LDAP listener represents the network interface of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## use-tcp-no-delay

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	true
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not `TCP_NODELAY` should be enabled for connections between clients and a listener.

This property is `true` or `false`.

This property is used to configure the following features:

`ldap-data-source`

The common name of the LDAP data source

`ldap-listener`

The LDAP listener represents the network interface of Directory Proxy Server.

`ldaps-listener`

The LDAP listener represents the network interface of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## verify-certs

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property is a flag indicating whether or not Directory Proxy Server should verify that the client entry contains the SSL client certificate.

This property is `true` or `false`.

This property is used to configure the following features:

`server`

The global configuration of Directory Proxy Server contains properties that affect the overall operation of Directory Proxy Server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## viewable-attr

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	all except non-viewable-attr
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property provides a list of attributes that are exposed by the data view.

The default behavior for this property is as follows: All attributes are viewable

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)

---

## view-value

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	none
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property defines the virtual value of the attribute.

The default behavior for this property is as follows: For some transformations, this property is required for the proxy to apply the transformation.

This property is used to configure the following features:

`virtual-transformation`

Virtual data transformations create a virtual data view from a physical data view. Practically, you never define a virtual data view. Instead, you specify the transformations that you require and define these on an existing physical data view. A transformation performs a specific action in a certain direction. The direction of a transformation determines the transformation model. When you define a virtual data transformation, you create a virtual attribute that exists only in the context of the virtual data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## vlv-control-enabled

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	boolean
Default value	false
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies whether VLV control is enabled.

This property is `true` or `false`.

This property is used to configure the following features:

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## vlv-control-page-size

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	1024
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the page size used to retrieve entries for VLV control.

This property takes an integer.

The value of this property must be at least 1.

This property is used to configure the following features:

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## vlv-control-sorting-attr

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	objectclass
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the attribute used by VLV control to sort results.

The syntax of this string is ATTR\_NAME.

The value of this property must match the pattern `^[a-zA-Z] [-a-zA-Z0-9] *$`.

This property is used to configure the following features:

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

## warning-op-count-per-interval

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	integer
Default value	unlimited
Must be set	No
Is modifiable	Yes
Is multivalued	No
Requires restart	No

This property specifies the threshold number of operations for a connection handler, per interval of time, at which a warning is logged or sent as admin alert. The maximum number of operations per interval of time is defined by the property: [max-op-count-per-interval\(5DPCONF\)](#). The interval of time is defined by the property: [op-count-per-interval-timeout\(5DPCONF\)](#). The admin alert to set on the property [enabled-admin-alerts\(5DPCONF\)](#) is "warning-resource-limit-exceeded".

This property takes an integer.

The value of this property must be at least 1.

This property is used to configure the following features:

[resource-limits-policy](#)

Resource limit policies define the maximum resources that Directory Proxy Server can process for a given connection handler.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

### See Also

[dpconf\(1M\)](#)

---

## writable-attr

Directory Proxy Server configuration property

### Description

Characteristic	Value
Syntax	string
Default value	all except non-writable-attr
Must be set	No
Is modifiable	Yes
Is multivalued	Yes
Requires restart	No

This property provides a list of attributes that can be written through the data view.

The default behavior for this property is as follows: All attributes are writable

This property is used to configure the following features:

`coordinator-data-view`

A coordinator data view is a coordinator of multiple data views.

`jdbc-data-view`

A JDBC data view enables you to make a relational database accessible to LDAP client applications.

`join-data-view`

A join data view is an aggregation of multiple data views. The current release of Directory Proxy Server supports the aggregation of two data views into one join data view.

`ldap-data-view`

An LDAP data view exposes data in an LDAP server to a client request and specifies the data source pool that responds to the request.

`ldif-data-view`

An LDIF data view allows data in an LDIF file to be present to LDAP applications as if it were LDAP data.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## See Also

[dpconf\(1M\)](#)



# 5

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## Formats

This section describes the formats of files delivered with Directory Server Enterprise Edition.

## Intro\_5Formats

introduction to Directory Server Enterprise Edition file formats

### Description

This section describes the formats of files delivered with Directory Server Enterprise Edition.

### LIST OF FILE FORMATS

This reference manual section includes the following pages.

**[certmap.conf](#)**

map certificates to directory entries

**[dse.ldif](#)**

Directory Server configuration file

**[hosts\\_access\(4\)](#)**

format of host access control files for Directory Server Enterprise Edition

---

## certmap.conf

Map certificates to directory entries

### Synopsis

Location: *instance-path/alias/certmap.conf*

```
# This is a comment.
certmap default default
[default:property1 [value1]]
[default:property2 [value2]]
[...]

[certmap name issuerDN
[name:property1 [value1]]
[name:property2 [value2]]
...
]
```

### Description

The `certmap.conf` file defines how Directory Server maps certificates to directory entries.

Comment lines are those starting with #.

#### CERTIFICATE MAPPINGS

The `certmap.conf` file consists of a series of certificate maps. It begins with a default certificate map, starting with the line:

```
certmap default default
```

Each subsequent certificate map starts with a line identifying the name of the map and the certificate authority issuer DN of the certificates to which the map applies.

The *issuerDN* string specified in the certificate map must correspond *exactly* to the issuer DN shown in the certificates. In particular, whitespace in the issuer DN is significant.

#### PROPERTIES AND VALUES

A certificate map also optionally specifies values for the following properties.

`DNComps`

Specifies a comma separated list of relative distinguished name components of the base DN for an LDAP search to find the user entry matching the certificate. The components are taken from the subject DN of the certificate.

When the value of this property value is left empty, the base DN is the null suffix. In this particular case, searching against the null suffix in Directory Server searches every suffix in the directory. Thus leaving `DNComps` empty can have negative impact on performance.

The default behavior, when this property is commented out or not specified, is to take as the base DN the subject DN of the certificate.

**FilterComps**

Specifies a comma separated list of LDAP attributes to form a filter for an LDAP search to find the user entry matching the certificate. The values for the filter are taken from the certificate, which can hold the following attributes.

c  
Country

cn  
Common name

e  
mail  
Email address

l  
Location

o  
Organization

ou  
Organizational unit

st  
State

uid  
UNIX user ID

For example, consider a certificate map named `example` containing the following `FilterComps` specification.

```
example:FilterComps e,uid
```

Then searches for the user entry matching the certificate use the filter `"(& (& (mail=email-addr-from-cert) (uid-from-cert)))"`.

The default behavior, when this property is commented out or not specified, is to use the filter `"(objectclass=*)"`.

**verifycert**

Specifies whether the client application certificate is checked to make sure it is valid and not revoked.

This property can be usefully set to `on` if the directory stores client application certificates.

The default behavior is the same as `off`, meaning client certificates are not checked to be valid and not revoked.

**CmapLdapAttr**

Specifies the name of the LDAP attribute in the directory containing the subject DN of the certificate.

The implied default value is `certSubjectDN`, not a standard LDAP attribute.

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**Note:** If the LDAP attribute used is not of syntax DN, its value must match the subject DN provided *exactly* as the LDAP server does normalize DN values that are not stored in attributes with DN syntax.

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**library**

Specifies a shared plug-in library or DLL containing custom certificate mapping code.

There is no default.

**InitFn**

Specifies the initialization function for the custom certificate mapping code in the library referenced by the value of the `library` property.

There is no default.

**Examples**

The following `certmap.conf` file specifies both a default certificate map, and an additional certificate map for certificates from the US subsidiary of Example.com.

```
# Example certmap.conf
certmap default default

certmap examplecerts ou=Example.com, o=examplecerts, c=US
examplecerts:DNComps ou,o,c
examplecerts:FilterComps e
examplecerts:verifycert on
```

When the server gets a certificate issued by any certificate authority other than the US subsidiary of Example.com, it uses the default mapping. If the certificate however has been issued by the US subsidiary of Example.com, the server looks for entries under the branch for the organizational unit and searches for entries using the client email address. It also verifies that such certificates are valid and that they are not revoked.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

**See Also**

[dsadm\(1M\)](#)

## dse.ldif

Directory Server configuration file

### Synopsis

Location: *instance-path/config/dse.ldif*

### Description

Directory Server stores its configuration as directory entries under `cn=config`. You can therefore change the server configuration by modifying configuration entries over LDAP, rather than by editing configuration files. Configuring Directory Server in this way allows you to reconfigure a remote server while it continues to serve other directory clients.

The `dse.ldif` file defines the configuration for a Directory Server instance. The `dse.ldif` file includes a set of entries under `cn=config`. These entries make up the modular parts of the Directory Server instance configuration.

Directory Server stores its schema under `cn=schema`, not as part of the rest of the server configuration. For an introduction to the schema available under `cn=schema`, see [Intro\\_6Schema\(5DSSD\)](#).

---

---

**Note:** Neither the `dse.ldif` file nor the `cn=config` suffix constitute a public interface for configuring a Directory Server instance. Use [dsconf\(1M\)](#) instead.

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The `dse.ldif` file has the following characteristics.

- The `dse.ldif` file is read only once at startup. Thereafter, the server configuration is based on the in-memory LDAP image of the configuration entries. Modifications to the `dse.ldif` file while the server is running are erased.
- Modification of the configuration with Directory Service Control Center or from the command line changes the LDAP image of the configuration. Some directory features read the current configuration when invoked and do not require the server to be restarted.
- Directory Server writes the `dse.ldif` file whenever the LDAP image of the configuration is changed. Some directory features read their configuration only when the server starts. Writing the file ensures the change is present.

The existing `dse.ldif` file is copied to `dse.ldif.bak`, and the existing `dse.ldif.bak` is overwritten. Therefore, any manual changes to the `dse.ldif` file are lost if the configuration is changed through LDAP before the server is restarted.

- After every successful startup of the directory, the `dse.ldif` file is copied to `dse.ldif.startOK` in the same location. If your server cannot start because of a faulty configuration, restore the `dse.ldif` file from the `dse.ldif.startOK` file.
- The following restrictions apply to modifications to the server configuration.
  - Some modifications only take effect after the server is restarted. See *ATTRIBUTES REQUIRING RESTART* in the manual page for details.

- The `cn=monitor` entry cannot be modified.
- The server ignores invalid attribute values.

## Extended Description

Directory Server has a modular configuration, with a number of distinct branches under the `cn=config` Directory Information Tree. The primary branches are below the following DNs.

`cn=encryption,cn=config`

Configuration attributes related to encryption

`cn=features,cn=config`

Access control for many server features, also configuration for internationalized matching and searching

`cn=mapping tree,cn=config`

Configuration for suffixes and replica

`cn=Password Policy,cn=config`

Default password policy configuration

`cn=plugins,cn=config`

Plug-in configuration entries for plug-in based server functionality, databases, indexes

`cn=replication,cn=config`

Default replication bind information for `cn=Replication Manager`, also formerly used for replication configuration

`cn=suffixName,cn=config`

Suffix configuration attributes

`cn=tasks,cn=config`

Used by the server to manage online import, backup, and so forth

`cn=uniqueid generator,cn=config`

Configuration attributes for providing unique IDs

### About Configuration Attributes

The `dse.ldif` file contains all configuration information including directory specific entries created by Directory Server at startup, and directory specific entries related to the database, also created by Directory Server at startup. The file includes the Root DSE, named by " ", and the entire contents of `cn=config`. When the server generates the `dse.ldif` file, it lists the entries in hierarchical order. It does so in the order that the entries appear in the directory under `cn=config`.

Within a configuration entry, each attribute is represented as an attribute name. The value of the attribute corresponds to the attribute's configuration.

The following example shows part of the `dse.ldif` file for a Directory Server instance. The example indicates, among other things, that schema checking has been turned *on*. This is represented by the attribute `nsslapd-schemacheck`, which takes the value `on`.

```
dn: cn=config
objectclass: top
objectclass: extensibleObject
objectclass: nsslapdConfig
```

```
nsslapd-accesslog-logging-enabled: on
nsslapd-enquote-sup-oc: on
nsslapd-localhost: myServer.example.com
nsslapd-errorlog: /local/ds/logs/errors
nsslapd-schemacheck: on
nsslapd-port: 389
nsslapd-localuser: nobody
...
```

See *CONFIGURATION ATTRIBUTES* in this manual page for a list of configuration attribute manual pages.

### Access Control For Configuration Entries

When Directory Server is installed, a default set of Access Control Instructions, ACIs, is implemented for all entries under `cn=config`. The following extract from the `dse.ldif` file shows an example of these default ACIs.

```
aci: (targetattr != "aci") (targetscope = "base") (version 3.0;
  aci "Enable read access to rootdse for anonymous users";
  allow(read,search,compare) userdn="ldap:///anyone"; )
aci: (targetattr = "*") (version 3.0; aci "Enable full access
  for Administrators group"; allow (all)(groupdn = "
  ldap:///cn=Administrators,cn=config"); )
aci: (targetattr = "userPassword") ( version 3.0;
  aci "allow userpassword self modification";
  allow (write) userdn = "ldap:///self";)
```

By default, both the `cn=Directory Manager` user and the `cn=admin`, `cn=Administrators`, `cn=config` user have access to modify configuration entries. ACI syntax is covered elsewhere in the Directory Server Enterprise Edition documentation.

## CONFIGURATION ATTRIBUTES

This section lists configuration attributes by their location in the configuration Directory Information Tree.

### Attributes of `cn=config`

General configuration entries are stored under the `cn=config` entry. The `cn=config` entry is an instance of the `nsslapdConfig` object class, which inherits from the `extensibleObject` object class. For attributes to be taken into account by the server, the entry must contain the `nsslapdConfig` object class, the `extensibleObject` object class and the `top` object class.

See the following manual pages.

- [nsslapd-allidsthreshold\(5DSCONF\)](#)
- [nsslapd-attribute-name-exceptions\(5DSCONF\)](#)
- [nsslapd-berbufsize\(5DSCONF\)](#)
- [nsslapd-certmap-basedn\(5DSCONF\)](#)
- [nsslapd-config\(5DSCONF\)](#)
- [nsslapd-ds4-compatible-schema\(5DSCONF\)](#)
- [nsslapd-enquote-sup-oc\(5DSCONF\)](#)
- [nsslapd-groupevalnestlevel\(5DSCONF\)](#)

- `nsslapd-idletimeout(5DSCONF)`
- `nsslapd-instancedir(5DSCONF)`
- `nsslapd-ioblocktimeout(5DSCONF)`
- `nsslapd-lastmod(5DSCONF)`
- `nsslapd-listenBacklog(5DSCONF)`
- `nsslapd-listenhost(5DSCONF)`
- `nsslapd-localhost(5DSCONF)`
- `nsslapd-localuser(5DSCONF)`
- `nsslapd-maxbersize(5DSCONF)`
- `nsslapd-maxconnections(5DSCONF)`
- `nsslapd-maxdescriptors(5DSCONF)`
- `nsslapd-maxpsearch(5DSCONF)`
- `nsslapd-maxthreadsperconn(5DSCONF)`
- `nsslapd-nagle(5DSCONF)`
- `nsslapd-port(5DSCONF)`
- `nsslapd-privatenamespaces(5DSCONF)`
- `nsslapd-readonly(5DSCONF)`
- `nsslapd-referral(5DSCONF)`
- `nsslapd-referralmode(5DSCONF)`
- `nsslapd-reservedescriptors(5DSCONF)`
- `nsslapd-rootdn(5DSCONF)`
- `nsslapd-rootpw(5DSCONF)`
- `nsslapd-rootpwstoragescheme(5DSCONF)`
- `nsslapd-schema-repl-useronly(5DSCONF)`
- `nsslapd-schemacheck(5DSCONF)`
- `nsslapd-securePort(5DSCONF)`
- `nsslapd-securelistenhost(5DSCONF)`
- `nsslapd-security(5DSCONF)`
- `nsslapd-sizelimit(5DSCONF)`
- `nsslapd-threadnumber(5DSCONF)`
- `nsslapd-timelimit(5DSCONF)`
- `nsslapd-versionstring(5DSCONF)`
- `useAuthzIdForAuditAttrs(5DSCONF)`

#### **Attributes of `cn=encryption, cn=config`**

Encryption related attributes are stored under the `cn=encryption, cn=config` entry. This entry is an instance of the `nsEncryptionConfig` object class. For encryption related attributes to be taken into account by the server, this object class, in addition to the `top` object class, must be present in the entry.

See the following manual pages.

- [nsSSL2\(5DSCONF\)](#)
- [nsSSL3\(5DSCONF\)](#)
- [nsSSL3ciphers\(5DSCONF\)](#)
- [nsSSLClientAuth\(5DSCONF\)](#)
- [nsSSLServerAuth\(5DSCONF\)](#)
- [nsSSLSessionTimeout\(5DSCONF\)](#)

### **Attributes of** `cn=mapping tree,cn=config`

Configuration attributes for suffixes and replication are stored under the branch `cn=mapping tree,cn=config`.

Configuration attributes related to suffixes are found under the suffix subentry, which has a DN of the following form.

```
cn="suffixName",cn=mapping tree,cn=config
```

Suffix configuration entries therefore have CNs such as `cn="dc=example,dc=com"`. Suffix configuration entries are instances of the `nsMappingTree` object class, which inherits from the `extensibleObject` object class. For suffix configuration attributes to be taken into account by the server, these object classes, in addition to the `top` object class, must be present in the entry. See the following man pages about suffix configuration entry attributes.

- [nsslapd-backend\(5DSCONF\)](#)
- [nsslapd-distribution-plugin\(5DSCONF\)](#)
- [nsslapd-distribution-funct\(5DSCONF\)](#)
- [nsslapd-referral\(5DSCONF\)](#)
- [nsslapd-state\(5DSCONF\)](#)

Replication configuration attributes are stored under an entry with a DN of the following form.

```
cn=replica,cn="suffixName",cn=mapping tree,cn=config
```

Replication agreement attributes are stored under an entry with a DN of the following form.

```
cn=replicationAgreementName,cn=replica,cn="suffixName",  
cn=mapping tree,cn=config
```

See [replication\(5DSCONF\)](#) for details.

### **Attributes of** `cn>Password Policy`

The default password policy entry for a Directory Server instance has DN `cn>Password Policy,cn=config`. For help configuring password policy, see the *Directory Server Administration Guide*.

For details concerning password policy entries, see [pwpolicy\(5DSSD\)](#). Entries having the object classes described in [pwdPolicy\(5DSOC\)](#), and in [sunPwdPolicy\(5DSOC\)](#) are used to configure password policy.

For instructions concerning legacy password policy functionality, see the *Directory Server Migration Guide*. Legacy password policy functionality is configured using entries of the object class described in [passwordPolicy\(5DSOC\)](#).

### Plug-In Configuration Under `cn=plugins`

Many of the features of Directory Server are designed as discrete modules that plug into the core server. The configuration for each part of Directory Server plug-in functionality has its own separate entry and set of attributes under the subtree `cn=plugins, cn=config`. The following example shows the configuration entry for the Telephone Syntax plug-in.

```
dn: cn=Telephone Syntax,cn=plugins,cn=config
objectclass: top
objectclass: nsSlapdPlugin
objectclass: ds-signedPlugin
objectclass: extensibleObject
cn: Telephone Syntax
nsslapd-pluginPath: /opt/SUNWdsee7/lib/sparcv9/syntax-plugin.so
nsslapd-pluginInitfunc: tel_init
nsslapd-pluginType: syntax
nsslapd-pluginEnabled: on
...
```

Some of these attributes are common to all plug-ins and some may be particular to a specific plug-in.

### Chained Suffix Plug-In Configuration

All plug-in configuration information used by the chained suffix instances is stored under the `cn=chaining database, cn=plugins, cn=config` entry.

The following global chained suffix configuration attributes common to all instances are stored under `cn=config, cn=chaining database, cn=plugins, cn=config`.

- [nsActiveChainingComponents\(5DSCONF\)](#)
- [nsMaxResponseDelay\(5DSCONF\)](#)
- [nsMaxTestResponseDelay\(5DSCONF\)](#)
- [nsTransmittedControls\(5DSCONF\)](#)

Default instance chained suffix attributes are stored under `cn=default instance config, cn=chaining database, cn=plugins, cn=config`.

- [nsAbandonedSearchCheckInterval\(5DSCONF\)](#)
- [nsBindConnectionsLimit\(5DSCONF\)](#)
- [nsBindRetryLimit\(5DSCONF\)](#)
- [nsBindTimeout\(5DSCONF\)](#)
- [nsCheckLocalACI\(5DSCONF\)](#)
- [nsConcurrentBindLimit\(5DSCONF\)](#)
- [nsConcurrentOperationsLimit\(5DSCONF\)](#)
- [nsConnectionLife\(5DSCONF\)](#)
- [nsOperationConnectionsLimit\(5DSCONF\)](#)
- [nsProxiedAuthorization\(5DSCONF\)](#)

- `nsReferralOnScopedSearch(5DSCONF)`
- `nsslapd-sizelimit(5DSCONF)`
- `nsslapd-timelimit(5DSCONF)`

Instance-specific chained suffix attributes are stored under `cn=chainedSuffix`, `cn=chaining database`, `cn=plugins`, `cn=config`.

- `nsFarmServerURL(5DSCONF)`
- `nshoplimit(5DSCONF)`
- `nsMultiplexorBindDN(5DSCONF)`
- `nsMultiplexorCredentials(5DSCONF)`

The following list shows the chained suffix attributes used for monitoring activity on instances. These attributes are stored under `cn=monitor`, `cn=dbName`, `cn=chaining database`, `cn=plugins`, `cn=config`.

`nsAddCount`

Number of add operations received.

`nsDeleteCount`

Number of delete operations received.

`nsModifyCount`

Number of modify operations received.

`nsRenameCount`

Number of rename operations received.

`nsSearchBaseCount`

Number of base level searches received.

`nsSearchOneLevelCount`

Number of one-level searches received.

`nsSearchSubtreeCount`

Number of subtree searches received.

`nsAbandonCount`

Number of abandon operations received.

`nsBindCount`

Number of bind requests received.

`nsUnbindCount`

Number of unbinds received.

`nsCompareCount`

Number of compare operations received.

`nsOperationConnectionCount`

Number of open connections for normal operations.

`nsBindConnectionCount`

Number of open connections for bind operations.

### Database Plug-In Configuration

Database plug-in configuration entries are stored under `cn=ldbm database, cn=plugins, cn=config`. That entry is a server plug-in configuration entry for databases, and therefore takes the same attributes as other plug-in entries.

Key entries beneath the plug-in configuration entry are listed as follows.

`cn=attr, cn=default indexes, cn=config, cn=ldbm database, cn=plugins, cn=config`

Configuration entries for default indexes. Notice that each individual attribute type indexed has its own entry, and that the attribute type is identified by common name, CN. See the following man pages concerning attributes for such entries.

- [cn\(5DSAT\)](#)
- [description\\_5dsat\(5DSAT\)](#)
- [nsIndexType\(5DSCONF\)](#)
- [nsMatchingRule\(5DSCONF\)](#)
- [nsSystemIndex\(5DSCONF\)](#)

`cn=attr, cn=index, cn=dbName, cn=ldbm database, cn=plugins, cn=config`

Configuration entries for indexing for attributes of the suffix whose backend database has CN `dbName`. Such entries take the same configuration attributes as configuration entries for default indexes.

All indexes, except system-essential ones, can be removed, but care should be taken not to cause unnecessary disruptions.

`cn=config, cn=ldbm database, cn=plugins, cn=config`

Global configuration information for all databases. See the following man pages concerning attributes for such entries.

- [nsLookthroughLimit\\_5dsconf\(5DSCONF\)](#)
- [nsslapd-db-checkpoint-interval\(5DSCONF\)](#)
- [nsslapd-db-circular-logging\(5DSCONF\)](#)
- [nsslapd-db-durable-transactions\(5DSCONF\)](#)
- [nsslapd-db-home-directory\(5DSCONF\)](#)
- [nsslapd-db-idl-divisor\(5DSCONF\)](#)
- [nsslapd-db-locks\(5DSCONF\)](#)
- [nsslapd-db-logbuf-size\(5DSCONF\)](#)
- [nsslapd-db-logdirectory\(5DSCONF\)](#)
- [nsslapd-db-logfile-size\(5DSCONF\)](#)
- [nsslapd-db-page-size\(5DSCONF\)](#)
- [nsslapd-db-transaction-batch-val\(5DSCONF\)](#)
- [nsslapd-db-tx-max\(5DSCONF\)](#)
- [nsslapd-dbcachesize\(5DSCONF\)](#)
- [nsslapd-dbncache\(5DSCONF\)](#)
- [nsslapd-disk-full-threshold\(5DSCONF\)](#)
- [nsslapd-disk-low-threshold\(5DSCONF\)](#)

- [nsslapd-exclude-from-export\(5DSCONF\)](#)
- [nsslapd-import-cachesize\(5DSCONF\)](#)
- [nsslapd-mode\(5DSCONF\)](#)

cn=database,cn=monitor,cn=ldbm database, cn=plugins,cn=config  
Entry for read-only database performance monitoring attributes. All of the values for these attributes are 32-bit integers.

nsslapd-db-abort-rate

Number of transactions that have been aborted.

nsslapd-db-active-txns

Number of transactions that are currently active (used by the database.)

nsslapd-db-cache-hit

Requested pages found in the cache.

nsslapd-db-cache-region-wait-rate

Number of times that a thread of control was forced to wait before obtaining the region lock.

nsslapd-db-cache-size-bytes

Total cache size in bytes.

nsslapd-db-cache-try

Total cache lookups.

nsslapd-db-clean-pages

Clean pages currently in the cache.

nsslapd-db-commit-rate

Number of transactions that have been committed.

nsslapd-db-configured-locks

Configured number of locks.

nsslapd-db-configured-txns

Configured number of transactions.

nsslapd-db-current-locks

Number of locks currently used by the database.

nsslapd-db-deadlock-rate

Number of deadlocks detected.

nsslapd-db-dirty-pages

Dirty pages currently in the cache.

nsslapd-db-hash-buckets

Number of hash buckets in buffer hash table.

nsslapd-db-hash-elements-examine-rate

Total number of hash elements traversed during hash table lookups.

nsslapd-db-hash-search-rate

Total number of buffer hash table lookups.

nsslapd-db-lock-conflicts

Total number of locks not immediately available due to conflicts.

nsslapd-db-lockers

Number of current lockers.

nsslapd-db-lock-region-wait-rate

Number of times that a thread of control was forced to wait before obtaining the region lock.

nsslapd-db-lock-request-rate

Total number of locks requested.

nsslapd-db-log-bytes-since-checkpoint

Number of bytes written to this log since the last checkpoint.

nsslapd-db-log-flush-commit

The number of log flushes that contained a transaction commit record.

nsslapd-db-log-flush-count

The number of times the log has been flushed to disk.

nsslapd-db-log-max-commit-per-flush

The maximum number of commits contained in a single log flush.

nsslapd-db-log-min-commit-per-flush

The minimum number of commits contained in a single log flush that contained a commit.

nsslapd-db-log-region-wait-rate

Number of times that a thread of control was forced to wait before obtaining the region lock.

nsslapd-db-log-write-count

The number of times the log has been written to disk.

nsslapd-db-log-write-count-fill

The number of times the log has been written to disk because the in-memory log record cache filled up.

nsslapd-db-log-write-rate

Number of bytes written to the log since the last checkpoint.

nsslapd-db-longest-chain-length

Longest chain ever encountered in buffer hash table lookups.

nsslapd-db-max-locks

Maximum number of locks used by the database since the last startup.

nsslapd-db-max-txns

Maximum number of transactions used since the last startup.

nsslapd-db-page-create-rate

Pages created in the cache.

nsslapd-db-page-read-rate

Pages read into the cache.

nsslapd-db-page-ro-evict-rate  
Clean pages forced from the cache.

nsslapd-db-page-rw-evict-rate  
Dirty pages forced from the cache.

nsslapd-db-pages-in-use  
All pages, clean or dirty, currently in use.

nsslapd-db-page-trickle-rate  
Dirty pages written using the `memp_trickle` interface.

nsslapd-db-page-write-rate  
Pages read into the cache.

nsslapd-db-txn-region-wait-rate  
Number of times that a thread of control was force to wait before obtaining the region lock.

`cn=dbName,cn=ldbm database,cn=plugins,cn=config`  
Configuration information for databases backing suffixes you define. The `dbName` is by default a contraction of the common name for the suffix. For example, if the suffix has CN `cd=example,dc=com`, the `dbName` might be `example`. See the following man pages concerning attributes for such entries.

- [nsslapd-cachesize\(5DSCONF\)](#)
- [nsslapd-cachememsize\(5DSCONF\)](#)
- [nsslapd-directory\(5DSCONF\)](#)
- [nsslapd-readonly\(5DSCONF\)](#)
- [nsslapd-require-index\(5DSCONF\)](#)
- [nsslapd-suffix\(5DSCONF\)](#)

Virtual list view, VLV, index entries are found beneath this entry.

A VLV index provides fast searches against a known result set and sort ordering. To do this, the object class `vlvSearch` is needed to define the VLV search, and the object class `vlvIndex` is needed to order the search. See the following manual pages for details on the VLV configuration entry object classes and attributes.

- [vlvBase\(5DSAT\)](#)
- [vlvEnabled\(5DSAT\)](#)
- [vlvFilter\(5DSAT\)](#)
- [vlvScope\(5DSAT\)](#)
- [vlvSort\(5DSAT\)](#)
- [vlvUses\(5DSAT\)](#)
- [vlvIndex\(5DSOC\)](#)
- [vlvSearch\(5DSOC\)](#)

`cn=default indexes,cn=config,cn=ldbm database, cn=plugins,cn=config`  
Configuration entry for default indexing for all suffixes. Default indexes are configured per backend in order to optimize Directory Server functionality for the majority of deployments.

---

`cn=monitor,cn=dbName,cn=ldbm database,cn=plugins,cn=config`  
Entry for database monitoring attributes, listing database statistics for monitoring activity on the *dbName* database. These attributes are provided for each file that makes up your database.

`dbentrycount`

Total number of entries in the database, including entries created by replication.

`dbfilename-number`

This attribute indicates the name of the file and provides a sequential integer identifier, starting at 0, for the file. All associated statistics for the file are given the same numerical identifier.

`dbfilecachehit`

Number of times that a search requiring data from this file was performed and data successfully obtained from the cache.

`dbfilecachemiss`

Number of times that a search requiring data from this file was performed and that the data could not be obtained from the cache.

`dbfilepagein`

Number of pages brought to the cache from this file.

`dbfilepageout`

Number of pages for this file written from cache to disk.

`entrycachehitratio`

Ratio that indicates the number of entry cache tries to successful entry cache lookups.

`entrycachehits`

Total number of successful entry cache lookups.

`ldapentrycount`

Number of user entries in the database.

`maxentrycachecount`

Maximum number of directory entries that are allowed to be maintained in the entry cache.

`maxentrycachesize`

Maximum memory size allowed for entry cache, in bytes.

`cn=monitor,cn=ldbm database,cn=plugins,cn=config`

Entry for database monitoring attributes, listing database statistics for monitoring activity on databases.

`dbcachehits`

Requested pages found in the database.

`dbcachetries`

Total requested pages found in the database cache.

`dbcachehitratio`

Percentage of requested pages found in the database cache, `hits/tries`.

`dbcachepagein`  
Pages read into the database cache.

`dbcachepageout`  
Pages written from the database cache to the backing file.

`dbcacheroevict`  
Clean pages forced from the cache.

`dbcacherwevict`  
Dirty pages forced from the cache.

### **DSML Front End Plug-In Configuration Attributes**

The front end plug-in enables you to access directory data by methods other than LDAP. Directory Server provides a DSML front end plug-in that enables access using DSMLv2 over HTTP/SOAP. Attributes for the DSML front end plug-in are stored under `cn=DSMLv2-SOAP-HTTP,cn=frontends,cn=plugins,cn=config`. See the following manual pages for details.

- [ds-hdsml-clientauthmethod\(5DSCONF\)](#)
- [ds-hdsml-dsmlschemalocation\(5DSCONF\)](#)
- [ds-hdsml-iobuffersize\(5DSCONF\)](#)
- [ds-hdsml-poolmaxsize\(5DSCONF\)](#)
- [ds-hdsml-poolsize\(5DSCONF\)](#)
- [ds-hdsml-port\(5DSCONF\)](#)
- [ds-hdsml-requestmaxsize\(5DSCONF\)](#)
- [ds-hdsml-responsemsgsize\(5DSCONF\)](#)
- [ds-hdsml-rooturl\(5DSCONF\)](#)
- [ds-hdsml-secureport\(5DSCONF\)](#)
- [ds-hdsml-soapschemalocation\(5DSCONF\)](#)

### **Retro Changelog Plug-In Configuration**

The following manual pages describe attributes used when configuring the retro changelog plug-in.

- [nsslapd-changelogdir\(5DSCONF\)](#)
- [nsslapd-changelogmaxage\(5DSCONF\)](#)
- [nsslapd-changelogmaxentries\(5DSCONF\)](#)

### **Server Plug-In Configuration Entries**

All plug-ins are instances of the `nsSlapdPlugin` object class, which in turn inherits from the `extensibleObject` object class. For plug-in configuration attributes to be taken into account by the server, both of these object classes, in addition to the `top` object class, must be present in the entry.

See [nsslapd-plugin\(5DSCONF\)](#) for an overview of the plug-ins provided with Directory Server, including configurable options, configurable arguments, default setting, dependencies, general performance related information, and further reading.

**Attributes of `cn=uniqueid generator,cn=config`**

Unique ID generator configuration attributes are stored under the entry with DN `cn=uniqueid generator,cn=config`. The `cn=uniqueid generator,cn=config` entry is an instance of the `extensibleObject` object class. For unique ID generator configuration attributes to be taken into account by the server, this object class, in addition to the `top` object class, must be present in the entry.

The principal unique ID generator attribute is `nsState(5DSCONF)`.

**Attributes**

This section lists configuration elements whose modifications cannot take effect dynamically, while the server is still running. After modifying these parameters, you must restart the server. The following list shows the configuration attributes concerned, with their full DN, and provides a brief description of their functions.

**Any plug-in configuration attribute**

Changing plug-in settings.

`cn=config:nsslapd-port`

Changing the port number.

`cn=config:nsslapd-secureport`

Changing the secure port number.

`cn=config:nsslapd-security`

Enabling or disabling use of SSL, TLS, and attribute encryption.

`cn=config:nsslapd-changelogdir`

Modifying the change log database path.

`cn=config:nsslapd-changelogsuffix`

Modifying the change log suffix.

`cn=config:nsslapd-return-exact-case`

Modifying whether the server returns exact case matches for attribute names.

`cn=config,cn=ldbm`

`database,cn=plugins,cn=config:nsslapd-allidsthreshold`

Changing the all IDs threshold value.

`cn=config,cn=ldbm database,cn=plugins,cn=config:nsslapd-dbcachesize`

Modifying the size of the database cache.

`cn=config,cn=ldbm database,cn=plugins,cn=config:nsslapd-dbncache`

Modifying whether the database cache memory is split into equally sized pieces.

`cn=config,cn=ldbm database,cn=plugins,cn=config:nsslapd-directory`

Changing the path to the database instance.

`cn=config,cn=ldbm database,cn=plugins,cn=config:nsslapd-db-locks`

Changing the number of locks available in the database.

`cn=encryption,cn=config:nssslsessiontimeout`

Changing the lifetime of an SSL session.

`cn=encryption,cn=config:nsslclientauth`

Enabling or disabling client authentication.

cn=encryption,cn=config:nssslserverauth  
Enabling or disabling server authentication.

cn=encryption,cn=config:nsssl2  
Enabling or disabling SSL Version 2 for Directory Server.

cn=encryption,cn=config:nsssl3  
Enabling or disabling SSL Version 3 for Directory Server.

cn=RSA,cn=encryption,cn=config:nsssltoken  
Changing the SSL token.

cn=RSA,cn=encryption,cn=config:nssslpersonalityssl  
Changing the SSL personality.

cn=RSA,cn=encryption,cn=config:nssslactivation  
Enabling or disabling the SSL encryption module.

cn=**suffixName**,cn=ldbm  
database,cn=plugins,cn=config:nsslapd-cachesize  
Modifying the number of entries held in the entry cache.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal as a supported interface after this release

---

## hosts\_access

Format of host access control files for Directory Server Enterprise Edition

### Synopsis

```
instance-path/config/hosts.allow
instance-path/config/hosts.deny
```

### Description

This manual page describes a simple access control language that is based on client (host name/address, user name), and server (process name, host name/address) patterns. Examples are given at the end. The impatient reader is encouraged to skip to the EXAMPLES section for a quick introduction.

In the following text, daemon is the the process name of a network daemon process, and client is the name and/or address of a host requesting service.

Note that the version of hosts\_access supplied with Directory Server Enterprise Edition is different from the version delivered with Solaris. The Directory Server Enterprise Edition version of hosts\_access has the following characteristics:

- Shell commands are not available on Microsoft Windows.
- hosts\_options are not available on any OS.
- IPv6 is supported on all platforms.
- PARANOID mode is not available.
- You cannot replace the lib with your own lib, as it is statically linked to the server.
- There is no support of NIS Netgroups. Any '@' symbols in rules are ignored.
- The daemon\_list process name is the port number of the server. For example, 3389:eng.example.com or 636:192.168.11.254. Port numbers are server properties: ldap-port, ldap-secure-port, dsml-port, dsml-secure-port. Use the dsconf command to view and modify these properties.
- Server instances can share files by pointing the instance name at the same file (*instance-path/config/hosts.allow*). Use the dsconf command to view and modify the server property host-access-dir-path. For example, to have all server instances pointing to /etc/hosts.{deny,allow}, run the following command on all servers: \$ dsconf set-server-prop -h host -p port host-access-dir-path: /etc
- You can make changes to the hosts\_access or hosts\_deny files without needing to restart the server. You can safely ignore the dsconf server restart message.
- Two conditions must be met in order for access to be allowed. Firstly, the permissions of the file(s) must be owned by nsslapd-localuser or root and secondly write permission must be allowed for the owner, but not for group or other. Ensure that you use correct permissions, as incorrect permissions on shared files can cause problems. Note that these conditions are not checked on Windows platforms.

## ACCESS CONTROL FILES

The access control software consults two files. The search stops at the first match:

- Access will be granted when a (daemon,client) pair matches an entry in the *instance-path/config/hosts.allow* file.
- Otherwise, access will be denied when a (daemon,client) pair matches an entry in the *instance-path/config/hosts.deny* file.
- Otherwise, access will be granted.

A non-existing access control file is treated as if it were an empty file. Thus, access control can be turned off by providing no access control files.

## ACCESS CONTROL RULES

Each access control file consists of zero or more lines of text. These lines are processed in order of appearance. The search terminates when a match is found.

- A newline character is ignored when it is preceded by a backslash character. This permits you to break up long lines so that they are easier to edit.
- Blank lines or lines that begin with a '#' character are ignored. This permits you to insert comments and whitespace so that the tables are easier to read.
- All other lines should satisfy the following format:

Hosts are identified by server port numbers. If there is no port number match or wildcard, the access control check skips that line of the file.

List elements should be separated by blanks and/or commas.

All access control checks are case insensitive.

## PATTERNS

The access control language implements the following patterns:

- A string that begins with a '.' character. A host name is matched if the last components of its name match the specified pattern. For example, the pattern '.tue.nl' matches the host name 'wzv.win.tue.nl'.
- A string that ends with a '.' character. A host address is matched if its first numeric fields match the given string. For example, the pattern '131.155.' matches the address of (almost) every host on the Eindhoven University network (131.155.x.x).
- An expression of the form 'n.n.n.n/m.m.m.m' is interpreted as a 'net/mask' pair. A host address is matched if 'net' is equal to the bitwise AND of the address and the 'mask'. For example, the net/mask pattern '131.155.72.0/255.255.254.0' matches every address in the range '131.155.72.0' through '131.155.73.255'.
- When using IPv6 for matching, be aware that an expression of the form '[n:n:n:n:n:n:n/m]' is interpreted as a '[net/prefixlen]' pair. An IPv6 host address is matched if prefixlen bits of net is equal to the prefixlen bits of the address. For example, the '[net/prefixlen]' pattern '[3ffe:505:2:1::/64]' matches every address in the range '3ffe:505:2:1::' through '3ffe:505:2:1:ffff:ffff:ffff:ffff'.

## WILDCARDS

Wildcards '\*' and '?' can be used to match hostnames or IP addresses. However, this method of matching cannot be used in conjunction with the following: net/mask

matching, hostname matching beginning with `.', IP address matching ending with `.' or a IPv6 rule (begins with '[').

The access control language supports explicit wildcards:

#### **ALL**

The universal wildcard, always matches.

#### **LOCAL**

Matches any host whose name does not contain a dot character.

#### **UNKNOWN**

Matches any user whose name is unknown, and matches any host whose name or address are unknown. This pattern should be used with care: host names may be unavailable due to temporary name server problems. A network address will be unavailable when the software cannot figure out what type of network it is talking to.

It is not recommended to use the UNKNOWN wildcard. Directory Server always fills in both host and address, so there is never a case when the host name is unknown. The user is unavailable because of no NIS netgroups support.

#### **KNOWN**

Matches any user whose name is known, and matches any host whose name and address are known. This pattern should be used with care: host names may be unavailable due to temporary name server problems. A network address will be unavailable when the software cannot figure out what type of network it is talking to.

In Directory Server the user is always marked as unknown and is unavailable because of the NIS Netgroup restriction.

### **OPERATORS**

#### **EXCEPT**

Intended use is of the form: `list\_1 EXCEPT list\_2'; this construct matches anything that matches list\_1 unless it matches list\_2. The EXCEPT operator can be used in daemon\_lists and in client\_lists. The EXCEPT operator can be nested: if the control language would permit the use of parentheses, `a EXCEPT b EXCEPT c' would parse as `(a EXCEPT (b EXCEPT c))'.

### **SHELL COMMANDS**

Note that shell commands are not available on Microsoft Windows.

- If the first-matched access control rule contains a shell command, that command is subjected to *%letter* substitutions (see next section). The result is executed by a `/bin/sh` child process with standard input, output and error connected to `/dev/null`. Specify an `&'` at the end of the command if you do not want to wait until it has completed.
- Shell commands should not rely on the `PATH` setting of the `inetd`. Instead, they should use absolute path names, or they should begin with an explicit `PATH=whatever` statement.

### **% EXPANSIONS**

The following expansions are available within shell commands:

#### **%a (%A)**

The client (server) host address.

**%c**

Client information: user@host, user@address, a host name, or just an address, depending on how much information is available.

**%d**

The daemon process name (argv[0] value).

**%h (%H)**

The client (server) host name or address, if the host name is unavailable.

**%n (%N)**

The client (server) host name (or "unknown").

**%p**

The daemon process id.

**%s**

Server information: daemon@host, daemon@address, or just a daemon name, depending on how much information is available.

**%u**

The client user name (or "unknown").

**%%**

Expands to a single '%' character.

Characters in % expansions that may confuse the shell are replaced by underscores.

## Examples

The language is flexible enough that different types of access control policy can be expressed with a minimum of fuss. Although the language uses two access control tables, the most common policies can be implemented with one of the tables being trivial or even empty.

When reading the examples below it is important to realize that the allow table is scanned before the deny table, that the search terminates when a match is found, and that access is granted when no match is found at all.

The examples use host and domain names. They can be improved by including address and/or network/netmask information, to reduce the impact of temporary name server lookup failures.

### **MOSTLY CLOSED**

In this case, access is denied by default. Only explicitly authorized hosts are permitted access.

The default policy (no access) is implemented with a trivial deny file:

```
instance-path/config/hosts.deny: ALL: ALL
```

This denies all service to all hosts, unless they are permitted access by entries in the allow file.

The explicitly authorized hosts are listed in the allow file. For example:

```
instance-path/config/hosts.allow:  
ALL: LOCAL ALL: .foobar.edu EXCEPT terminalserver.foobar.edu
```

The first rule permits access from hosts in the local domain (no `.` in the host name). The second rule permits access from all hosts in the .foobar.edu domain (notice the leading period), with the exception of terminalserver.foobar.edu.

## MOSTLY OPEN

Here, access is granted by default; only explicitly specified hosts are refused service.

The default policy (access granted) makes the allow file redundant so that it can be omitted. The explicitly non-authorized hosts are listed in the deny file. For example:

```
instance-path/config/hosts.deny:
ALL: some.host.name, .some.domain
ALL EXCEPT 1389: other.host.name, .other.domain
```

The first rule denies some hosts and domains all services; the second rule still permits connections to directory port 1389 from other hosts and domains.

## BOOBY TRAPS

The next example permits requests to Directory Server port 1389 from hosts in the local domain (notice the leading dot). Requests from any other hosts are denied. Instead of the requested file, a finger probe is sent to the offending host. The result is mailed to the superuser.

```
instance-path/config/hosts.allow:
1389: LOCAL, .my.domain

instance-path/config/hosts.deny:
ALL: (/usr/sfw/sbin/safe_finger -l @%h | \
      /usr/ucb/mail -s %d-%h root) &
```

The above example assumes that the `safe_finger` command is installed in `/usr/sfw/sbin`. For Solaris, the `safe_finger` command is in the `SUNWtcpd` package. The default location for the `safe_finger` command in the `SUNWtcpd` package is `/usr/sfw/sbin`. For other operating systems the `safe_finger` command should be installed in a suitable place. The `safe_finger` command limits possible damage from data sent by the remote finger server, and gives better protection than the standard `finger` command. Shell commands for Windows is not supported, so Windows users should not use this rule.

The expansion of the `%h` (client host) and `%d` (service name) sequences is described in the section on shell commands.

Warning: do not booby-trap your finger daemon, unless you are prepared for infinite finger loops.

On network firewall systems this trick can be carried even further. The typical network firewall only provides a limited set of services to the outer world. All other services can be "bugged" just like the above `tftp` example. The result is an excellent early-warning system.

## Diagnostics

An error is reported when a syntax error is found in a host access control rule; when the length of an access control rule exceeds the capacity of an internal buffer (2048); when an access control rule is not terminated by a newline character; when the result of `%letter` expansion would overflow an internal buffer; when a system call fails that should not. All problems are written to the Directory Server instance access log.

## Files

*instance-path/config/hosts.allow*, (daemon,client) pairs are granted access.  
*instance-path/config/hosts.deny*, (daemon,client) pairs are denied access.

## See Also

tcpd(1M) tcp/ip daemon wrapper program. tcpdchk(1M), tcpdmatch(1M), test programs.

## Bugs

If a name server lookup times out, the host name will not be available to the access control software, even though the host is registered.

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## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	External

# 6

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## LDAP Schema Collections

This section provides Directory Server schema reference information.

## Intro\_6Schema

Directory Server schema reference

### Description

Directory schema form a set of rules defining how data are stored in the directory. Data are stored in the form of directory entries. Each entry must have an object class. The object class specifies the kind of object the entry describes and defines the set of attributes it contains. The schema defines the type of entries allowed, their attribute structure and the syntax of the attributes. The schema can be modified and extended if it does not meet your requirements, but use standard schema where possible.

### OBJECT CLASSES

In LDAP, an object class defines the set of attributes that can be used to define an entry. The LDAP standard provides some basic types of object classes, including:

- Groups, including unordered lists of individual objects or groups of objects
- Locations, such as the country name and description
- Organizations
- People
- Devices

Object classes may be subdivided into three types:

#### **Structural**

Indicates the attributes that the entry may have and where each entry may occur in the DIT. This object class represents the corresponding real world object. Entries must belong to a structural object class, so most object classes are structural object classes.

#### **Auxiliary**

Indicates the attributes that the entry may have. An auxiliary object class does not represent a real world object, but represents additional attributes that can be associated with a structural object class to supplement its specification. Each entry may belong to only a single structural object class, but may belong to zero or more auxiliary object classes.

#### **Abstract**

Defined only as a superclass or template for other (structural) object classes. An abstract object class is a way of collecting a set of attributes that will be common to a set of structural object classes, so that these classes may be derived as subclasses of the abstract class rather than being defined from scratch. An entry may not belong to an abstract object class.

---

---

**Note:** Directory Server does not distinguish between structural and auxiliary object classes.

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### Required and Allowed Attributes

Every object class includes a number of required attributes and allowed attributes. Required attributes *must* be present in entries using the object class. All entries require the `objectClass` attribute, which defines the object classes assigned to the entry.

Allowed attributes *may* be present in entries using the object class.

For example, the `person` object class requires attributes `objectClass`, `cn` (Common Name), and `sn` (Surname). It allows attributes `description`, `seeAlso`, `telephoneNumber`, and `userPassword`.

### Object Class Inheritance

Each entry must be assigned to one structural object class. All object classes inherit from the `top` object class. They can also inherit from other object classes. The server's object class structure determines the list of required and allowed attributes for a particular entry. For example, a `person` entry is usually defined with the following object class structure:

```
objectClass: top

objectClass: person

objectClass: organizationalPerson

objectClass: inetOrgPerson
```

In this structure, the `inetOrgPerson` inherits from the `organizationalPerson` and `person` object classes. Therefore, when you assign the `inetOrgPerson` object class to an entry, it automatically inherits the required and allowed attributes from the superior object class.

Note that object class inheritance is dependent on the order in which the object classes appear in the schema `.ldif` files. The order in which object classes appear in the `.ldif` file must be consistent with the object class hierarchy, otherwise the server will not start. An object class that inherits from another object class must therefore appear *after* this object class in the schema `.ldif` file.

### ATTRIBUTE TYPES

Directory data is represented as attribute-value pairs. Any piece of information in the directory is associated with a descriptive attribute.

For instance, the `commonName`, or `cn`, attribute is used to store a person's name. A person named Barbara (Babs) Jensen can be represented in the directory as

```
cn: Babs Jensen
```

Each person entered in the directory can be defined by the collection of attributes in the `inetOrgPerson` object class. Other attributes used to define this entry could include:

```
givenname: Barbara

surname: Jensen

mail: bjensen@example.com
```

### Attribute Syntax

Each attribute has a syntax definition that describes the type of information provided by the attribute.

Attribute syntax is used by Directory Server to perform sorting and pattern matching.

The following table lists the different syntax methods that can be applied to attributes, and gives an OID and a definition for each syntax method.

**Table 6–1 Attribute Syntax**

Syntax and OID	Definition
Binary - 1.3.6.1.4.1.1466.115.121.1.5	Indicates that values for this attribute are treated as binary data, and cannot be matched.
Boolean - 1.3.6.1.4.1.1466.115.121.1.7	Indicates that this attribute has one of only two values: <code>True</code> or <code>False</code> .
Country String - 1.3.6.1.4.1.1466.115.121.1.11	Indicates that values for this attribute are limited to exactly two printable string characters, representing the ISO-3166 code of a country for example <code>FR</code> .
DN - 1.3.6.1.4.1.1466.115.121.1.12	Indicates that values for this attribute are DNs (distinguished names).
DirectoryString - 1.3.6.1.4.1.1466.115.121.1.15	Indicates that values for this attribute are UTF-8 encoded characters, and are treated as case insensitive.
GeneralizedTime - 1.3.6.1.4.1.1466.115.121.1.24	Indicates that values for this attribute are encoded as printable strings. You cannot specify a local time in this attribute. GMT must be used.
IA5String - 1.3.6.1.4.1.1466.115.121.1.26	Indicates that values for this attribute must contain only ASCII characters, and are treated as case sensitive.
INTEGER - 1.3.6.1.4.1.1466.115.121.1.27	Indicates that valid values for this attribute are numbers.
OctetString - 1.3.6.1.4.1.1466.115.121.1.40	Same behavior as binary.
Postal Address - 1.3.6.1.4.1.1466.115.121.1.41	Indicates that values for this attribute are encoded as <i>dstring</i> [\$ <i>dstring</i> ]*  where each <i>dstring</i> component is encoded as a value with DirectoryString syntax. Backslashes and dollar characters within <i>dstring</i> must be quoted, so that they will not be mistaken for line delimiters. Many servers limit the postal address to 6 lines of up to thirty characters. For example:  1234 Main St.\$Anytown, TX 12345\$USA
TelephoneNumber - 1.3.6.1.4.1.1466.115.121.1.50	Indicates that values for this attribute are in the form of telephone numbers. It is recommended to use telephone numbers in international form.
URI - 1.3.6.1.4.1.4401.1.1.1	Indicates that the values for this attribute are in the form of a URL, introduced by a string such as <code>http://</code> , <code>https://</code> , <code>ftp</code> , <code>LDAP</code> . The URI has the same behavior as IA5String. Refer to RFC 2396.

### Single-Valued and Multi-Valued Attributes

By default, most attributes are multi-valued. This means that an entry can contain the same attribute with multiple values. For example, `cn`, `tel` and `objectClass` are all attributes that can have more than one value. Attributes that are single-valued (only one instance of the attribute can be specified) are noted as such. For example, `uidNumber` can have only one possible value.

## SUPPORTED SCHEMA

The schema provided with Directory Server is described in a set of files stored in the `$INSTANCE_DIR/config/schema/` directory, where `$INSTANCE_DIR` represents the directory containing files for the Directory Server instance.

You can modify the schema by creating new object classes and attributes. Your modifications are stored in a file called `99user.ldif`. Do not modify the other schema files provided with Directory Server, because you run the risk of breaking compatibility with other Sun products, and of causing interoperability problems with directory servers from other vendors.

For information about how Directory Server stores information and suggestions for planning directory schema, refer to *Directory Server Enterprise Edition Deployment Planning Guide*.

The following tables list the schema files that are provided with Directory Server.

**Table 6–2 Schema Files Used by Directory Server**

Schema Filename	Purpose
00core.ldif	Recommended core schema from the X.500 and LDAP standards (RFCs), and schema used by Directory Server itself.
05rfc2247.ldif	Schema from RFC 2247 and related pilot schema "Using Domains in LDAP/X.500 Distinguished Names."
05rfc2927.ldif	Schema from RFC 2927 "MIME Directory Profile for LDAP Schema."
11rfc2307.ldif	Schema from RFC 2307 "An Approach for Using LDAP as a Network Information Service."
20subscriber.ldif	Common schema elements for Nortel subscriber interoperability.
25java-object.ldif	Schema from RFC 2713 "Schema for Representing Java™ Objects in an LDAP Directory."
28pilot.ldif	Schema from the pilot RFCs, especially RFC 1274, that is no longer recommended for use in new deployments.
30ns-common.ldif	Common Sun Java System schema.
50ns-admin.ldif	Schema used by Sun Java System Administration Services.
50ns-directory.ldif	Additional schema used by Directory Server 4.x.
50ns-value.ldif	Sun Java System servers "value item" schema.
99user.ldif	Placeholder for your modifications to the schema.

The following table lists the schema files that are used by other Sun products.

**Table 6–3 Schema Files Used by Other Sun Products**

Schema Filenames	Purpose
50iplanet-servicemgt.ldif	Service management schema elements.
50ns-calendar.ldif	Calendar Server schema.
50ns-certificate.ldif	Schema for Certificate Management System.
50ns-compass.ldif	Schema for the Netscape Compass Server.

**Table 6–3 (Cont.) Schema Files Used by Other Sun Products**

Schema Filenames	Purpose
50ns-delegated-admin.ldif	Schema for Delegated Administrator 4.5.
50ns-legacy.ldif	Legacy Netscape Schema.
50ns-mail.ldif	Schema for Messaging Server.
50ns-mcd-browser.ldif	Schema for Netscape Mission Control Desktop - Browser.
50ns-mcd-config.ldif	Schema for Netscape Mission Control Desktop - Configuration.
50ns-mcd-li.ldif	Schema for Netscape Mission Control Desktop - Location Independence.
50ns-mcd-mail.ldif	Schema for Netscape Mission Control Desktop - Mail.
50ns-media.ldif	Schema for Netscape Media Server.
50ns-mlm.ldif	Schema for Mailing List Manager.
50ns-msg.ldif	Schema for Web Mail.
50ns-netshare.ldif	Schema for Netshare.
50ns-news.ldif	Schema for Collabra Server.
50ns-proxy.ldif	Schema for Web Proxy Server.
50ns-wcal.ldif	Schema for Web Calendaring.
50ns-web.ldif	Schema for Web Server.

## OBJECT IDENTIFIERS

Object identifiers (OIDs) are assigned to all attributes and object classes to conform to the LDAP and X.500 standards. An OID is a sequence of integers, typically written as a dot-separated string. When no OID is specified, Directory Server automatically uses *ObjectClass\_name-oid* and *attribute\_name-oid*.

Directory Server uses Sun-based OIDs. Previous versions of Directory Server used Netscape-based OIDs.

Sun-defined attributes and object classes using the Sun base have the base OID of 1.3.6.1.4.1.42.2.27.9.

Sun-defined attributes and object classes using the Netscape base have the base OID of 2.16.840.1.113730.3

For more information about OIDs, or to request a prefix for your enterprise, visit the IANA (Internet Assigned Number Authority) website at <http://www.iana.org/> (<http://www.iana.org/>).

## EXTENDING SCHEMA

The Directory Server schema includes hundreds of object classes and attributes that can be used to meet most of your requirements. This schema can be extended with new object classes and attributes that meet evolving requirements for the directory service in the enterprise.

When adding new attributes to the schema, a new object class should be created to contain them. Adding a new attribute to an existing object class can compromise Directory Server compatibility with existing LDAP clients that rely on the standard LDAP schema and may cause difficulties when upgrading Directory Server.

## SCHEMA CHECKING

When possible, run Directory Server with schema checking turned on.

The schema checking capability of Directory Server checks entries when you add them to the directory or when you modify them, to verify that:

- Object classes and attributes in the entry are defined in Directory Server schema
- Attributes required for an object class are contained in the entry
- Only attributes allowed by the object class are contained in the entry

Schema checking also occurs when importing a database using LDIF. For more information, refer to *Administrator's Guide for Oracle Directory Server Enterprise Edition* for further information.

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**Note:** Directory Server schema checking does *not* enforce the validity of values with respect to their syntax.

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## COLLECTIONS

This collection contains the collections documented in the following additional pages:

[adminserv\(5DSSD\)](#), [attributes\(5DSSD\)](#), [changelog\\_5dssd\(5DSSD\)](#), [dirserv\(5DSSD\)](#), [idpilot\(5DSSD\)](#), [numsub\(5DSSD\)](#), [objects\(5DSSD\)](#), [operational\(5DSSD\)](#), [pwpolicy\(5DSSD\)](#), [rfc2079\(5DSSD\)](#), [rfc2247\(5DSSD\)](#), [rfc2307\(5DSSD\)](#), [rfc2713\(5DSSD\)](#), [rfc2798\(5DSSD\)](#), [rfc3045\(5DSSD\)](#), [rfc3296\(5DSSD\)](#), [rfc4512\(5DSSD\)](#), [rfc4517\(5DSSD\)](#), [rfc4519\(5DSSD\)](#), [rfc4523\(5DSSD\)](#), [rfc4524\(5DSSD\)](#), [sas1\(5DSSD\)](#), [subentry\(5DSSD\)](#), [wppilot\(5DSSD\)](#)

## Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## adminserv

Schema definitions for Administration Server

### Description

This collection includes attribute types and object classes used by Administration Server.

### Object Classes

This collection includes the object classes documented in the following additional pages:

[nsLicenseUser\(5DSOC\)](#)

### Attribute Types

This collection includes the attribute types documented in the following additional pages:

[nsLicenseEndTime\(5DSAT\)](#), [nsLicenseStartTime\(5DSAT\)](#),  
[nsLicensedFor\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release.

---

## attributes

Schema definitions for User Attributes

### Description

Directory Server supports many user attributes you may use directly or in your own object classes.

### Attribute Types

This collection includes the attribute types documented in the following additional pages:

[abstract\(5DSAT\)](#), [aliasedObjectName\(5DSAT\)](#), [associatedDomain\(5DSAT\)](#), [associatedName\(5DSAT\)](#), [attributeTypes\(5DSAT\)](#), [audio\(5DSAT\)](#), [authorCn\(5DSAT\)](#), [authorSn\(5DSAT\)](#), [authorityRevocationList\(5DSAT\)](#), [bootFile\(5DSAT\)](#), [bootParameter\(5DSAT\)](#), [buildingName\(5DSAT\)](#), [businessCategory\(5DSAT\)](#), [c\(5DSAT\)](#), [cACertificate\(5DSAT\)](#), [carLicense\(5DSAT\)](#), [certificateRevocationList\(5DSAT\)](#), [changeLog\\_5dsat\(5DSAT\)](#), [changeNumber\(5DSAT\)](#), [changeTime\(5DSAT\)](#), [changeType\(5DSAT\)](#), [changes\(5DSAT\)](#), [cn\(5DSAT\)](#), [co\(5DSAT\)](#), [cosAttribute\(5DSAT\)](#), [cosIndirectSpecifier\(5DSAT\)](#), [cosPriority\(5DSAT\)](#), [cosspecifier\(5DSAT\)](#), [costargettree\(5DSAT\)](#), [costemplatedn\(5DSAT\)](#), [crossCertificatePair\(5DSAT\)](#), [dITContentRules\(5DSAT\)](#), [dITStructureRules\(5DSAT\)](#), [dnsRecord\(5DSAT\)](#), [dsaQuality\(5DSAT\)](#), [dc\(5DSAT\)](#), [deleteOldRdn\(5DSAT\)](#), [deltaRevocationList\(5DSAT\)](#), [departmentNumber\(5DSAT\)](#), [description\\_5dsat\(5DSAT\)](#), [destinationIndicator\(5DSAT\)](#), [displayName\(5DSAT\)](#), [distinguishedName\(5DSAT\)](#), [ditRedirect\(5DSAT\)](#), [dmdName\(5DSAT\)](#), [documentAuthor\(5DSAT\)](#), [documentIdentifier\(5DSAT\)](#), [documentLocation\(5DSAT\)](#), [documentPublisher\(5DSAT\)](#), [documentStore\(5DSAT\)](#), [documentTitle\(5DSAT\)](#), [documentVersion\(5DSAT\)](#), [drink\(5DSAT\)](#), [employeeNumber\(5DSAT\)](#), [employeeType\(5DSAT\)](#), [enhancedSearchGuide\(5DSAT\)](#), [facsimileTelephoneNumber\(5DSAT\)](#), [gecos\(5DSAT\)](#), [generationQualifier\(5DSAT\)](#), [gidNumber\(5DSAT\)](#), [givenName\(5DSAT\)](#), [homeDirectory\(5DSAT\)](#), [homePhone\(5DSAT\)](#), [homePostalAddress\(5DSAT\)](#), [host\(5DSAT\)](#), [houseIdentifier\(5DSAT\)](#), [info\(5DSAT\)](#), [initials\(5DSAT\)](#), [internationaliSDNNNumber\(5DSAT\)](#), [ipHostNumber\(5DSAT\)](#), [ipNetmaskNumber\(5DSAT\)](#), [ipNetworkNumber\(5DSAT\)](#), [ipProtocolNumber\(5DSAT\)](#), [ipServicePort\(5DSAT\)](#), [ipServiceProtocol\(5DSAT\)](#), [janetMailbox\(5DSAT\)](#), [javaClassName\(5DSAT\)](#), [javaClassNames\(5DSAT\)](#), [javaCodebase\(5DSAT\)](#), [javaDoc\(5DSAT\)](#), [javaFactory\(5DSAT\)](#), [javaReferenceAddress\(5DSAT\)](#), [javaSerializedData\(5DSAT\)](#), [jpegPhoto\(5DSAT\)](#), [keyWords\(5DSAT\)](#), [knowledgeInformation\(5DSAT\)](#), [l\(5DSAT\)](#), [labeledUri\(5DSAT\)](#), [lastModifiedBy\(5DSAT\)](#), [lastModifiedTime\(5DSAT\)](#), [loginShell\(5DSAT\)](#), [macAddress\(5DSAT\)](#), [mail\(5DSAT\)](#), [mailPreferenceOption\(5DSAT\)](#), [manager\(5DSAT\)](#), [matchingRuleUse\(5DSAT\)](#), [matchingRules\(5DSAT\)](#), [member\(5DSAT\)](#), [memberCertificateDescription\(5DSAT\)](#), [memberNisNetgroup\(5DSAT\)](#), [memberURL\(5DSAT\)](#), [memberUid\(5DSAT\)](#), [mobile\(5DSAT\)](#), [multiLineDescription\(5DSAT\)](#), [name\(5DSAT\)](#), [nameForms\(5DSAT\)](#), [newRdn\(5DSAT\)](#), [newSuperior\(5DSAT\)](#), [nisMapEntry\(5DSAT\)](#), [nisMapName\(5DSAT\)](#), [nisNetgroupTriple\(5DSAT\)](#),

[nsLicensedFor\(5DSAT\)](#), [nsRoleFilter\(5DSAT\)](#), [nsRoleScopeDn\(5DSAT\)](#),  
[o\(5DSAT\)](#), [objectClass\(5DSAT\)](#), [objectClasses\(5DSAT\)](#),  
[obsoletedByDocument\(5DSAT\)](#), [obsoletesDocument\(5DSAT\)](#),  
[oncRpcNumber\(5DSAT\)](#), [organizationalStatus\(5DSAT\)](#), [ou\(5DSAT\)](#),  
[otherMailbox\(5DSAT\)](#), [owner\(5DSAT\)](#), [pager\(5DSAT\)](#),  
[passwordChange\(5DSAT\)](#), [passwordCheckSyntax\(5DSAT\)](#),  
[passwordExp\(5DSAT\)](#), [passwordExpireWithoutWarning\(5DSAT\)](#),  
[passwordInHistory\(5DSAT\)](#), [passwordLockout\(5DSAT\)](#),  
[passwordLockoutDuration\(5DSAT\)](#), [passwordMaxAge\(5DSAT\)](#),  
[passwordMaxFailure\(5DSAT\)](#), [passwordMinAge\(5DSAT\)](#),  
[passwordMinLength\(5DSAT\)](#), [passwordMustChange\(5DSAT\)](#),  
[passwordResetDuration\(5DSAT\)](#), [passwordResetFailureCount\(5DSAT\)](#),  
[passwordRootdnMayBypassModsChecks\(5DSAT\)](#),  
[passwordStorageScheme\(5DSAT\)](#), [passwordUnlock\(5DSAT\)](#),  
[passwordWarning\(5DSAT\)](#), [personalSignature\(5DSAT\)](#),  
[personalTitle\(5DSAT\)](#), [photo\(5DSAT\)](#),  
[physicalDeliveryOfficeName\(5DSAT\)](#), [postOfficeBox\(5DSAT\)](#),  
[postalAddress\(5DSAT\)](#), [postalCode\(5DSAT\)](#),  
[preferredDeliveryMethod\(5DSAT\)](#), [preferredLanguage\(5DSAT\)](#),  
[presentationAddress\(5DSAT\)](#), [protocolInformation\(5DSAT\)](#),  
[pwdAttribute\(5DSAT\)](#), [pwdIsLockoutPrioritized\(5DSAT\)](#),  
[pwdKeepLastAuthTime\(5DSAT\)](#), [ref\(5DSAT\)](#), [registeredAddress\(5DSAT\)](#),  
[roleOccupant\(5DSAT\)](#), [roomNumber\(5DSAT\)](#), [searchGuide\(5DSAT\)](#),  
[secretary\(5DSAT\)](#), [seeAlso\(5DSAT\)](#), [serialNumber\(5DSAT\)](#),  
[shadowExpire\(5DSAT\)](#), [shadowFlag\(5DSAT\)](#), [shadowInactive\(5DSAT\)](#),  
[shadowLastChange\(5DSAT\)](#), [shadowMax\(5DSAT\)](#), [shadowMin\(5DSAT\)](#),  
[shadowWarning\(5DSAT\)](#), [singleLevelQuality\(5DSAT\)](#), [sn\(5DSAT\)](#), [st\(5DSAT\)](#),  
[street\(5DSAT\)](#), [subject\(5DSAT\)](#), [subtreeMaximumQuality\(5DSAT\)](#),  
[subtreeMinimumQuality\(5DSAT\)](#), [supportedAlgorithms\(5DSAT\)](#),  
[supportedApplicationContext\(5DSAT\)](#), [targetDn\(5DSAT\)](#),  
[telephoneNumber\(5DSAT\)](#), [teletexTerminalIdentifier\(5DSAT\)](#),  
[telexNumber\(5DSAT\)](#), [textEncodedORAddress\(5DSAT\)](#), [title\(5DSAT\)](#),  
[uid\(5DSAT\)](#), [uidNumber\(5DSAT\)](#), [uniqueIdentifier\(5DSAT\)](#),  
[uniqueMember\(5DSAT\)](#), [updatedByDocument\(5DSAT\)](#),  
[updatesDocument\(5DSAT\)](#), [userCertificate\(5DSAT\)](#), [userClass\(5DSAT\)](#),  
[userPKCS12\(5DSAT\)](#), [userPassword\(5DSAT\)](#), [userSMIMECertificate\(5DSAT\)](#),  
[x121Address\(5DSAT\)](#), [x500UniqueIdentifier\(5DSAT\)](#)

## Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

---

## changelog\_5dssd

Schema definitions for Changelog Internet Draft

### Description

The Changelog Internet Draft describes how to store LDAP change records in LDAP entries. Directory Server supports schema definitions corresponding to those described in the draft.

### Object Classes

This collection includes the object classes documented in the following additional pages:

[changeLogEntry\(5DSOC\)](#)

### Attribute Types

This collection includes the attribute types documented in the following additional pages:

[changeLog\\_5dsat\(5DSAT\)](#), [changeNumber\(5DSAT\)](#), [changeType\(5DSAT\)](#), [changes\(5DSAT\)](#), [deleteOldRdn\(5DSAT\)](#), [newRdn\(5DSAT\)](#), [newSuperior\(5DSAT\)](#), [targetDn\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External

## dirserv

Schema definitions for Directory Server

### Description

This collection includes attribute types and object classes used by Directory Server.

### Object Classes

This collection includes the object classes documented in the following additional pages:

[cosClassicDefinition\(5DSOC\)](#), [cosDefinition\(5DSOC\)](#),  
[cosIndirectDefinition\(5DSOC\)](#), [cosPointerDefinition\(5DSOC\)](#),  
[cosSuperDefinition\(5DSOC\)](#), [costemplate\(5DSOC\)](#),  
[groupOfCertificates\(5DSOC\)](#), [groupOfURLs\(5DSOC\)](#),  
[nsComplexRoleDefinition\(5DSOC\)](#), [nsFilteredRoleDefinition\(5DSOC\)](#),  
[nsManagedRoleDefinition\(5DSOC\)](#), [nsNestedRoleDefinition\(5DSOC\)](#),  
[nsRoleDefinition\(5DSOC\)](#), [nsSimpleRoleDefinition\(5DSOC\)](#),  
[passwordPolicy\(5DSOC\)](#), [pwdPolicy\(5DSOC\)](#), [sunPwdPolicy\(5DSOC\)](#),  
[vlvIndex\(5DSOC\)](#), [vlvSearch\(5DSOC\)](#)

### Attribute Types

This collection includes the attribute types documented in the following additional pages:

[accountUnlockTime\(5DSAT\)](#), [aci\(5DSAT\)](#), [changeTime\(5DSAT\)](#),  
[copiedFrom\(5DSAT\)](#), [copyingFrom\(5DSAT\)](#), [cosAttribute\(5DSAT\)](#),  
[cosIndirectSpecifier\(5DSAT\)](#), [cosPriority\(5DSAT\)](#), [cosspecifier\(5DSAT\)](#),  
[costargettree\(5DSAT\)](#), [costemplatedn\(5DSAT\)](#), [ds-pluginDigest\(5DSAT\)](#),  
[ds-pluginSignature\(5DSAT\)](#), [memberCertificateDescription\(5DSAT\)](#),  
[memberURL\(5DSAT\)](#), [nsRole\(5DSAT\)](#), [nsRoleDN\(5DSAT\)](#), [nsRoleFilter\(5DSAT\)](#),  
[nsRoleScopeDn\(5DSAT\)](#), [nsds5ReplConflict\(5DSAT\)](#),  
[passwordAllowChangeTime\(5DSAT\)](#), [passwordChange\(5DSAT\)](#),  
[passwordCheckSyntax\(5DSAT\)](#), [passwordExp\(5DSAT\)](#),  
[passwordExpWarned\(5DSAT\)](#), [passwordExpirationTime\(5DSAT\)](#),  
[passwordExpireWithoutWarning\(5DSAT\)](#), [passwordHistory\(5DSAT\)](#),  
[passwordInHistory\(5DSAT\)](#), [passwordLockout\(5DSAT\)](#),  
[passwordLockoutDuration\(5DSAT\)](#), [passwordMaxAge\(5DSAT\)](#),  
[passwordMaxFailure\(5DSAT\)](#), [passwordMinAge\(5DSAT\)](#),  
[passwordMinLength\(5DSAT\)](#), [passwordMustChange\(5DSAT\)](#),  
[passwordNonRootMayResetUserpwd\(5DSAT\)](#),  
[passwordPolicySubentry\(5DSAT\)](#), [passwordResetDuration\(5DSAT\)](#),  
[passwordResetFailureCount\(5DSAT\)](#), [passwordRetryCount\(5DSAT\)](#),  
[passwordUnlock\(5DSAT\)](#), [passwordWarning\(5DSAT\)](#),  
[pwdAllowUserChange\(5DSAT\)](#), [pwdAttribute\(5DSAT\)](#),  
[pwdChangedTime\(5DSAT\)](#), [pwdCheckQuality\(5DSAT\)](#),  
[pwdExpireWarning\(5DSAT\)](#), [pwdFailureCountInterval\(5DSAT\)](#),  
[pwdGraceAuthNLimit\(5DSAT\)](#), [pwdInHistory\(5DSAT\)](#), [pwdLockout\(5DSAT\)](#),  
[pwdLockoutDuration\(5DSAT\)](#), [pwdMaxAge\(5DSAT\)](#), [pwdMaxFailure\(5DSAT\)](#),  
[pwdMinAge\(5DSAT\)](#), [pwdMinLength\(5DSAT\)](#), [pwdMustChange\(5DSAT\)](#),  
[pwdSafeModify\(5DSAT\)](#), [retryCountResetTime\(5DSAT\)](#),

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[supportedSSLCiphers\(5DSAT\)](#), [vlvBase\(5DSAT\)](#), [vlvEnabled\(5DSAT\)](#),  
[vlvFilter\(5DSAT\)](#), [vlvScope\(5DSAT\)](#), [vlvSort\(5DSAT\)](#), [vlvUses\(5DSAT\)](#)

## Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## idpilot

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Schema definitions for Internet directory pilot

### Description

The Internet Directory Pilot defines a number of common directory attribute types and object classes, mostly defined in RFC 1274. Directory Server supports schema definitions corresponding to those described in the pilot.

### Object Classes

This collection includes the object classes documented in the following additional pages:

[RFC822localPart\(5DSOC\)](#)

### Attribute Types

This collection includes the attribute types documented in the following additional pages:

[dNSRecord\(5DSAT\)](#)

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	External

## numsub

Schema definitions for numSubordinates Internet Draft

### Description

The numSubordinates Internet Draft defines an operational attribute to hold the number of immediate subordinates of a directory entry. Directory Server supports the schema definition corresponding to those described in the draft.

### Attribute Types

This collection includes the attribute types documented in the following additional pages:

[numSubordinates\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External

## objects

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Schema definitions for Object Classes

### Description

Directory Server supports many object classes you may use either directly or as the basis for your own object classes. An object class that inherits from another object class must appear after this object class in `99user.ldif`, otherwise Directory Server will not start.

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**Note:** Schema provided with Directory Server differ from RFC 2256 with regard to the `groupOfNames` and `groupOfUniqueNames` object classes. In the schema provided, the `member` and `uniquemember` attribute types are optional, while RFC 2256 specifies that at least one value for these types must be present in the respective object class.

Also, the LDAP RFCs (and X.500 standards) allow for an object class to have more than one superior. This behavior is not currently supported by Directory Server.

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### Object Classes

This collection includes the object classes documented in the following additional pages:

[RFC822localPart\(5DSOC\)](#), [account\(5DSOC\)](#), [alias\(5DSOC\)](#), [applicationEntity\(5DSOC\)](#), [bootableDevice\(5DSOC\)](#), [changeLogEntry\(5DSOC\)](#), [cosClassicDefinition\(5DSOC\)](#), [cosDefinition\(5DSOC\)](#), [cosIndirectDefinition\(5DSOC\)](#), [cosPointerDefinition\(5DSOC\)](#), [cosSuperDefinition\(5DSOC\)](#), [costemplate\(5DSOC\)](#), [country\(5DSOC\)](#), [dsa\(5DSOC\)](#), [dcObject\(5DSOC\)](#), [device\(5DSOC\)](#), [document\(5DSOC\)](#), [documentSeries\(5DSOC\)](#), [domain\(5DSOC\)](#), [domainRelatedObject\(5DSOC\)](#), [extensibleObject\(5DSOC\)](#), [friendlyCountry\(5DSOC\)](#), [groupOfCertificates\(5DSOC\)](#), [groupOfNames\(5DSOC\)](#), [groupOfURLs\(5DSOC\)](#), [groupOfUniqueNames\(5DSOC\)](#), [ieee802Device\(5DSOC\)](#), [inetOrgPerson\(5DSOC\)](#), [ipHost\(5DSOC\)](#), [ipNetwork\(5DSOC\)](#), [ipProtocol\(5DSOC\)](#), [ipService\(5DSOC\)](#), [javaContainer\(5DSOC\)](#), [javaMarshaledObject\(5DSOC\)](#), [javaNamingReference\(5DSOC\)](#), [javaObject\(5DSOC\)](#), [javaSerializedObject\(5DSOC\)](#), [labeledURIObject\(5DSOC\)](#), [ldapSubEntry\(5DSOC\)](#), [locality\\_5dsoc\(5DSOC\)](#), [newPilotPerson\(5DSOC\)](#), [nisMap\(5DSOC\)](#), [nisNetgroup\(5DSOC\)](#), [nisObject\(5DSOC\)](#), [nsComplexRoleDefinition\(5DSOC\)](#), [nsFilteredRoleDefinition\(5DSOC\)](#), [nsLicenseUser\(5DSOC\)](#), [nsManagedRoleDefinition\(5DSOC\)](#), [nsNestedRoleDefinition\(5DSOC\)](#), [nsRoleDefinition\(5DSOC\)](#), [nsSimpleRoleDefinition\(5DSOC\)](#), [oncRpc\(5DSOC\)](#), [organization\(5DSOC\)](#), [organizationalPerson\(5DSOC\)](#), [organizationalRole\(5DSOC\)](#), [organizationalUnit\(5DSOC\)](#), [passwordPolicy\(5DSOC\)](#), [person\(5DSOC\)](#), [pilotObject\(5DSOC\)](#), [pilotOrganization\(5DSOC\)](#), [posixAccount\(5DSOC\)](#), [posixGroup\(5DSOC\)](#), [pwdPolicy\(5DSOC\)](#), [referral\(5DSOC\)](#), [residentialPerson\(5DSOC\)](#), [room\(5DSOC\)](#), [shadowAccount\(5DSOC\)](#),

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`simpleSecurityObject(5DSOC), strongAuthenticationUser(5DSOC), subschema(5DSOC), sunPwdPolicy(5DSOC), top(5DSOC)`

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## operational

Schema definitions for Operational Attributes

### Description

Directory Server supports many operational attributes. Operational attributes may be available for use on every entry in the directory, regardless of whether they are defined for the object class of the entry. Operational attributes are returned in a search operation only if they are specifically requested.

### Attribute Types

This collection includes the attribute types documented in the following additional pages:

[accountUnlockTime\(5DSAT\)](#), [aci\(5DSAT\)](#), [changeHasReplFixupOp\(5DSAT\)](#), [changeIsReplFixupOp\(5DSAT\)](#), [copiedFrom\(5DSAT\)](#), [copyingFrom\(5DSAT\)](#), [deletedEntryAttrs\(5DSAT\)](#), [ds-pluginDigest\(5DSAT\)](#), [ds-pluginSignature\(5DSAT\)](#), [isMemberOf\(5DSAT\)](#), [ldapSyntaxes\(5DSAT\)](#), [namingContexts\(5DSAT\)](#), [nsIdleTimeout\(5DSAT\)](#), [nsLookThroughLimit\\_5dsat\(5DSAT\)](#), [nsRole\(5DSAT\)](#), [nsds5ReplConflict\(5DSAT\)](#), [nsRoleDN\(5DSAT\)](#), [nsSizeLimit\(5DSAT\)](#), [nsTimeLimit\(5DSAT\)](#), [numSubordinates\(5DSAT\)](#), [passwordAllowChangeTime\(5DSAT\)](#), [passwordExpWarned\(5DSAT\)](#), [passwordExpirationTime\(5DSAT\)](#), [passwordHistory\(5DSAT\)](#), [passwordPolicySubentry\(5DSAT\)](#), [passwordRetryCount\(5DSAT\)](#), [pwdAccountLockedTime\(5DSAT\)](#), [pwdChangedTime\(5DSAT\)](#), [pwdFailureTime\(5DSAT\)](#), [pwdGraceUseTime\(5DSAT\)](#), [pwdHistory\(5DSAT\)](#), [pwdLastAuthTime\(5DSAT\)](#), [pwdPolicySubentry\(5DSAT\)](#), [pwdReset\(5DSAT\)](#), [replicaIdentifier\(5DSAT\)](#), [replicationCSN\(5DSAT\)](#), [retryCountResetTime\(5DSAT\)](#), [subschemaSubentry\(5DSAT\)](#), [supportedControl\(5DSAT\)](#), [supportedExtension\(5DSAT\)](#), [supportedLDAPVersion\(5DSAT\)](#), [supportedSASLMechanisms\(5DSAT\)](#), [targetUniqueId\(5DSAT\)](#), [vendorName\(5DSAT\)](#), [vendorVersion\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

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## pwpolicy

Schema definitions for Password Policy Internet Draft

### Description

The Password Policy Internet Draft describes attribute types and object classes for holding password policy configuration data. Directory Server supports schema definitions corresponding to those described in the draft.

See [sunPwPolicy\(5DSOC\)](#) for additional Directory Server extensions.

### Object Classes

This collection includes the object classes documented in the following additional pages:

[pwdPolicy\(5DSOC\)](#)

### Attribute Types

This collection includes the attribute types documented in the following additional pages:

[pwdAccountLockedTime\(5DSAT\)](#), [pwdAllowUserChange\(5DSAT\)](#),  
[pwdAttribute\(5DSAT\)](#), [pwdChangedTime\(5DSAT\)](#), [pwdCheckQuality\(5DSAT\)](#),  
[pwdExpireWarning\(5DSAT\)](#), [pwdFailureCountInterval\(5DSAT\)](#),  
[pwdFailureTime\(5DSAT\)](#), [pwdGraceAuthNLimit\(5DSAT\)](#),  
[pwdGraceUseTime\(5DSAT\)](#), [pwdHistory\(5DSAT\)](#), [pwdInHistory\(5DSAT\)](#),  
[pwdLockout\(5DSAT\)](#), [pwdLockoutDuration\(5DSAT\)](#), [pwdMaxAge\(5DSAT\)](#),  
[pwdMaxFailure\(5DSAT\)](#), [pwdMinAge\(5DSAT\)](#), [pwdMinLength\(5DSAT\)](#),  
[pwdMustChange\(5DSAT\)](#), [pwdPolicySubentry\(5DSAT\)](#), [pwdReset\(5DSAT\)](#),  
[pwdSafeModify\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External

## rfc2079

Schema definitions for rfc 2079

### Description

RFC 2079 defines X.500 attribute types and object classes for holding Uniform Resource Identifiers (URI). Directory Server supports schema definitions corresponding to those described in RFC 2079.

### Object Classes

This collection includes the object classes documented in the following additional pages:

[labeledURIObject\(5DSOC\)](#)

### Attribute Types

This collection includes the attribute types documented in the following additional pages:

[labeledUri\(5DSAT\)](#)

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Standard

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## rfc2247

Schema definitions for rfc 2247

### Description

RFC 2247 specifies mappings for DNS domain names onto directory attribute types and object classes. Directory Server supports schema definitions corresponding to those described in RFC 2247.

### Object Classes

This collection includes the object classes documented in the following additional pages:

[dcObject\(5DSOC\)](#), [domain\(5DSOC\)](#)

### Attribute Types

This collection includes the attribute types documented in the following additional pages:

[dc\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard

## rfc2307

Schema definitions for rfc 2307

### Description

RFC 2307 defines an approach for using LDAP as a Network Information Service. Directory Server supports schema definitions corresponding to those described in RFC 2307.

### Object Classes

This collection includes the object classes documented in the following additional pages:

[bootableDevice\(5DSOC\)](#), [ieee802Device\(5DSOC\)](#), [ipHost\(5DSOC\)](#), [ipNetwork\(5DSOC\)](#), [ipProtocol\(5DSOC\)](#), [ipService\(5DSOC\)](#), [nisMap\(5DSOC\)](#), [nisNetgroup\(5DSOC\)](#), [nisObject\(5DSOC\)](#), [oncRpc\(5DSOC\)](#), [posixAccount\(5DSOC\)](#), [posixGroup\(5DSOC\)](#), [shadowAccount\(5DSOC\)](#)

### Attribute Types

This collection includes the attribute types documented in the following additional pages:

[bootFile\(5DSAT\)](#), [bootParameter\(5DSAT\)](#), [gecos\(5DSAT\)](#), [gidNumber\(5DSAT\)](#), [homeDirectory\(5DSAT\)](#), [ipHostNumber\(5DSAT\)](#), [ipNetmaskNumber\(5DSAT\)](#), [ipNetworkNumber\(5DSAT\)](#), [ipProtocolNumber\(5DSAT\)](#), [ipServicePort\(5DSAT\)](#), [ipServiceProtocol\(5DSAT\)](#), [loginShell\(5DSAT\)](#), [macAddress\(5DSAT\)](#), [memberNisNetgroup\(5DSAT\)](#), [memberUid\(5DSAT\)](#), [nisMapEntry\(5DSAT\)](#), [nisMapName\(5DSAT\)](#), [nisNetgroupTriple\(5DSAT\)](#), [oncRpcNumber\(5DSAT\)](#), [shadowExpire\(5DSAT\)](#), [shadowFlag\(5DSAT\)](#), [shadowInactive\(5DSAT\)](#), [shadowLastChange\(5DSAT\)](#), [shadowMax\(5DSAT\)](#), [shadowMin\(5DSAT\)](#), [shadowWarning\(5DSAT\)](#), [uidNumber\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard

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## rfc2713

Schema definitions for rfc 2713

### Description

RFC 2713 defines schema for representing Java objects in an LDAP directory. Directory Server supports schema definitions corresponding to those described in RFC 2713.

### Object Classes

This collection includes the object classes documented in the following additional pages:

[javaContainer\(5DSOC\)](#), [javaMarshaledObject\(5DSOC\)](#),  
[javaNamingReference\(5DSOC\)](#), [javaObject\(5DSOC\)](#),  
[javaSerializedObject\(5DSOC\)](#)

### Attribute Types

This collection includes the attribute types documented in the following additional pages:

[javaClassName\(5DSAT\)](#), [javaClassNames\(5DSAT\)](#), [javaCodebase\(5DSAT\)](#),  
[javaDoc\(5DSAT\)](#), [javaFactory\(5DSAT\)](#), [javaReferenceAddress\(5DSAT\)](#),  
[javaSerializedData\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard

## rfc2798

Schema definitions for rfc 2798

### Description

RFC 2798 defines the `inetOrgPerson` object class and relevant attribute types. Directory Server supports schema definitions corresponding to those described in RFC 2798.

### Object Classes

This collection includes the object classes documented in the following additional pages:

[inetOrgPerson\(5DSOC\)](#)

### Attribute Types

This collection includes the attribute types documented in the following additional pages:

[carLicense\(5DSAT\)](#), [departmentNumber\(5DSAT\)](#), [displayName\(5DSAT\)](#), [employeeNumber\(5DSAT\)](#), [employeeType\(5DSAT\)](#), [jpegPhoto\(5DSAT\)](#), [preferredLanguage\(5DSAT\)](#), [userPKCS12\(5DSAT\)](#), [userSMIMECertificate\(5DSAT\)](#)

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard

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## rfc3045

Schema definitions for rfc 3045

### Description

RFC 3045 specifies how to store vendor information in the LDAP root DSE. Directory Server supports schema definitions corresponding to those described in RFC 3045.

### Attribute Types

This collection includes the attribute types documented in the following additional pages:

[vendorName\(5DSAT\)](#), [vendorVersion\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard

## rfc3296

Schema definitions for rfc 3296

### Description

RFC 3296 defines schema and protocol elements for representing and manipulating named subordinate references in LDAP directories. Directory Server supports schema definitions corresponding to those described in RFC 3296.

### Object Classes

This collection includes the object classes documented in the following additional pages:

[referral\(5DSOC\)](#)

### Attribute Types

This collection includes the attribute types documented in the following additional pages:

[ref\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Standard

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## rfc4512

Schema definitions for rfc 4512

### Description

RFC 4512 describes the X.500 Directory Information Models, as used in LDAP.

### Object Classes

This collection includes the object classes documented in the following additional pages:

[extensibleObject\(5DSOC\)](#), [subschema\(5DSOC\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard

## rfc4517

Schema definitions for rfc 4517

### Description

RFC 4517 specifies a set of syntaxes and matching rules for LDAP v3 attribute values. Directory Server supports schema definitions corresponding to those described in RFC 4517.

### Attribute Types

This collection includes the attribute types documented in the following additional pages:

[attributeTypes\(5DSAT\)](#), [dITContentRules\(5DSAT\)](#),  
[dITStructureRules\(5DSAT\)](#), [ldapSyntaxes\(5DSAT\)](#),  
[matchingRuleUse\(5DSAT\)](#), [matchingRules\(5DSAT\)](#), [nameForms\(5DSAT\)](#),  
[namingContexts\(5DSAT\)](#), [objectClasses\(5DSAT\)](#),  
[subschemaSubentry\(5DSAT\)](#), [supportedControl\(5DSAT\)](#),  
[supportedExtension\(5DSAT\)](#), [supportedLDAPVersion\(5DSAT\)](#),  
[supportedSASLMechanisms\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard

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## rfc4519

Schema definitions for rfc 4519

### Description

RFC 4519 summarizes X.500 user schema for use with LDAP v3 directories. Directory Server supports schema definitions corresponding to those described in RFC 4519.

### Object Classes

This collection includes the object classes documented in the following additional pages:

[alias\(5DSOC\)](#), [applicationEntity\(5DSOC\)](#), [country\(5DSOC\)](#), [dSA\(5DSOC\)](#), [device\(5DSOC\)](#), [groupOfNames\(5DSOC\)](#), [groupOfUniqueNames\(5DSOC\)](#), [locality\\_5dsoc\(5DSOC\)](#), [organization\(5DSOC\)](#), [organizationalPerson\(5DSOC\)](#), [organizationalRole\(5DSOC\)](#), [organizationalUnit\(5DSOC\)](#), [person\(5DSOC\)](#), [residentialPerson\(5DSOC\)](#), [strongAuthenticationUser\(5DSOC\)](#), [top\(5DSOC\)](#)

### Attribute Types

This collection includes the attribute types documented in the following additional pages:

[aliasedObjectName\(5DSAT\)](#), [authorityRevocationList\(5DSAT\)](#), [businessCategory\(5DSAT\)](#), [c\(5DSAT\)](#), [cACertificate\(5DSAT\)](#), [certificateRevocationList\(5DSAT\)](#), [cn\(5DSAT\)](#), [crossCertificatePair\(5DSAT\)](#), [deltaRevocationList\(5DSAT\)](#), [description\\_5dsat\(5DSAT\)](#), [destinationIndicator\(5DSAT\)](#), [distinguishedName\(5DSAT\)](#), [dmdName\(5DSAT\)](#), [enhancedSearchGuide\(5DSAT\)](#), [facsimileTelephoneNumber\(5DSAT\)](#), [generationQualifier\(5DSAT\)](#), [givenName\(5DSAT\)](#), [houseIdentifier\(5DSAT\)](#), [initials\(5DSAT\)](#), [internationaliSDNNNumber\(5DSAT\)](#), [knowledgeInformation\(5DSAT\)](#), [l\(5DSAT\)](#), [member\(5DSAT\)](#), [name\(5DSAT\)](#), [o\(5DSAT\)](#), [objectClass\(5DSAT\)](#), [ou\(5DSAT\)](#), [owner\(5DSAT\)](#), [physicalDeliveryOfficeName\(5DSAT\)](#), [postOfficeBox\(5DSAT\)](#), [postalAddress\(5DSAT\)](#), [postalCode\(5DSAT\)](#), [preferredDeliveryMethod\(5DSAT\)](#), [presentationAddress\(5DSAT\)](#), [protocolInformation\(5DSAT\)](#), [registeredAddress\(5DSAT\)](#), [roleOccupant\(5DSAT\)](#), [searchGuide\(5DSAT\)](#), [seeAlso\(5DSAT\)](#), [serialNumber\(5DSAT\)](#), [sn\(5DSAT\)](#), [st\(5DSAT\)](#), [street\(5DSAT\)](#), [supportedAlgorithms\(5DSAT\)](#), [supportedApplicationContext\(5DSAT\)](#), [telephoneNumber\(5DSAT\)](#), [teletexTerminalIdentifier\(5DSAT\)](#), [telexNumber\(5DSAT\)](#), [title\(5DSAT\)](#), [uniqueMember\(5DSAT\)](#), [userCertificate\(5DSAT\)](#), [userPassword\(5DSAT\)](#), [x121Address\(5DSAT\)](#), [x500UniqueIdentifier\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Stability Level	Standard

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## rfc4523

Schema definitions for rfc 4523

### Description

RFC 4523 describes schema for representing X.509 certificates, X.521 security information, and related elements in directories accessible using the Lightweight Directory Access Protocol (LDAP). Directory Server supports schema definitions corresponding to those described in RFC 4523.

### Object Classes

This collection includes the object classes documented in the following additional pages:

[certificationAuthority](#), [certificationAuthority-V2](#), [cRLDistributionPoint](#), [strongAuthenticationUser\(5DSOC\)](#), [userSecurityInformation](#)

### Attribute Types

This collection includes the attribute types documented in the following additional pages:

[authorityRevocationList\(5DSAT\)](#), [cACertificate\(5DSAT\)](#), [certificateRevocationList\(5DSAT\)](#), [crossCertificatePair\(5DSAT\)](#), [deltaRevocationList\(5DSAT\)](#), [supportedAlgorithms\(5DSAT\)](#), [userCertificate\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard

## rfc4524

Schema definitions for rfc 4524

### Description

RFC 4524 specifies schema for use in the COSINE and Internet X.500 pilots. Directory Server supports schema definitions corresponding to those described in RFC 4524.

### Object Classes

This collection includes the object classes documented in the following additional pages:

[account\(5DSOC\)](#), [document\(5DSOC\)](#), [documentSeries\(5DSOC\)](#),  
[domainRelatedObject\(5DSOC\)](#), [friendlyCountry\(5DSOC\)](#),  
[pilotObject\(5DSOC\)](#), [pilotOrganization\(5DSOC\)](#), [room\(5DSOC\)](#),  
[simpleSecurityObject\(5DSOC\)](#)

### Attribute Types

This collection includes the attribute types documented in the following additional pages:

[associatedDomain\(5DSAT\)](#), [associatedName\(5DSAT\)](#), [audio\(5DSAT\)](#),  
[buildingName\(5DSAT\)](#), [co\(5DSAT\)](#), [dsaQuality\(5DSAT\)](#), [ditRedirect\(5DSAT\)](#),  
[documentAuthor\(5DSAT\)](#), [documentIdentifier\(5DSAT\)](#),  
[documentLocation\(5DSAT\)](#), [documentPublisher\(5DSAT\)](#),  
[documentTitle\(5DSAT\)](#), [documentVersion\(5DSAT\)](#), [drink\(5DSAT\)](#),  
[homePhone\(5DSAT\)](#), [homePostalAddress\(5DSAT\)](#), [host\(5DSAT\)](#), [info\(5DSAT\)](#),  
[janetMailbox\(5DSAT\)](#), [lastModifiedBy\(5DSAT\)](#), [lastModifiedTime\(5DSAT\)](#),  
[mail\(5DSAT\)](#), [mailPreferenceOption\(5DSAT\)](#), [manager\(5DSAT\)](#),  
[mobile\(5DSAT\)](#), [organizationalStatus\(5DSAT\)](#), [otherMailbox\(5DSAT\)](#),  
[pager\(5DSAT\)](#), [personalSignature\(5DSAT\)](#), [personalTitle\(5DSAT\)](#),  
[photo\(5DSAT\)](#), [roomNumber\(5DSAT\)](#), [secretary\(5DSAT\)](#),  
[singleLevelQuality\(5DSAT\)](#), [subtreeMaximumQuality\(5DSAT\)](#),  
[subtreeMinimumQuality\(5DSAT\)](#), [textEncodedORAddress\(5DSAT\)](#),  
[uid\(5DSAT\)](#), [uniqueIdentifier\(5DSAT\)](#), [userClass\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard

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## sasl

Schema definitions for sasl

### Description

This collection reflects the object class and attributes for SASL configuration. The `dse.ldif` entry governing SASL configuration has DN `cn=SASL, cn=security, cn=config`.

### Object Classes

This collection includes the object classes documented in the following additional pages:

[dsSaslConfig\(5DSOC\)](#)

### Attribute Types

This collection includes the attribute types documented in the following additional pages:

[dsSaslMaxBufSize\(5DSAT\)](#), [dsSaslMaxSSF\(5DSAT\)](#), [dsSaslMinSSF\(5DSAT\)](#), [dsSaslPluginsEnable\(5DSAT\)](#), [dsSaslPluginsPath\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## subentry

Schema definitions for LDAP Subentry Internet Draft

### Description

The LDAP Subentry Internet Draft describes an object class that may be used to indicate operations and management-related entries in the directory, called LDAP Subentries. Directory Server supports schema definitions corresponding to those described in the draft.

### Object Classes

This collection includes the object classes documented in the following additional pages:

[ldapSubEntry\(5DSOC\)](#)

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External

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## wppilot

Schema definitions for Internet White Pages Pilot

### Description

The Internet White Pages Pilot specifies object classes and attribute types for interoperable white pages including name, email, address, and other contact data. Directory Server supports schema definitions corresponding to those used in the pilot.

### Object Classes

This collection includes the object classes documented in the following additional pages:

[newPilotPerson\(5DSOC\)](#)

### Attribute Types

This collection includes the attribute types documented in the following additional pages:

[abstract\(5DSAT\)](#), [authorCn\(5DSAT\)](#), [authorSn\(5DSAT\)](#), [documentStore\(5DSAT\)](#), [keyWords\(5DSAT\)](#), [multiLineDescription\(5DSAT\)](#), [obsoletedByDocument\(5DSAT\)](#), [obsoletesDocument\(5DSAT\)](#), [subject\(5DSAT\)](#), [updatedByDocument\(5DSAT\)](#), [updatesDocument\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External



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## LDAP Schema Attribute Types

This section describes attribute types defined in the LDAP schema that Directory Server provides.

## Intro\_7Attributes

introduction to LDAP schema attribute types

### Description

This section describes attribute types defined in the LDAP schema that Directory Server provides.

For an overview of LDAP schema provided by Directory Server, see [Intro\\_6Schema\(5DSSD\)](#).

### LIST OF ATTRIBUTE TYPES

This reference manual section includes the following pages, not counting additional names for some attribute types.

**[abstract\(5DSAT\)](#)**

Pilot attribute type

**[accountUnlockTime\(5DSAT\)](#)**

Sun ONE defined password policy attribute type

**[aci\(5DSAT\)](#)**

Sun ONE defined access control information attribute type

**[aliasedObjectName\(5DSAT\)](#)**

Standard LDAP attribute type

**[associatedDomain\(5DSAT\)](#)**

Standard LDAP attribute type

**[associatedName\(5DSAT\)](#)**

Standard LDAP attribute type

**[attributeTypes\(5DSAT\)](#)**

Standard LDAP attribute type

**[audio\(5DSAT\)](#)**

Standard LDAP attribute type

**[authorCn\(5DSAT\)](#)**

Pilot attribute type

**[authorityRevocationList\(5DSAT\)](#)**

Standard LDAP attribute type

**[authorSn\(5DSAT\)](#)**

Pilot attribute type

**[bootFile\(5DSAT\)](#)**

Standard LDAP attribute type

**[bootParameter\(5DSAT\)](#)**

Standard LDAP attribute type

**buildingName(5DSAT)**

Standard LDAP attribute type

**businessCategory(5DSAT)**

Standard LDAP attribute type

**c(5DSAT)**

Standard LDAP attribute type

**cACertificate(5DSAT)**

Standard LDAP attribute type

**carLicense(5DSAT)**

inetOrgPerson attribute type

**certificateRevocationList(5DSAT)**

Standard LDAP attribute type

**changeHasReplFixupOp(5DSAT)**

RetroChangelog attribute type

**changeIsReplFixupOp(5DSAT)**

RetroChangelog attribute type

**changeLog\_5dsat(5DSAT)**

DN of the entry containing the set of entries comprising the server changelog

**changeNumber(5DSAT)**

Changelog attribute type

**changes(5DSAT)**

Changelog attribute type

**changeTime(5DSAT)**

Sun ONE defined attribute type

**changeType(5DSAT)**

Changelog attribute type

**cn(5DSAT)**

Standard LDAP attribute type

**co(5DSAT)**

Standard LDAP attribute type

**copiedFrom(5DSAT)**

Sun ONE defined attribute type

**copyingFrom(5DSAT)**

Sun ONE defined attribute type

**cosAttribute(5DSAT)**

Sun ONE defined attribute type

**cosIndirectSpecifier(5DSAT)**

Sun ONE defined attribute type

**cosPriority(5DSAT)**

Sun ONE defined attribute type

**cosspecifier(5DSAT)**

Sun ONE defined attribute type

**costargettree(5DSAT)**

Sun ONE defined attribute type

**costemplatedn(5DSAT)**

Sun ONE defined attribute type

**crossCertificatePair(5DSAT)**

Standard LDAP attribute type

**dc(5DSAT)**

Standard LDAP attribute type

**deletedEntryAttrs(5DSAT)**

RetroChangelog attribute type

**deleteOldRdn(5DSAT)**

Changelog attribute type

**deltaRevocationList(5DSAT)**

Standard LDAP attribute type

**departmentNumber(5DSAT)**

inetOrgPerson attribute type

**description\_5dsat(5DSAT)**

Free form text description of the replication agreement

**destinationIndicator(5DSAT)**

Standard LDAP attribute type

**displayName(5DSAT)**

inetOrgPerson attribute type

**distinguishedName(5DSAT)**

Standard LDAP attribute type

**dITContentRules(5DSAT)**

Standard LDAP attribute type

**ditRedirect(5DSAT)**

Standard LDAP attribute type

**dITStructureRules(5DSAT)**

Standard LDAP attribute type

**dmdName(5DSAT)**

LDAP attribute type

**dnsRecord(5DSAT)**

Pilot attribute type

**documentAuthor(5DSAT)**

Standard LDAP attribute type

**documentauthorcommonname(5DSAT)**

Pilot attribute type

**documentauthorsurname(5DSAT)**

Pilot attribute type

**documentIdentifier(5DSAT)**

Standard LDAP attribute type

**documentLocation(5DSAT)**

Standard LDAP attribute type

**documentPublisher(5DSAT)**

Standard LDAP attribute type

**documentStore(5DSAT)**

Pilot attribute type

**documentTitle(5DSAT)**

Standard LDAP attribute type

**documentVersion(5DSAT)**

Standard LDAP attribute type

**drink(5DSAT)**

Standard LDAP attribute type

**ds-pluginDigest(5DSAT)**

Sun reserved definition

**ds-pluginSignature(5DSAT)**

Sun reserved definition

**dsaQuality(5DSAT)**

Standard LDAP attribute type

**dsSaslMaxBufSize(5DSAT)**

Sun DS attribute for SASL config

**dsSaslMaxSSF(5DSAT)**

Sun DS attribute for SASL config

**dsSaslMinSSF(5DSAT)**

Sun DS attribute for SASL config

**dsSaslPluginsEnable(5DSAT)**

Sun ONE defined attribute type

**dsSaslPluginsPath(5DSAT)**

Sun ONE defined attribute type

**employeeNumber(5DSAT)**

inetOrgPerson attribute type

**employeeType(5DSAT)**

inetOrgPerson attribute type

**enhancedSearchGuide(5DSAT)**

Standard LDAP attribute type

**facsimileTelephoneNumber(5DSAT)**

Standard LDAP attribute type

**gecos(5DSAT)**

Standard LDAP attribute type

**generationQualifier(5DSAT)**

Standard LDAP attribute type

**gidNumber(5DSAT)**

Standard LDAP attribute type

**givenName(5DSAT)**

Standard LDAP attribute type

**homeDirectory(5DSAT)**

Standard LDAP attribute type

**homePhone(5DSAT)**

Standard LDAP attribute type

**homePostalAddress(5DSAT)**

Standard LDAP attribute type

**host(5DSAT)**

Standard LDAP attribute type

**houseIdentifier(5DSAT)**

Standard LDAP attribute type

**info(5DSAT)**

Standard LDAP attribute type

**initials(5DSAT)**

Standard LDAP attribute type

**internationaliSDNNumber(5DSAT)**

Standard LDAP attribute type

**ipHostNumber(5DSAT)**

Standard LDAP attribute type

**ipNetmaskNumber(5DSAT)**

Standard LDAP attribute type

**ipNetworkNumber(5DSAT)**

Standard LDAP attribute type

**ipProtocolNumber(5DSAT)**

Standard LDAP attribute type

**ipServicePort(5DSAT)**

Standard LDAP attribute type

**ipServiceProtocol(5DSAT)**

Standard LDAP attribute type

**isMemberOf(5DSAT)**

LDAP attribute type

**janetMailbox(5DSAT)**

Standard LDAP attribute type

**javaClassName(5DSAT)**

Fully qualified name of distinguished Java class or interface

**javaClassNames(5DSAT)**

Fully qualified Java class or interface name

**javaCodebase(5DSAT)**

URL(s) specifying the location of class definition

**javaDoc(5DSAT)**

The Java documentation for the class

**javaFactory(5DSAT)**

Fully qualified Java class name of a JNDI object factory

**javaReferenceAddress(5DSAT)**

Addresses associated with a JNDI Reference

**javaSerializedData(5DSAT)**

Serialized form of a Java object

**jpegPhoto(5DSAT)**

inetOrgPerson attribute type

**keywords(5DSAT)**

Pilot attribute type

**knowledgeInformation(5DSAT)**

Standard LDAP attribute type

**l(5DSAT)**

Standard LDAP attribute type

**labeledUri(5DSAT)**

Uniform Resource Identifier with optional label

**labeledurl(5DSAT)**

Uniform Resource Identifier with optional label

**lastModifiedBy(5DSAT)**

old variant of modifiersName

**lastModifiedTime(5DSAT)**

old variant of modifyTimestamp

- ldapSyntaxes(5DSAT)**  
Standard LDAP attribute type
- loginShell(5DSAT)**  
Standard LDAP attribute type
- macAddress(5DSAT)**  
Standard LDAP attribute type
- mail(5DSAT)**  
Standard LDAP attribute type
- mailPreferenceOption(5DSAT)**  
Standard LDAP attribute type
- manager(5DSAT)**  
Standard LDAP attribute type
- matchingRules(5DSAT)**  
Standard LDAP attribute type
- matchingRuleUse(5DSAT)**  
Standard LDAP attribute type
- member(5DSAT)**  
Standard LDAP attribute type
- memberCertificateDescription(5DSAT)**  
Sun ONE defined attribute type
- memberNisNetgroup(5DSAT)**  
Standard LDAP attribute type
- memberUid(5DSAT)**  
Standard LDAP attribute type
- memberURL(5DSAT)**  
Sun ONE defined attribute type
- mobile(5DSAT)**  
Standard LDAP attribute type
- multiLineDescription(5DSAT)**  
Pilot attribute type
- name(5DSAT)**  
LDAP attribute type
- nameForms(5DSAT)**  
Standard LDAP attribute type
- namingContexts(5DSAT)**  
Standard LDAP attribute type
- newRdn(5DSAT)**  
Changelog attribute type

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**newSuperior(5DSAT)**  
Changelog attribute type

**nisMapEntry(5DSAT)**  
Standard LDAP attribute type

**nisMapName(5DSAT)**  
Standard LDAP attribute type

**nisNetgroupTriple(5DSAT)**  
Standard LDAP attribute type

**nsds5ReplConflict(5DSAT)**  
Sun ONE defined attribute type

**nsLicensedFor(5DSAT)**  
Sun ONE defined attribute type

**nsLicenseEndTime(5DSAT)**  
Sun ONE defined attribute type

**nsLicenseStartTime(5DSAT)**  
Sun ONE defined attribute type

**nsRole(5DSAT)**  
Sun ONE defined attribute type

**nsRoleDN(5DSAT)**  
Sun ONE defined attribute type

**nsRoleFilter(5DSAT)**  
Sun ONE defined attribute type

**nsRoleScopeDn(5DSAT)**  
Sun ONE defined attribute type

**numSubordinates(5DSAT)**  
count of immediate subordinates

**o(5DSAT)**  
Standard LDAP attribute type

**objectClass(5DSAT)**  
Standard LDAP attribute type

**objectClasses(5DSAT)**  
Standard LDAP attribute type

**obsoleteByDocument(5DSAT)**  
Pilot attribute type

**obsoletesDocument(5DSAT)**  
Pilot attribute type

**oncRpcNumber(5DSAT)**  
Standard LDAP attribute type

**organizationalStatus(5DSAT)**

Standard LDAP attribute type

**otherMailbox(5DSAT)**

Standard LDAP attribute type

**ou(5DSAT)**

Standard LDAP attribute type

**owner(5DSAT)**

Standard LDAP attribute type

**pager(5DSAT)**

Standard LDAP attribute type

**pagerTelephoneNumber(5DSAT)**

Standard LDAP attribute type

**passwordAllowChangeTime(5DSAT)**

Sun ONE defined password policy attribute type

**passwordChange(5DSAT)**

Sun ONE defined password policy attribute type

**passwordCheckSyntax(5DSAT)**

Sun ONE defined password policy attribute type

**passwordExp(5DSAT)**

Sun ONE defined password policy attribute type

**passwordExpirationTime(5DSAT)**

Sun ONE defined password policy attribute type

**passwordExpireWithoutWarning(5DSAT)**

Sun ONE defined password policy attribute type

**passwordExpWarned(5DSAT)**

Sun ONE defined password policy attribute type

**passwordHistory(5DSAT)**

Sun ONE defined password policy attribute type

**passwordInHistory(5DSAT)**

Sun ONE defined password policy attribute type

**passwordLockout(5DSAT)**

Sun ONE defined password policy attribute type

**passwordLockoutDuration(5DSAT)**

Sun ONE defined password policy attribute type

**passwordMaxAge(5DSAT)**

Sun ONE defined password policy attribute type

**passwordMaxFailure(5DSAT)**

Sun ONE defined password policy attribute type

- passwordMinAge(5DSAT)**  
Sun ONE defined password policy attribute type
- passwordMinLength(5DSAT)**  
Sun ONE defined password policy attribute type
- passwordMustChange(5DSAT)**  
Sun ONE defined password policy attribute type
- passwordNonRootMayResetUserpwd(5DSAT)**  
LDAP attribute type
- passwordPolicySubentry(5DSAT)**  
Sun ONE defined password policy attribute type
- passwordResetDuration(5DSAT)**  
Sun ONE defined password policy attribute type
- passwordResetFailureCount(5DSAT)**  
Sun ONE defined password policy attribute type
- passwordRetryCount(5DSAT)**  
Sun ONE defined password policy attribute type
- passwordRootdnMayBypassModsChecks(5DSAT)**  
Sun ONE defined password policy attribute type
- passwordStorageScheme(5DSAT)**  
Sun ONE defined password policy attribute type
- passwordUnlock(5DSAT)**  
Sun ONE defined password policy attribute type
- passwordWarning(5DSAT)**  
Sun ONE defined password policy attribute type
- personalSignature(5DSAT)**  
Standard LDAP attribute type
- personalTitle(5DSAT)**  
Standard LDAP attribute type
- photo(5DSAT)**  
Standard LDAP attribute type
- physicalDeliveryOfficeName(5DSAT)**  
Standard LDAP attribute type
- postalAddress(5DSAT)**  
Standard LDAP attribute type
- postalCode(5DSAT)**  
Standard LDAP attribute type
- postOfficeBox(5DSAT)**  
Standard LDAP attribute type

**preferredDeliveryMethod(5DSAT)**

Standard LDAP attribute type

**preferredLanguage(5DSAT)**

inetOrgPerson attribute type

**presentationAddress(5DSAT)**

Standard LDAP attribute type

**protocolInformation(5DSAT)**

Standard LDAP attribute type

**pwdAccountLockedTime(5DSAT)**

Directory Server defined password policy attribute type

**pwdAllowUserChange(5DSAT)**

LDAP attribute type

**pwdAttribute(5DSAT)**

LDAP attribute type

**pwdChangedTime(5DSAT)**

Directory Server defined password policy attribute type

**pwdCheckQuality(5DSAT)**

LDAP attribute type

**pwdExpireWarning(5DSAT)**

Password Warning Expiration

**pwdFailureCountInterval(5DSAT)**

Password Failure Count Interval

**pwdFailureTime(5DSAT)**

Directory Server defined password policy attribute type

**pwdGraceAuthNLimit(5DSAT)**

Password Grace Login

**pwdGraceUseTime(5DSAT)**

Directory Server defined password policy attribute type

**pwdHistory(5DSAT)**

Directory Server defined password policy attribute type

**pwdInHistory(5DSAT)**

Number of Passwords in history

**pwdIsLockoutPrioritized(5DSAT)**

LDAP attribute type

**pwdKeepLastAuthTime(5DSAT)**

Enable last authentication time recording

**pwdLastAuthTime(5DSAT)**

Last authentication time

---

**pwdLockout(5DSAT)**  
Password Lockout

**pwdLockoutDuration(5DSAT)**  
Password Lockout Duration

**pwdMaxAge(5DSAT)**  
Password Max Age

**pwdMaxFailure(5DSAT)**  
Password Max Failure

**pwdMinAge(5DSAT)**  
Password Min Age

**pwdMinLength(5DSAT)**  
Password Min Length

**pwdMustChange(5DSAT)**  
Password Must Change

**pwdPolicySubentry(5DSAT)**  
Directory Server defined password policy attribute type

**pwdReset(5DSAT)**  
Directory Server defined password policy attribute type

**pwdSafeModify(5DSAT)**  
Password Safe Modify

**ref(5DSAT)**  
Standard LDAP referral attribute type

**registeredAddress(5DSAT)**  
Standard LDAP attribute type

**replicaIdentifier(5DSAT)**  
RetroChangelog attribute type

**replicationCSN(5DSAT)**  
RetroChangelog attribute type

**retryCountResetTime(5DSAT)**  
Sun ONE defined password policy attribute type

**roleOccupant(5DSAT)**  
Standard LDAP attribute type

**roomNumber(5DSAT)**  
Standard LDAP attribute type

**searchGuide(5DSAT)**  
Standard LDAP attribute type

**secretary(5DSAT)**  
Standard LDAP attribute type

**seeAlso(5DSAT)**

Standard LDAP attribute type

**serialNumber(5DSAT)**

Standard LDAP attribute type

**shadowExpire(5DSAT)**

Standard LDAP attribute type

**shadowFlag(5DSAT)**

Standard LDAP attribute type

**shadowInactive(5DSAT)**

Standard LDAP attribute type

**shadowLastChange(5DSAT)**

Standard LDAP attribute type

**shadowMax(5DSAT)**

Standard LDAP attribute type

**shadowMin(5DSAT)**

Standard LDAP attribute type

**shadowWarning(5DSAT)**

Standard LDAP attribute type

**singleLevelQuality(5DSAT)**

Standard LDAP attribute type

**sn(5DSAT)**

Standard LDAP attribute type

**st(5DSAT)**

Standard LDAP attribute type

**street(5DSAT)**

Standard LDAP attribute type

**subject(5DSAT)**

Pilot attribute type

**subschemaSubentry(5DSAT)**

Standard LDAP attribute type

**subtreeMaximumQuality(5DSAT)**

Standard LDAP attribute type

**subtreeMinimumQuality(5DSAT)**

Standard LDAP attribute type

**supportedAlgorithms(5DSAT)**

Standard LDAP attribute type

**supportedApplicationContext(5DSAT)**

Standard LDAP attribute type

**supportedControl(5DSAT)**

Standard LDAP attribute type

**supportedExtension(5DSAT)**

Standard LDAP attribute type

**supportedLDAPVersion(5DSAT)**

Standard LDAP attribute type

**supportedSASLMechanisms(5DSAT)**

Standard LDAP attribute type

**supportedSSLCiphers(5DSAT)**

List of ciphers supported by SSL lib

**targetDn(5DSAT)**

Changelog attribute type

**targetUniqueId(5DSAT)**

RetroChangelog attribute type

**telephoneNumber(5DSAT)**

Standard LDAP attribute type

**teletexTerminalIdentifier(5DSAT)**

Standard LDAP attribute type

**telexNumber(5DSAT)**

Standard LDAP attribute type

**textEncodedORAddress(5DSAT)**

Standard LDAP attribute type

**title(5DSAT)**

Standard LDAP attribute type

**uid(5DSAT)**

Standard LDAP attribute type

**uidNumber(5DSAT)**

Standard LDAP attribute type

**uniqueIdentifier(5DSAT)**

Standard LDAP attribute type

**uniqueMember(5DSAT)**

Standard LDAP attribute type

**updatedByDocument(5DSAT)**

Pilot attribute type

**updatesDocument(5DSAT)**

Pilot attribute type

**userCertificate(5DSAT)**

Standard LDAP attribute type

**userClass(5DSAT)**

Standard LDAP attribute type

**userPassword(5DSAT)**

Standard LDAP attribute type

**userPKCS12(5DSAT)**

inetOrgPerson attribute type

**userSMIMECertificate(5DSAT)**

inetOrgPerson attribute type

**vendorName(5DSAT)**

LDAP attribute type

**vendorVersion(5DSAT)**

LDAP attribute type

**x121Address(5DSAT)**

Standard LDAP attribute type

**x500UniqueIdentifier(5DSAT)**

Standard LDAP attribute type

---

## abstract

Pilot attribute type

### Synopsis

```
( 0.9.2342.19200300.102.1.9
  NAME 'abstract'
  DESC 'Pilot attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'Internet White Pages Pilot' )
```

### Description

Provides an abstract of a document entry.

### Syntax

Directory String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Internet White Pages Pilot

## accountUnlockTime

Sun ONE defined password policy attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.95
  NAME 'accountUnlockTime'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.24
  SINGLE-VALUE
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Indicates the exact time after which a user can attempt to bind to the directory (after an account lockout). This attribute is used only when the password policy is enabled.

### Syntax

Generalized Time, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

---

## aci

Sun ONE defined access control information attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.55
  NAME 'aci'
  DESC 'Sun ONE defined access control information attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.26
  USAGE directoryOperation
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Used by Directory Server to evaluate what rights are granted or denied when it receives an LDAP request from a client. Note that this is an operational attribute. It is not returned in a search unless you explicitly request it.

### Syntax

IA5 String, multi-valued.

### Usage

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## aliasedObjectName

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.1
  NAME 'aliasedObjectName'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  SINGLE-VALUE
  X-ORIGIN 'RFC 2256' )
```

### Description

This attribute is defined in RFC 2256, but Directory Server does not support alias dereferencing. The value of `aliasedObjectName` attributes are never used by Directory Server.

### Syntax

DN, single-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## associatedDomain

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.37
  NAME 'associatedDomain'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 1274' )
```

### Description

Specifies a DNS domain associated with an object in the directory tree. For Example, the entry in the directory tree with a distinguished name `c=US, o=example Corporation` might be associated to the domain `example.com`. Note that all domains should be represented in rfc822 order.

### Syntax

Directory String, multi-valued.

### Examples

associatedDomain: example.com

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## associatedName

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.38
  NAME 'associatedName'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  X-ORIGIN 'RFC 1274' )
```

### Description

Specifies an entry in the organizational directory tree associated with a DNS domain.

### Syntax

DN, multi-valued.

### Examples

associatedName: c=us

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## attributeTypes

Standard LDAP attribute type

### Synopsis

```
( 2.5.21.5
  NAME 'attributeTypes'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2252' )
```

### Description

Multi-valued attribute that specifies the attribute types used within a subschema. Each value describes a single attribute.

### Syntax

Directory String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2252 ( <a href="http://www.ietf.org/rfc/rfc2252.txt">http://www.ietf.org/rfc/rfc2252.txt</a> )

## audio

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.55
  NAME 'audio'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.5
  X-ORIGIN 'RFC 1274' )
```

### Description

Contains a sound file in binary format. The attribute uses a u-law encoded sound file.

### Syntax

Binary, multi-valued.

### Examples

```
audio:: AAAAAA==
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## authorCn

Pilot attribute type

### Synopsis

```
( 0.9.2342.19200300.102.1.11
  NAME ( 'authorCn' 'documentauthorcommonname' )
  DESC 'Pilot attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'Internet White Pages Pilot' )
```

### Description

Contains the common name of the author of a document entry.

### Syntax

Directory String, multi-valued.

### Examples

authorCn: Mark Craig

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Internet White Pages Pilot

## authorityRevocationList

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.38  
  NAME 'authorityRevocationList'  
  DESC 'Standard LDAP attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.5  
  X-ORIGIN 'RFC 2256' )
```

### Description

Contains a list of CA certificates that have been revoked. This attribute is to be stored and requested in the binary form, as `authorityRevocationList;binary`.

### Syntax

Binary, multi-valued.

### Examples

```
authorityRevocationList;binary:: AAAAAA==
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## authorSn

Pilot attribute type

### Synopsis

```
( 0.9.2342.19200300.102.1.12
  NAME ( 'authorSn' 'documentauthorsurname' )
  DESC 'Pilot attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'Internet White Pages Pilot' )
```

### Description

Contains the surname of the author of a document entry.

### Syntax

Directory String, multi-valued.

### Examples

authorSn: Doe

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Internet White Pages Pilot

## bootFile

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.24
  NAME 'bootFile'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.26
  X-ORIGIN 'RFC 2307' )
```

### Description

The name of the boot image.

### Syntax

IA5 String, multi-valued.

### Examples

```
bootFile: mach
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

---

## bootParameter

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.23
  NAME 'bootParameter'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.26
  X-ORIGIN 'RFC 2307' )
```

### Description

Specified boot parameters.

### Syntax

IA5 String, multi-valued.

### Examples

```
bootParameter: root=fs:/nfsroot/peg
bootParameter: swap=fs:/nfsswap/peg
bootParameter: dump=fs:/nfsdump/peg
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

## buildingName

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.48
  NAME 'buildingName'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 1274' )
```

### Description

Defines the building name associated with the entry.

### Syntax

Directory String, multi-valued.

### Examples

buildingName: EGNB07

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## businessCategory

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.15
  NAME 'businessCategory'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the type of business in which the entry is engaged. This should be a broad generalization such as is made at the corporate division level.

### Syntax

Directory String, multi-valued.

### Examples

businessCategory: Engineering

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

**C**

Standard LDAP attribute type

**Synopsis**

```
( 2.5.4.6
  NAME ( 'c' 'countryName' )
  DESC 'Standard LDAP attribute type'
  SUP name
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  X-ORIGIN 'RFC 2256' )
```

**Description**

This attribute is designed to contain the two-character code representing a country name, as defined by ISO, in the directory.

**Syntax**

Directory String, single-valued.

**Examples**

c: FR

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## cACertificate

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.37
  NAME 'cACertificate'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.5
  X-ORIGIN 'RFC 2256' )
```

### Description

Contains the CA's certificate. This attribute is to be stored and requested in the binary form, as `cACertificate;binary`.

### Syntax

Binary, multi-valued.

### Examples

```
cACertificate;binary:: AAAAAA==
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## carLicense

---

inetOrgPerson attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.1
  NAME 'carLicense'
  DESC 'inetOrgPerson attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'inetOrgPerson Internet Draft' )
```

### Description

Identifies the entry's automobile license plate number.

### Syntax

Directory String, multi-valued.

### Examples

```
carLicense: 4MCS389
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, RFC 2798 ( <a href="http://www.ietf.org/rfc/rfc2798.txt">http://www.ietf.org/rfc/rfc2798.txt</a> )

---

## certificateRevocationList

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.39
  NAME 'certificateRevocationList'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.5
  X-ORIGIN 'RFC 2256' )
```

### Description

Contains a list of revoked user certificates. This attribute is to be stored and requested in the binary form, as `certificateRevocationList;binary`.

### Syntax

Binary, multi-valued.

### Examples

```
certificateRevocationList;binary:: AAAAAA==
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## changeHasReplFixupOp

RetroChangelog attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.1.751
  NAME 'changeHasReplFixupOp'
  DESC 'RetroChangelog attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.5
  NO-USER-MODIFICATION
  USAGE directoryOperation
  X-ORIGIN 'Sun Directory Server' )
```

### Description

This attribute is used for the retro change log.

This attribute is created in an entry when the following conditions are satisfied:

- The retro change log is enabled
- The `changeIsReplFixupOp` attribute is configured to TRUE
- Directory Server has performed an operation to resolve a replication conflict

This attribute stores the following information about an operation performed to resolve a replication conflict:

- Target DN of the operation
- The type of update
- The change made

There is one value of this attribute for each operation performed to resolve a replication conflict.

The value of this attribute is base64 encoded.

### Syntax

Binary, multi-valued.

### Usage

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

The value of this attribute may only be modified by the server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## changeIsReplFixupOp

RetroChangelog attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.1.726
  NAME 'changeIsReplFixupOp'
  DESC 'RetroChangelog attribute type'
  EQUALITY booleanMatch
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.7
  SINGLE-VALUE
  NO-USER-MODIFICATION
  USAGE directoryOperation
  X-ORIGIN 'Sun Directory Server' )
```

### Description

This attribute is used for the retro change log.

This attribute indicates whether Directory Server has performed an operation to resolve a replication conflict. The value of this attribute is as follows:

#### TRUE

A replication conflict has occurred and Directory Server has performed an operation to resolve the conflict. The `changeHasReplFixupOp` attribute has been added to the entry to describe the operation.

#### FALSE

Directory Server has not performed an operation to resolve a replication conflict on this entry.

### Syntax

Boolean, single-valued.

### Usage

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

The value of this attribute may only be modified by the server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## changeLog\_5dsat

---

DN of the entry containing the set of entries comprising the server changelog

### Synopsis

```
( 2.16.840.1.113730.3.1.35
  NAME 'changeLog'
  DESC 'DN of the entry containing the set of entries comprising the server
  changelog'
  EQUALITY distinguishedNameMatch
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  X-ORIGIN 'Changelog Internet Draft' )
```

### Description

The distinguished name of the entry that contains the set of entries comprising the server change log.

### Syntax

DN, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	External: IETF, Changelog Internet Draft

---

## changeNumber

Changelog attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.5
  NAME 'changeNumber'
  DESC 'Changelog attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  SINGLE-VALUE
  X-ORIGIN 'Changelog Internet Draft' )
```

### Description

This single-valued attribute is always present. It contains an integer that uniquely identifies each change made to a directory entry. This number is related to the order in which the change occurred. The higher the number, the later the change.

### Syntax

Integer, single valued.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Changelog Internet Draft

---

## changes

Changelog attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.8
  NAME 'changes'
  DESC 'Changelog attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.5
  X-ORIGIN 'Changelog Internet Draft' )
```

### Description

For add and modify operations, contains the changes made to the entry, in LDIF format.

### Syntax

Binary, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	External: IETF, Changelog Internet Draft

---

## changeTime

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.77  
  NAME 'changeTime'  
  DESC 'Sun ONE defined attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15  
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Defines a time, in a YYMMDDHHMMSS format, when the entry was added.

### Syntax

Directory String, multi-valued.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## changeType

Changelog attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.7
  NAME 'changeType'
  DESC 'Changelog attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'Changelog Internet Draft' )
```

### Description

Specifies the type of LDAP operation. This attribute can have one of the following values: add, delete, modify, or modRDN.

### Syntax

Directory String, multi-valued.

### Examples

```
changeType: modify
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Changelog Internet Draft

---

**cn**

Standard LDAP attribute type

**Synopsis**

```
( 2.5.4.3
  NAME ( 'cn' 'commonName' )
  DESC 'Standard LDAP attribute type'
  SUP name
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

**Description**

Identifies the name of an object in the directory. When the object corresponds to a person, the CN is typically the person's full name.

**Syntax**

Directory String, multi-valued.

**Examples**

When identifying the common name or full name of an entry:

```
commonName: Barbara Jensen
```

or

```
cn: Barbara Jensen
```

When in reference to LDAPReplica or LDAPServer object classes:

```
commonName: replicator.example.com:17430/dc%3Dexample%2Cdc%3Dcom
```

or

```
cn: replicator.example.com:17430/dc%3Dexample%2Cdc%3Dcom
```

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## CO

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.43
  NAME ( 'co' 'friendlycountryname' )
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 1274' )
```

### Description

Contains the name of a country. Often, the country attribute is used to describe a two-character code for a country, and the friendlyCountryName attribute is used to describe the actual country name.

### Syntax

Directory String, multi-valued.

### Examples

```
friendlyCountryName: Ireland
```

or

```
co: Ireland
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## commonName

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.3
  NAME ( 'cn' 'commonName' )
  DESC 'Standard LDAP attribute type'
  SUP name
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the name of an object in the directory. When the object corresponds to a person, the CN is typically the person's full name.

### Syntax

Directory String, multi-valued.

### Examples

When identifying the common name or full name of an entry:

```
commonName: Barbara Jensen
```

or

```
cn: Barbara Jensen
```

When in reference to LDAPReplica or LDAPServer object classes:

```
commonName: replicator.example.com:17430/dc%3Dexample%2Cdc%3Dcom
```

or

```
cn: replicator.example.com:17430/dc%3Dexample%2Cdc%3Dcom
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## copiedFrom

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.613
  NAME 'copiedFrom'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Used by read-only replica to recognize master data source. Contains a reference to the server that holds the master data. Note that this attribute is only used for legacy replication. It is not used for multi-master replication.

### Syntax

Directory String, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

---

## copyingFrom

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.614
  NAME 'copyingFrom'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Used by read-only replica to recognize master data source while replication is in progress. Contains a reference to the server that holds the master data. Note that this attribute is only used for legacy replication. It is not used for multi-master replication.

### Syntax

Directory String, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## cosAttribute

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.550
  NAME 'cosAttribute'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Provides the name of the attribute for which you want to generate a value. You can specify more than one `cosAttribute` value. This attribute is used by all types of CoS definition entries.

The `cosAttribute` attribute allows two qualifiers following the name of the CoS attribute. The *override* qualifier has one of the following values:

- `default` (or no qualifier) - Indicates that the server does not override a real attribute value stored in the entry when it has the same type as the virtual attribute.
- `override` - Indicates that the server always returns the value generated by the CoS, even when there is a value stored with the entry.
- `operational` - Indicates that the attribute will only be returned if it is explicitly requested in the search. Operational attributes do not need to pass a schema check in order to be returned. It also has the same behavior as the `override` qualifier.

The `merge` qualifier is either absent or given with the following value:

- `merge-schemes` - Allows the virtual CoS attribute to be multivalued, either from multiple templates or multiple CoS definitions.

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

---

## cosIndirectSpecifier

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.577
  NAME 'cosIndirectSpecifier'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Specifies the attribute values used by an indirect CoS to identify the template entry.

### Syntax

Directory String, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## cosPriority

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.569
  NAME 'cosPriority'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  SINGLE-VALUE
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Specifies which template provides the attribute value, when CoS templates compete to provide an attribute value. This attribute represents the global priority of a particular template. A priority of zero is the highest priority.

### Syntax

Integer, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

---

## cosspecifier

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.551
  NAME 'cosspecifier'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Specifies the attribute value used by a classic CoS, which, along with the template entry's DN, identifies the template entry.

### Syntax

Directory String, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## costargettree

---

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.552
  NAME 'costargettree'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Determines the subtree of the DIT to which the CoS schema applies. The values for this attribute for the schema and for multiple CoS schema may overlap their target trees in an arbitrary fashion.

### Syntax

Directory String, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

---

## costemplatedn

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.553
  NAME 'costemplatedn'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  SINGLE-VALUE
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Points to the entry that contains the CoS template.

### Syntax

DN, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

---

## countryName

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.6
  NAME ( 'c' 'countryName' )
  DESC 'Standard LDAP attribute type'
  SUP name
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  X-ORIGIN 'RFC 2256' )
```

### Description

This attribute is designed to contain the two-character code representing a country name, as defined by ISO, in the directory.

### Syntax

Directory String, single-valued.

### Examples

c: FR

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## crossCertificatePair

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.40
  NAME 'crossCertificatePair'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.5
  X-ORIGIN 'RFC 2256' )
```

### Description

This attribute contains a pair of cross signed certificates. It is to be stored and requested in the binary form, as `crossCertificatePair;binary`.

### Syntax

Binary, multi-valued.

### Examples

```
crossCertificatePair;binary:: AAAAAA==
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## dc

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.25
  NAME ( 'dc' 'domaincomponent' )
  DESC 'Standard LDAP attribute type'
  EQUALITY caseIgnoreIA5Match
  SUBSTR caseIgnoreIA5SubstringsMatch
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  X-ORIGIN 'RFC 2247' )
```

### Description

Specifies one component of a domain name.

### Syntax

Directory String, single-valued.

### Examples

domainComponent: example

or

dc: example

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2247 ( <a href="http://www.ietf.org/rfc/rfc2247.txt">http://www.ietf.org/rfc/rfc2247.txt</a> )

---

## deletedEntryAttrs

RetroChangelog attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.1.595
  NAME 'deletedEntryAttrs'
  DESC 'RetroChangelog attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.5
  SINGLE-VALUE
  NO-USER-MODIFICATION
  USAGE directoryOperation
  X-ORIGIN 'Sun Directory Server' )
```

### Description

This attribute is used for the retro change log. When this attribute is configured and the retro change log enabled, the retro change log records the following information about an entry that has been deleted:

- Attributes specified in the value of `deletedEntryAttrs`
- Corresponding values of the attributes

The value of this attribute is base64 encoded.

### Syntax

Binary, single-valued.

### Usage

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

The value of this attribute may only be modified by the server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

---

## deleteOldRdn

Changelog attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.10
  NAME 'deleteOldRdn'
  DESC 'Changelog attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.7
  X-ORIGIN 'Changelog Internet Draft' )
```

### Description

In the case of modrdn operations, specifies whether the old RDN was deleted.

### Syntax

Boolean, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	External: IETF, Changelog Internet Draft

---

## deltaRevocationList

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.53
  NAME 'deltaRevocationList'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.5
  X-ORIGIN 'RFC 2256' )
```

### Description

This attribute contains the *delta revocation list*, a list of newly revoked certificates. It is stored and requested in the binary form, as `deltaRevocationList;binary`.

### Syntax

Binary, multi-valued.

### Examples

```
deltaRevocationList;binary::AAAAAA==
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## departmentNumber

inetOrgPerson attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.2
  NAME 'departmentNumber'
  DESC 'inetOrgPerson attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'inetOrgPerson Internet Draft' )
```

### Description

Identifies the entry's department number.

### Syntax

Directory String, multi-valued.

### Examples

departmentNumber: 2604

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, RFC 2798 ( <a href="http://www.ietf.org/rfc/rfc2798.txt">http://www.ietf.org/rfc/rfc2798.txt</a> )

---

## description\_5dsat

Free form text description of the replication agreement

### Synopsis

```
( 2.5.4.13
  NAME 'description'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

This attribute allows you to initialize a replica. This attribute is absent by default, however, if you add this attribute with a value of `start`, the server reinitializes the replica and removes the attribute value.

Entry DN is `cn=ReplicationAgreementName,cn=replica,cn="suffixName",cn=mapping tree,cn=config`.

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Examples

`description: Replication Agreement between Server A and Server B.`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## destinationIndicator

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.27
  NAME 'destinationIndicator'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

The country and city associated with the entry needed to provide Public Telegram Service. Generally used in conjunction with `registeredAddress`.

### Syntax

Directory String, multi-valued.

### Examples

destinationIndicator: Stow, Ohio, USA

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## displayName

inetOrgPerson attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.241
  NAME 'displayName'
  DESC 'inetOrgPerson attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  X-ORIGIN 'inetOrgPerson Internet Draft' )
```

### Description

Preferred name of a person to be used when displaying entries. Especially useful in displaying a preferred name for an entry within a one-line summary list. Since other attribute types, such as `cn`, are multi-valued, they cannot be used to display a preferred name.

### Syntax

Directory String, single-valued.

### Examples

displayName: Michigan Smith

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, RFC 2798 ( <a href="http://www.ietf.org/rfc/rfc2798.txt">http://www.ietf.org/rfc/rfc2798.txt</a> )

## distinguishedName

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.49
  NAME ( 'dn' 'distinguishedName' )
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  X-ORIGIN 'RFC 2256' )
```

### Description

Defines the distinguished name (`dn`) for the entry. Note that the `dn` is not always a mandatory attribute in an entry.

### Syntax

DN, multi-valued.

### Examples

`dn: cn=Jane Doe, ou=Quality Control, dc=example, dc=com`

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## dITContentRules

Standard LDAP attribute type

### Synopsis

```
( 2.5.21.2
  NAME 'dITContentRules'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2252' )
```

### Description

Multi-valued attribute that defines the DIT content rules in force within a subschema. Each value defines one DIT content rule. Each value is tagged by the object identifier of the structural object class to which it pertains.

Note that Directory Server does not support or use this attribute.

### Syntax

Directory String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2252 ( <a href="http://www.ietf.org/rfc/rfc2252.txt">http://www.ietf.org/rfc/rfc2252.txt</a> )

## ditRedirect

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.54
  NAME 'ditRedirect'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  X-ORIGIN 'RFC 1274' )
```

### Description

Used to indicate that the object described by one entry now has a newer entry in the directory tree. This attribute may be used when an individual's place of work changes, and the individual acquires a new organizational DN.

### Syntax

DN, multi-valued.

### Examples

```
ditRedirect: cn=jdoe, dc=example, dc=com
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## dITStructureRules

Standard LDAP attribute type

### Synopsis

```
( 2.5.21.1
  NAME 'dITStructureRules'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2252' )
```

### Description

Multi-valued attribute that defines the DIT structure rules in force within a subschema. Each value defines one DIT structure rule.

Note that Directory Server does not support or use this attribute.

### Syntax

Directory String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2252 ( <a href="http://www.ietf.org/rfc/rfc2252.txt">http://www.ietf.org/rfc/rfc2252.txt</a> )

## dmdName

LDAP attribute type

### Synopsis

```
( 2.5.4.54  
  NAME 'dmdName'  
  SUP name  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15  
  X-ORIGIN 'RFC 2256' )
```

### Description

The value of this attribute specifies a directory management domain (DMD), the administrative authority that operates Directory Server.

### Syntax

Directory String, multi-valued.

### Examples

dmdName: example.com

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## dn

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.49
  NAME ( 'dn' 'distinguishedName' )
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  X-ORIGIN 'RFC 2256' )
```

### Description

Defines the distinguished name (`dn`) for the entry. Note that the `dn` is not always a mandatory attribute in an entry.

### Syntax

DN, multi-valued.

### Examples

```
dn: cn=Jane Doe, ou=Quality Control, dc=example, dc=com
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## dNSRecord

---

Pilot attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.26
  NAME 'dNSRecord'
  DESC 'Pilot attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.26
  X-ORIGIN 'Internet directory pilot' )
```

### Description

Specifies DNS resource records, including type A (Address), type MX (Mail Exchange), type NS (Name Server), and type SOA (Start Of Authority) resource records.

### Syntax

IA5 String, multi-valued.

### Examples

```
dNSRecord: IN NS ns.uu.net
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	External: IETF, Internet directory pilot

---

## documentAuthor

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.14  
  NAME 'documentAuthor'  
  DESC 'Standard LDAP attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12  
  X-ORIGIN 'RFC 1274' )
```

### Description

Contains the distinguished name of the author of a document entry.

### Syntax

DN, multi-valued.

### Examples

documentAuthor: cn=John Doe, dc=example, dc=com

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

## documentauthorcommonname

Pilot attribute type

### Synopsis

```
( 0.9.2342.19200300.102.1.11  
  NAME ( 'authorCn' 'documentauthorcommonname' )  
  DESC 'Pilot attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15  
  X-ORIGIN 'Internet White Pages Pilot' )
```

### Description

Contains the common name of the author of a document entry.

### Syntax

Directory String, multi-valued.

### Examples

```
authorCn: Mark Craig
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Internet White Pages Pilot

---

## documentauthorsurname

Pilot attribute type

### Synopsis

```
( 0.9.2342.19200300.102.1.12  
  NAME ( 'authorSn' 'documentauthorsurname' )  
  DESC 'Pilot attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15  
  X-ORIGIN 'Internet White Pages Pilot' )
```

### Description

Contains the surname of the author of a document entry.

### Syntax

Directory String, multi-valued.

### Examples

```
authorSn: Doe
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Internet White Pages Pilot

## documentIdentifier

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.11
  NAME 'documentIdentifier'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 1274' )
```

### Description

Specifies a unique identifier for a document.

### Syntax

Directory String, multi-valued.

### Examples

documentIdentifier: L3204REV1

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## documentLocation

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.15
  NAME 'documentLocation'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 1274' )
```

### Description

Defines the location of the original copy of a document entry.

### Syntax

Directory String, multi-valued.

### Examples

```
documentLocation: Department Library
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

## documentPublisher

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.56
  NAME 'documentPublisher'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  X-ORIGIN 'RFC 1274' )
```

### Description

The person and/or organization that published a document.

### Syntax

Directory String, single-valued.

### Examples

documentPublisher: Southeastern Publishing

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## documentStore

Pilot attribute type

### Synopsis

```
( 0.9.2342.19200300.102.1.10
  NAME 'documentStore'
  DESC 'Pilot attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'Internet White Pages Pilot' )
```

### Description

Defines the place in which a document is stored.

### Syntax

Directory String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Internet White Pages Pilot

---

## documentTitle

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.12  
  NAME 'documentTitle'  
  DESC 'Standard LDAP attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15  
  X-ORIGIN 'RFC 1274' )
```

### Description

Contains the title of a document entry.

### Syntax

Directory String, multi-valued.

### Examples

```
documentTitle: Directory Server Administration Guide
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## documentVersion

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.13
  NAME 'documentVersion'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 1274' )
```

### Description

Defines the version of a document entry.

### Syntax

Directory String, multi-valued.

### Examples

```
documentVersion: 1.1
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

## domaincomponent

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.25
  NAME ( 'dc' 'domaincomponent' )
  DESC 'Standard LDAP attribute type'
  EQUALITY caseIgnoreIA5Match
  SUBSTR caseIgnoreIA5SubstringsMatch
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  X-ORIGIN 'RFC 2247' )
```

### Description

Specifies one component of a domain name.

### Syntax

Directory String, single-valued.

### Examples

```
domainComponent: example
```

or

```
dc: example
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2247 ( <a href="http://www.ietf.org/rfc/rfc2247.txt">http://www.ietf.org/rfc/rfc2247.txt</a> )

---

## drink

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.5
  NAME ( 'drink' 'favouriteDrink' )
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 1274' )
```

### Description

Describes the favorite drink of a person entry.

### Syntax

Directory String, multi-valued.

### Examples

```
drink: gin
```

or

```
favouriteDrink: gin
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

## dSAQuality

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.49
  NAME 'dSAQuality'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  X-ORIGIN 'RFC 1274' )
```

### Description

Specifies the purported quality of a DSA. This attribute allows a DSA manager to indicate the expected level of availability of the DSA.

### Syntax

Directory String, single-valued.

### Examples

dSAQuality: high

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## ds-pluginDigest

Sun reserved definition

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.1.57
  NAME 'ds-pluginDigest'
  DESC 'Sun reserved definition'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

The configuration digest of a signed plug-in. (The plug-in entry DN, ID, version, type, init function, and vendor are hashed together to create the configuration digest.)

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## ds-pluginSignature

Sun reserved definition

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.1.7
  NAME 'ds-pluginSignature'
  DESC 'Sun reserved definition'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

The configuration signature of a signed plug-in.

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

---

## dsSaslMaxBufSize

Sun DS attribute for SASL config

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.1.791
  NAME 'dsSaslMaxBufSize'
  DESC 'Sun DS attribute for SASL config'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  SINGLE-VALUE
  X-DS-USE 'internal'
  X-ORIGIN 'Sun Directory Server' )
```

### Description

Reflects the maximum buffer size for SASL, which limits the size of packets accepted from SASL clients. The default value is 65535, and is not modifiable. The actual value used is negotiated to be less than or equal to this maximum.

### Syntax

Integer, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## dsSaslMaxSSF

Sun DS attribute for SASL config

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.1.790
  NAME 'dsSaslMaxSSF'
  DESC 'Sun DS attribute for SASL config'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  SINGLE-VALUE
  X-DS-USE 'internal'
  X-ORIGIN 'Sun Directory Server' )
```

### Description

Reflects the maximum security strength factor value for SASL. The default value is 32767. The value of this attribute must be greater than or equal to the value of dsSaslMinSSF.

Some security strength factor values include:

0  
No protection

1  
Integrity protection only

40  
40-bit DES or 40-bit RC2/RC4

56  
DES or other weak ciphers

112  
triple DES and other strong ciphers

128  
128-bit RC2/RC4/Blowfish and other modern strong ciphers

256  
baseline AES

### Syntax

Integer, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Examples

```
dsSaslMaxSSF: 256
```

---

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## dsSaslMinSSF

Sun DS attribute for SASL config

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.1.789
  NAME 'dsSaslMinSSF'
  DESC 'Sun DS attribute for SASL config'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  SINGLE-VALUE
  X-DS-USE 'internal'
  X-ORIGIN 'Sun Directory Server' )
```

### Description

Reflects the minimum security strength factor value for SASL. The default value is 0. The value of this attribute must be less than or equal to the value of dsSaslMaxSSF.

Some security strength factor values include:

0

No protection

1

Integrity protection only

40

40-bit DES or 40-bit RC2/RC4

56

DES or other weak ciphers

112

triple DES and other strong ciphers

128

128-bit RC2/RC4/Blowfish and other modern strong ciphers

256

baseline AES

### Syntax

Integer, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Examples

```
dsSaslMinSSF: 56
```

---

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## dsSaslPluginsEnable

Sun ONE defined attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.1.467
  NAME 'dsSaslPluginsEnable'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Specifies the SASL mechanisms of the plug-ins to enable. Possible values are those of the supportedSASLMechanisms attribute on the root DSE, including EXTERNAL, DIGEST-MD5, and GSSAPI.

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

---

## dsSaslPluginsPath

Sun ONE defined attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.1.466
  NAME 'dsSaslPluginsPath'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Specifies the path to the system directory containing libraries implementing the required SASL mechanisms.

### Syntax

Directory String, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Examples

```
dsSaslPluginsPath: /lib/sasl
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## employeeNumber

inetOrgPerson attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.3
  NAME 'employeeNumber'
  DESC 'inetOrgPerson attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  X-ORIGIN 'inetOrgPerson Internet Draft' )
```

### Description

Identifies the entry's employee number.

### Syntax

Directory String, single-valued.

### Examples

```
employeeNumber: 3440
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, RFC 2798 ( <a href="http://www.ietf.org/rfc/rfc2798.txt">http://www.ietf.org/rfc/rfc2798.txt</a> )

---

## employeeType

inetOrgPerson attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.4
  NAME 'employeeType'
  DESC 'inetOrgPerson attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'inetOrgPerson Internet Draft' )
```

### Description

Identifies the entry's type of employment.

### Syntax

Directory String, multi-valued.

### Examples

employeeType: Full time

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, RFC 2798 ( <a href="http://www.ietf.org/rfc/rfc2798.txt">http://www.ietf.org/rfc/rfc2798.txt</a> )

## enhancedSearchGuide

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.47  
  NAME 'enhancedSearchGuide'  
  DESC 'Standard LDAP attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15  
  X-ORIGIN 'RFC 2256' )
```

### Description

Used by X.500 clients when constructing search filters.

### Syntax

Directory String, multi-valued.

### Examples

```
enhancedSearchGuide: (uid=mhughes)
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## facsimileTelephoneNumber

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.23
  NAME ( 'facsimileTelephoneNumber' 'fax' )
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.50
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the fax number at which the entry can be reached. Abbreviation: fax.

### Syntax

Telephone Number, multi-valued.

### Examples

```
facsimileTelephoneNumber: 415-555-1212
```

or:

```
fax: 415-555-1212
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## favouriteDrink

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.5
  NAME ( 'drink' 'favouriteDrink' )
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 1274' )
```

### Description

Describes the favorite drink of a person entry.

### Syntax

Directory String, multi-valued.

### Examples

```
drink: gin
```

or

```
favouriteDrink: gin
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## fax

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.23
  NAME ( 'facsimileTelephoneNumber' 'fax' )
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.50
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the fax number at which the entry can be reached. Abbreviation: fax.

### Syntax

Telephone Number, multi-valued.

### Examples

```
facsimileTelephoneNumber: 415-555-1212
```

or:

```
fax: 415-555-1212
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## friendlycountryname

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.43
  NAME ( 'co' 'friendlycountryname' )
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 1274' )
```

### Description

Contains the name of a country. Often, the country attribute is used to describe a two-character code for a country, and the friendlyCountryName attribute is used to describe the actual country name.

### Syntax

Directory String, multi-valued.

### Examples

```
friendlyCountryName: Ireland
```

or

```
co: Ireland
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## gecos

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.2  
  NAME 'gecos'  
  DESC 'Standard LDAP attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15  
  SINGLE-VALUE  
  X-ORIGIN 'RFC 2307' )
```

### Description

The default GECOS.

### Syntax

Directory String, single-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

## generationQualifier

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.44
  NAME 'generationQualifier'
  DESC 'Standard LDAP attribute type'
  SUP name
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

Contains the generation Qualifier part of the name, typically appearing in the suffix.

### Syntax

Directory String, multi-valued.

### Examples

```
generationQualifier: Jr
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## gidNumber

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.1
  NAME 'gidNumber'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  SINGLE-VALUE
  X-ORIGIN 'RFC 2307' )
```

### Description

Group ID number.

### Syntax

Integer, single-valued.

### Examples

gidNumber: 162035

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

## givenName

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.42
  NAME 'givenName'
  DESC 'Standard LDAP attribute type'
  SUP name
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the entry's given name, usually a person's first name.

### Syntax

Directory String, multi-valued.

### Examples

givenName: Hecuba

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## homeDirectory

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.3  
  NAME 'homeDirectory'  
  DESC 'Standard LDAP attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.26  
  SINGLE-VALUE  
  X-ORIGIN 'RFC 2307' )
```

### Description

The home directory of the account.

### Syntax

IA5 String, single-valued.

### Examples

```
homeDirectory: /home/bsmith
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

---

## homePhone

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.20
  NAME 'homePhone'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.50
  X-ORIGIN 'RFC 1274' )
```

### Description

Identifies the entry's home phone number.

### Syntax

Telephone Number, multi-valued.

### Examples

homePhone: 415-555-1212

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## homePostalAddress

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.39
  NAME 'homePostalAddress'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 1274' )
```

### Description

Identifies the home mailing address of an entry. This field is intended to include multiple lines, but each line within the entry should be separated by a dollar sign (\$). To represent an actual dollar sign (\$) or backslash (\) within this text, use the escaped hex values \24 and \5c respectively.

### Syntax

Directory String, multi-valued.

### Examples

To identify the home mailing address:

```
homePostalAddress: 1234 Ridgeway Drive$Santa Clara, CA$99555
```

Additionally, to represent the string:

```
The dollar ($) value can be found
in the c:\cost file.
```

provide the string:

```
The dollar (\24) value can be found$in the c:\5ccost file.
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

## host

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.9
  NAME 'host'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 1274' )
```

### Description

Defines the hostname of a computer.

### Syntax

Directory String, multi-valued.

### Examples

```
host: myServer
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## houseIdentifier

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.51  
  NAME 'houseIdentifier'  
  DESC 'Standard LDAP attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15  
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies a building in a location.

### Syntax

Directory String, multi-valued.

### Examples

houseIdentifier: B105

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## info

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.4
  NAME 'info'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 1274' )
```

### Description

Specifies any general information pertinent to an object. It is recommended that specific usage of this attribute type is avoided, and that specific requirements are met by other (possibly additional) attribute types.

### Syntax

Directory String, multi-valued.

### Examples

info: not valid

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## initials

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.43
  NAME 'initials'
  DESC 'Standard LDAP attribute type'
  SUP name
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the entry's initials. Does not identify the entry's surname.

### Syntax

Directory String, multi-valued.

### Examples

```
initials: BFA
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## internationaliSDNNumber

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.25  
  NAME 'internationaliSDNNumber'  
  DESC 'Standard LDAP attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.26  
  X-ORIGIN 'RFC 2256' )
```

### Description

Contains the ISDN number of the entry. This is in the internationally agreed format for ISDN addresses given in CCITT Rec. E. 164.

### Syntax

IA5 String, multi-valued.

### Examples

```
internationaliSDNNumber: +SO 812467
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## ipHostNumber

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.19
  NAME 'ipHostNumber'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2307' )
```

### Description

IP address, expressed as a dotted decimal, omitting leading zeros.

### Syntax

Directory String, multi-valued.

### Examples

ipHostNumber: 10.0.0.1

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

## ipNetmaskNumber

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.21
  NAME 'ipNetmaskNumber'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  X-ORIGIN 'RFC 2307' )
```

### Description

IP netmask, expressed as a dotted decimal, omitting leading zeros.

### Syntax

Directory String, single-valued.

### Examples

ipNetmaskNumber: 255.255.255.0

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

---

## ipNetworkNumber

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.20
  NAME 'ipNetworkNumber'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  X-ORIGIN 'RFC 2307' )
```

### Description

IP network, expressed as a dotted decimal, omitting leading zeros.

### Syntax

Directory String, single-valued.

### Examples

ipNetworkNumber: 192.168

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

## ipProtocolNumber

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.17
  NAME 'ipProtocolNumber'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  SINGLE-VALUE
  X-ORIGIN 'RFC 2307' )
```

### Description

The IP protocol number.

### Syntax

Integer, single-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

---

## ipServicePort

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.15
  NAME 'ipServicePort'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  SINGLE-VALUE
  X-ORIGIN 'RFC 2307' )
```

### Description

The IP service port number.

### Syntax

Integer, single-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

## ipServiceProtocol

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.16  
  NAME 'ipServiceProtocol'  
  DESC 'Standard LDAP attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15  
  X-ORIGIN 'RFC 2307' )
```

### Description

The IP service protocol.

### Syntax

Directory String, multi-valued.

### Examples

```
ipServiceProtocol: tcp  
ipServiceProtocol: udp
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

---

## isMemberOf

LDAP attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.1.792
  NAME 'isMemberOf'
  DESC 'Sun defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  NO-USER-MODIFICATION
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Sun Directory Server' )
```

### Description

The values of this attribute are the DN's of static groups to which this entry belongs. This attribute values are calculated, thus cannot be indexed. Therefore this attribute should not be used in search filters.

### Syntax

DN, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

The value of this attribute may only be modified by the server.

### Examples

```
isMemberOf: cn=bigGroup,ou=groups,dc=example,dc=com
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## janetMailbox

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.46
  NAME 'janetMailbox'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 1274' )
```

### Description

Specifies an email address. This attribute is intended for the convenience of UK users unfamiliar with rfc822 mail addresses. Entries using this attribute must also include an rfc822Mailbox attribute.

### Syntax

Directory String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## javaClassName

Fully qualified name of distinguished Java class or interface

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.4.1.6
  NAME 'javaClassName'
  DESC 'Fully qualified name of distinguished Java class or interface'
  EQUALITY caseExactMatch
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  X-ORIGIN 'RFC 2713' )
```

### Description

Stores the fully qualified name of the Java object's distinguished class or interface.

### Syntax

Directory String, single-valued.

### Examples

javaClassName: java.lang.String

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2713 ( <a href="http://www.ietf.org/rfc/rfc2713.txt">http://www.ietf.org/rfc/rfc2713.txt</a> )

## javaClassNames

Fully qualified Java class or interface name

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.4.1.13
  NAME 'javaClassNames'
  DESC 'Fully qualified Java class or interface name'
  EQUALITY caseExactMatch
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2713' )
```

### Description

Stores the Java object's fully qualified class or interface names. It is a multivalued attribute. When more than one value is present, each is the name of a class or interface, or ancestor class or interface, of this object.

### Syntax

Directory String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2713 ( <a href="http://www.ietf.org/rfc/rfc2713.txt">http://www.ietf.org/rfc/rfc2713.txt</a> )

---

## javaCodebase

URL(s) specifying the location of class definition

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.4.1.7
  NAME 'javaCodebase'
  DESC 'URL(s) specifying the location of class definition'
  EQUALITY caseExactIA5Match
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.26
  X-ORIGIN 'RFC 2713' )
```

### Description

Stores the Java class definition's locations. It specifies the locations from which to load the class definition for the class specified by the `javaClassName` attribute. If this attribute contains more than one value, each value is an independent codebase.

### Syntax

IA5 String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2713 ( <a href="http://www.ietf.org/rfc/rfc2713.txt">http://www.ietf.org/rfc/rfc2713.txt</a> )

## javaDoc

The Java documentation for the class

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.4.1.12
  NAME 'javaDoc'
  DESC 'The Java documentation for the class'
  EQUALITY caseExactIA5Match
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.26
  X-ORIGIN 'RFC 2713' )
```

### Description

This attribute stores a pointer to the Java documentation for the class. Its value is a URL.

### Syntax

IA5 String, multi-valued.

### Examples

javaDoc: <http://java.sun.com/products/j2se/1.5.0/docs/api/java/lang/String.html>

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2713 ( <a href="http://www.ietf.org/rfc/rfc2713.txt">http://www.ietf.org/rfc/rfc2713.txt</a> )

## javaFactory

Fully qualified Java class name of a JNDI object factory

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.4.1.10
  NAME 'javaFactory'
  DESC 'Fully qualified Java class name of a JNDI object factory'
  EQUALITY caseExactMatch
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  X-ORIGIN 'RFC 2713' )
```

### Description

Stores the fully qualified class name of the object factory that can be used to create an instance of the object identified by the `javaClassName` attribute.

### Syntax

Directory String, single-valued.

### Examples

```
javaFactory: com.sun.jndi.ExampleObjectFactory
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2713 ( <a href="http://www.ietf.org/rfc/rfc2713.txt">http://www.ietf.org/rfc/rfc2713.txt</a> )

## javaReferenceAddress

Addresses associated with a JNDI Reference

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.4.1.11
  NAME 'javaReferenceAddress'
  DESC 'Addresses associated with a JNDI Reference'
  EQUALITY caseExactMatch
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2713' )
```

### Description

Represents the sequence of addresses of a JNDI reference. Each of its values represents one address, a Java object of type `javax.naming.RefAddr`. Its value is a concatenation of the address type and address contents, preceded by a sequence number.

### Syntax

Directory String, multi-valued.

### Examples

```
ipServiceProtocol: #0#TypeA#ValA
                  #1#TypeB#ValB
                  #2#TypeC##r00ABXNyABpq
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2713 ( <a href="http://www.ietf.org/rfc/rfc2713.txt">http://www.ietf.org/rfc/rfc2713.txt</a> )

---

## javaSerializedData

Serialized form of a Java object

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.4.1.8
  NAME 'javaSerializedData'
  DESC 'Serialized form of a Java object'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.40
  SINGLE-VALUE
  X-ORIGIN 'RFC 2713' )
```

### Description

Stores the serialized form of a Java object.

### Syntax

Octet String, single-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2713 ( <a href="http://www.ietf.org/rfc/rfc2713.txt">http://www.ietf.org/rfc/rfc2713.txt</a> )

## jpegPhoto

inetOrgPerson attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.60
  NAME 'jpegPhoto'
  DESC 'inetOrgPerson attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.5
  X-ORIGIN 'inetOrgPerson Internet Draft (XXX: syntax should be ...28)' )
```

### Description

Contains a JPEG photo of the entry.

The syntax for this attribute differs from the standard syntax, which should end with .28, meaning JPEG syntax.

### Syntax

Binary, multi-valued.

### Examples

```
jpegPhoto:: AAAAAA==
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, RFC 2798 ( <a href="http://www.ietf.org/rfc/rfc2798.txt">http://www.ietf.org/rfc/rfc2798.txt</a> )

---

## keyWords

Pilot attribute type

### Synopsis

```
( 0.9.2342.19200300.102.1.7  
  NAME 'keyWords'  
  DESC 'Pilot attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15  
  X-ORIGIN 'Internet White Pages Pilot' )
```

### Description

Contains keywords for the entry.

### Syntax

Directory String, multi-valued.

### Examples

keyWords: directory LDAP X.500

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Internet White Pages Pilot

## knowledgeInformation

---

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.2  
  NAME 'knowledgeInformation'  
  DESC 'Standard LDAP attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15  
  X-ORIGIN 'RFC 2256' )
```

### Description

This attribute is no longer used.

### Syntax

Directory String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

|

## Standard LDAP attribute type

### Synopsis

```
( 2.5.4.7
  NAME ( 'l' 'locality' 'localityname' )
  DESC 'Standard LDAP attribute type'
  SUP name
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the county, city, or other geographical area in which the entry is located or with which it is in some other way associated.

### Syntax

Directory String, multi-valued.

### Examples

localityName: Santa Clara

or

l: Santa Clara

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## labeledUri

Uniform Resource Identifier with optional label

### Synopsis

```
( 1.3.6.1.4.1.250.1.57
  NAME ( 'labeledUri' 'labeledurl' )
  DESC 'Uniform Resource Identifier with optional label'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.26
  X-ORIGIN 'RFC 2079' )
```

### Description

Specifies a Uniform Resource Identifier (URI) that is relevant in some way to the entry. Values placed in the attribute should consist of a URI (currently only URLs are supported) optionally followed by one or more space characters and a label.

### Syntax

IA5 String, multi-valued.

### Examples

labeledURI: http://www.Oracle.com

labeledURI: http://www.Oracle.com                      Oracle website

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2079 ( <a href="http://www.ietf.org/rfc/rfc2079.txt">http://www.ietf.org/rfc/rfc2079.txt</a> )



## lastModifiedBy

old variant of modifiersName

### Synopsis

```
( 0.9.2342.19200300.100.1.24
  NAME 'lastModifiedBy'
  DESC 'old variant of modifiersName'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  X-ORIGIN 'RFC 1274' )
```

### Description

Specifies the distinguished name of the last user to modify the associated entry.

### Syntax

DN, multi-valued.

### Examples

```
lastModifiedBy: cn=Jane Doe,ou=Quality Control,dc=example,dc=com
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## lastModifiedTime

old variant of modifyTimestamp

### Synopsis

```
( 0.9.2342.19200300.100.1.23
  NAME 'lastModifiedTime'
  DESC 'old variant of modifyTimestamp'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 1274' )
```

### Description

Defines the last time, in UTC format, that a change was made to the entry.

### Syntax

Directory String, multi-valued.

### Examples

```
lastModifiedTime: Thu Sep 21 17:23:09 MEST 2006
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

## ldapSyntaxes

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.4.1.1466.101.120.16
  NAME 'ldapSyntaxes'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  USAGE directoryOperation
  X-ORIGIN 'RFC 2252' )
```

### Description

This attribute identifies the syntaxes implemented, with each value corresponding to one syntax.

### Syntax

Directory String, multi-valued.

### Usage

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2252 ( <a href="http://www.ietf.org/rfc/rfc2252.txt">http://www.ietf.org/rfc/rfc2252.txt</a> )

---

## locality\_5dsat

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.7
  NAME ( 'l' 'locality' 'localityname' )
  DESC 'Standard LDAP attribute type'
  SUP name
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the county, city, or other geographical area in which the entry is located or with which it is in some other way associated.

### Syntax

Directory String, multi-valued.

### Examples

localityName: Santa Clara

or

l: Santa Clara

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## localityname

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.7
  NAME ( 'l' 'locality' 'localityname' )
  DESC 'Standard LDAP attribute type'
  SUP name
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the county, city, or other geographical area in which the entry is located or with which it is in some other way associated.

### Syntax

Directory String, multi-valued.

### Examples

```
localityName: Santa Clara
```

or

```
l: Santa Clara
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## loginShell

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.4
  NAME 'loginShell'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.26
  SINGLE-VALUE
  X-ORIGIN 'RFC 2307' )
```

### Description

The path to the login shell.

### Syntax

IA5 String, single-valued.

### Examples

```
loginShell: /bin/bash
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

## macAddress

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.22
  NAME 'macAddress'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2307' )
```

### Description

The MAC address in maximal, colon separated hex notation.

### Syntax

Directory String, multi-valued.

### Examples

macAddress: 8:0:20:c0:5c:96

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

---

## mail

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.3
  NAME ( 'mail' 'rfc822mailbox' )
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 1274' )
```

### Description

Identifies a user's primary email address (the email address retrieved and displayed by white pages lookup applications).

### Syntax

Directory String, multi-valued.

### Examples

```
mail: banderson@example.com
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

## mailPreferenceOption

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.47
  NAME 'mailPreferenceOption'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  SINGLE-VALUE
  X-ORIGIN 'RFC 1274' )
```

### Description

Indicates a preference for the inclusion of user names on mailing lists (electronic or physical). Accepted values include:

- 0: user does not want to be included in mailing lists.
- 1: user consents to be added to any mailing list.
- 2: user only wants to be added to mailing lists that the list provider views as relevant to the user's professional interests.

The absence of this attribute for a person should be interpreted as if the attribute were present with the value `no-list-inclusion`. This attribute should be interpreted by anyone using the directory to derive mailing lists, and its value respected.

### Syntax

Integer, single-valued.

### Examples

```
mailPreferenceOption:0
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## manager

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.10
  NAME 'manager'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  X-ORIGIN 'RFC 1274' )
```

### Description

Identifies the distinguished name of the entry's manager.

### Syntax

DN, multi-valued.

### Examples

```
manager:cn=Jane Doe, ou=Quality Control, dc=example, dc=com
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

## matchingRules

---

Standard LDAP attribute type

### Synopsis

```
( 2.5.21.4
  NAME 'matchingRules'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2252' )
```

### Description

Multi-valued attribute that defines the matching rules used within a subschema. Each value defines one matching rule.

### Syntax

Directory String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2252 ( <a href="http://www.ietf.org/rfc/rfc2252.txt">http://www.ietf.org/rfc/rfc2252.txt</a> )

---

## matchingRuleUse

Standard LDAP attribute type

### Synopsis

```
( 2.5.21.8  
  NAME 'matchingRuleUse'  
  DESC 'Standard LDAP attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15  
  X-ORIGIN 'RFC 2252' )
```

### Description

Used to indicate the attribute types to which a matching rule applies in a subschema.

### Syntax

Directory String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2252 ( <a href="http://www.ietf.org/rfc/rfc2252.txt">http://www.ietf.org/rfc/rfc2252.txt</a> )

## member

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.31
  NAME 'member'
  DESC 'Standard LDAP attribute type'
  SUP distinguishedName
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the distinguished names for each member of the group.

### Syntax

DN, multi-valued.

### Examples

```
member: cn=John Doe, dc=example, dc=com
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## memberCertificateDescription

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.199
  NAME 'memberCertificateDescription'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.26
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

A multi-valued attribute, for which each value is a description, a pattern, or a filter matching the subject DN of a certificate (usually certificates used for SSL client authentication).

memberCertificateDescription matches any certificate that contains a subject DN with the same AVAs as the description. The description may contain multiple `ou=` AVAs. A matching DN must contain those same `ou=` AVAs, in the same order, although it may contain other AVAs (including other `ou=` AVAs) interspersed. For any other attribute type (not `ou`), there should be at most one AVA of that type in the description. If there are several, all but the last are ignored.

A matching DN must contain that same AVA, but no other AVA of the same type nearer the root (later, syntactically).

AVAs are considered the same if they contain the same attribute description (case-insensitive comparison) and the same attribute value (case-insensitive comparison, leading and trailing whitespace ignored, and consecutive whitespace characters treated as a single SP).

In order to be considered a member of a group with the following memberCertificateDescription, a certificate would need to include `ou=x`, `ou=A`, and `o=example`, but not `o=company`.

### Syntax

IA5 String, multi-valued.

### Examples

```
memberCertificateDescription: {ou=x, ou=A, o=company, o=example}
```

In order to match the group's requirements, a certificate's subject DNs must contain the same `ou` attribute types in the same order as defined in the memberCertificateDescription attribute.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Stability Level	Evolving

---

## memberNisNetgroup

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.13  
  NAME 'memberNisNetgroup'  
  DESC 'Standard LDAP attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.26  
  X-ORIGIN 'RFC 2307' )
```

### Description

The name of a netgroup.

### Syntax

IA5 String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

## memberUid

---

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.12
  NAME 'memberUid'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.26
  X-ORIGIN 'RFC 2307' )
```

### Description

The user id of the member.

### Syntax

IA5 String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

---

## memberURL

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.198
  NAME 'memberURL'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.26
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Identifies a URL associated with each member of a group. Any type of labeled URL can be used.

### Syntax

IA5 String, multi-valued.

### Examples

memberURL: ldap:///cn=jdoe,dc=example,dc=com

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## mobile

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.41
  NAME ( 'mobile' 'mobileTelephoneNumber' )
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.50
  X-ORIGIN 'RFC 1274' )
```

### Description

Identifies the entry's mobile or cellular phone number. Abbreviation: mobile.

### Syntax

Telephone Number, multi-valued.

### Examples

```
mobileTelephoneNumber: 415-555-4321
```

```
mobile: 415-555-4321
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## mobileTelephoneNumber

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.41
  NAME ( 'mobile' 'mobileTelephoneNumber' )
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.50
  X-ORIGIN 'RFC 1274' )
```

### Description

Identifies the entry's mobile or cellular phone number. Abbreviation: mobile.

### Syntax

Telephone Number, multi-valued.

### Examples

mobileTelephoneNumber: 415-555-4321

mobile: 415-555-4321

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

## multiLineDescription

Pilot attribute type

### Synopsis

```
( 1.3.6.1.4.1.250.1.2
  NAME 'multiLineDescription'
  DESC 'Pilot attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'Internet White Pages Pilot' )
```

### Description

Provides descriptive text for a mail user. When represented in LDIF format, each line should be separated by a dollar sign (\$). Directory Server expects 0 or 1 occurrences of this attribute per mail account.

### Syntax

Directory String, multi-valued.

### Examples

```
multiLineDescription: Account Administrator and$directory manager.
```

To represent an actual dollar sign (\$) or backslash (\) within this text, use the escaped hex values \24 and \5c respectively. For example, to represent the string:

```
The dollar ($) value can be found
in the c:\cost file.
```

provide the string:

```
The dollar (\24) value can be found$in the c:\5ccost file.
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Internet White Pages Pilot

---

## name

LDAP attribute type

### Synopsis

```
( 2.5.4.41
  NAME 'name'
  EQUALITY caseIgnoreMatch
  SUBSTR caseIgnoreSubstringsMatch
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15{32768}
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the attribute supertype from which string attribute types used for naming may be formed. It is unlikely that values of this type will occur in an entry. LDAP server implementations that do not support attribute subtyping do not need to recognize this attribute in requests. Client implementations should not assume that LDAP servers are capable of performing attribute subtyping.

### Syntax

Directory String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## nameForms

---

Standard LDAP attribute type

### Synopsis

```
( 2.5.21.7  
  NAME 'nameForms'  
  DESC 'Standard LDAP attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15  
  X-ORIGIN 'RFC 2252' )
```

### Description

Multi-valued attribute that defines the name forms used in a subschema. Each value defines one name form.

Note that Directory Server does not support or use this attribute.

### Syntax

Directory String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2252 ( <a href="http://www.ietf.org/rfc/rfc2252.txt">http://www.ietf.org/rfc/rfc2252.txt</a> )

---

## namingContexts

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.4.1.1466.101.120.5
  NAME 'namingContexts'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  USAGE dsaOperation
  X-ORIGIN 'RFC 2252' )
```

### Description

Corresponds to a naming context the server is mastering or shadowing. When Directory Server does not master any information (for example, it is an LDAP gateway to a public X.500 directory), this attribute is absent. When Directory Server believes it contains the entire directory, the attribute has a single value, and that value is the empty string (indicating the null DN of the root). This attribute permits a client contacting a server to choose suitable base objects for searching.

### Syntax

DN, multi-valued.

### Usage

Operational attribute used by a Directory Server instance; returned in `ldapsearch` only when specifically requested.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2252 ( <a href="http://www.ietf.org/rfc/rfc2252.txt">http://www.ietf.org/rfc/rfc2252.txt</a> )

## newRdn

---

Changelog attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.9
  NAME 'newRdn'
  DESC 'Changelog attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  X-ORIGIN 'Changelog Internet Draft' )
```

### Description

In the case of `modrdn` operations, specifies the new RDN of the entry.

### Syntax

DN, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	External: IETF, Changelog Internet Draft

---

## newSuperior

Changelog attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.11
  NAME 'newSuperior'
  DESC 'Changelog attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  X-ORIGIN 'Changelog Internet Draft' )
```

### Description

In the case of modrdn operations, specifies the newSuperior attribute of the entry.

### Syntax

DN, multi-valued.

### Attributes

See attributes(5) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Changelog Internet Draft

## nisMapEntry

---

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.27
  NAME 'nisMapEntry'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.26
  SINGLE-VALUE
  X-ORIGIN 'RFC 2307' )
```

### Description

The NIS map entry ID.

### Syntax

IA5 String, single-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

---

## nisMapName

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.26  
  NAME 'nisMapName'  
  DESC 'Standard LDAP attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15  
  X-ORIGIN 'RFC 2307' )
```

### Description

The name of the NIS map.

### Syntax

Directory String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

## nisNetgroupTriple

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.14  
  NAME 'nisNetgroupTriple'  
  DESC 'Standard LDAP attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.26  
  X-ORIGIN 'RFC 2307' )
```

### Description

Defines a NIS netgroup with the syntax *hostname , username , domainname*.

### Syntax

IA5 String, multi-valued.

### Examples

nisNetgroupTriple: (myserver,jsmith,example.com)

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

---

## nsds5ReplConflict

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.973
  NAME 'nsds5ReplConflict'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

This attribute is a conflict marker attribute. It is included on entries that have a change conflict that cannot be resolved automatically by the replication process.

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## nsIdleTimeout

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.573
NAME 'nsIdleTimeout'
DESC 'Binder-based connection idle timeout (seconds)'
SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
SINGLE-VALUE
USAGE directoryOperation
X-DS-USE 'internal'
X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

This attribute specifies the maximum time a client connection can remain idle before the connection is dropped.

### Syntax

Integer, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema. Operational attribute used by the directory service.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

---

## nsLicensedFor

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.36
  NAME 'nsLicensedFor'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'Sun ONE Administration Services' )
```

### Description

Identifies the server the user is licensed to use. The Administration Server expects each `nsLicenseUser` entry to contain zero or more instances of this attribute. Valid keywords for this attribute are currently:

- mail: the user is a licensed client of the Messaging Server.
- new: the user is a licensed client of the Collabra Server.
- slapd: the user is a licensed client of Directory Server.
- cal: the user is a licensed client of the Calendar Server.

### Syntax

Directory String, multi-valued.

### Examples

```
nsLicensedFor: slapd
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## nsLicenseEndTime

---

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.38
  NAME 'nsLicenseEndTime'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'Sun ONE Administration Services' )
```

### Description

Reserved for future use.

### Syntax

Directory String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

---

## nsLicenseStartTime

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.37
  NAME 'nsLicenseStartTime'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'Sun ONE Administration Services' )
```

### Description

Reserved for future use.

### Syntax

Directory String, multi-valued.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## nsLookThroughLimit\_5dsat

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.570
NAME 'nsLookThroughLimit'
DESC 'Binder-based search operation look through limit (candidate entries)'
SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
SINGLE-VALUE
USAGE directoryOperation
X-DS-USE 'internal'
X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

This attribute specifies the maximum number of entries examined for a search operation.

### Syntax

Integer, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema. Operational attribute used by the directory service.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

---

## nsRole

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.574
  NAME 'nsRole'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  NO-USER-MODIFICATION
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

This attribute is a computed attribute that is not stored with the entry itself. It identifies which roles an entry belongs to.

### Syntax

DN, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

The value of this attribute may only be modified by the server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## nsRoleDN

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.575
  NAME 'nsRoleDN'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

This attribute contains the distinguished name of each managed role to which the entry belongs. Membership of a managed role is conferred upon an entry by adding the role's DN to the entry's nsRoleDN attribute.

This attribute is not to be confused with the generated nsRole attribute that contains the DN of *all* roles to which the entry belongs, as computed by Directory Server. Use nsRoleDN to set managed role membership, and use nsRole to evaluate role membership.

### Syntax

DN, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in ldapsearch only when specifically requested.

### Examples

```
dn: cn=staff,ou=People,dc=example,dc=com
objectclass: LDAPsubentry
objectclass: nsRoleDefinition
objectclass: nsSimpleRoleDefinition
objectclass: nsManagedRoleDefinition
```

```
dn: uid=bjensen,ou=People,dc=example,dc=com
objectclass: top
objectclass: person
sn: Jensen
cn: Babs Jensen
uid: bjensen
nsroledn: cn=staff,ou=People,dc=example,dc=com
```

A nested role specifies containment of one or more roles of any type. In that case, nsRoleDN defines the DN of the contained roles.

```
dn: cn=everybody,o=example.com
objectclass: LDAPsubentry
```

---

```
objectclass: nsRoleDefinition
objectclass: nsComplexRoleDefinition
objectclass: nsNestedRoleDefinition
nsroledn: cn=manager,ou=People,dc=example,dc=com
nsroledn: cn=staff,ou=People,dc=example,dc=com
```

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## nsRoleFilter

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.576
  NAME 'nsRoleFilter'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.26
  SINGLE-VALUE
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Specifies a search filter to select entries having the role.

### Syntax

IA5 String, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

---

## nsRoleScopeDn

Sun ONE defined attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.1.10
  NAME 'nsRoleScopeDn'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  SINGLE-VALUE
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Determines the scope of a role entry. If this attribute is not present, the scope of the role is defined by the LDAPsubentry. Otherwise, the scope is the union of the scope defined by the LDAPsubentry and the scope defined in this attribute.

### Syntax

DN, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## nsSizeLimit

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.571
NAME 'nsSizeLimit'
DESC 'Binder-based search operation size limit (entries)'
SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
SINGLE-VALUE
USAGE directoryOperation
X-DS-USE 'internal'
X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

This attribute specifies the maximum number of entries returned in response to a search operation.

### Syntax

Integer, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema. Operational attribute used by the directory service.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

---

## nsTimeLimit

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.572
NAME 'nsTimeLimit'
DESC 'Binder-based search operation time limit (seconds)'
SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
SINGLE-VALUE
USAGE directoryOperation
X-DS-USE 'internal'
X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

This attribute specifies the maximum time spent processing a search operation.

### Syntax

Integer, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.  
Operational attribute used by the directory service.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## numSubordinates

count of immediate subordinates

### Synopsis

```
( 1.3.1.1.4.1.453.16.2.103
  NAME 'numSubordinates'
  DESC 'count of immediate subordinates'
  EQUALITY integerMatch
  ORDERING integerOrderingMatch
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  SINGLE-VALUE
  NO-USER-MODIFICATION
  USAGE directoryOperation
  X-ORIGIN 'numSubordinates Internet Draft' )
```

### Description

Indicates how many immediate subordinates an entry has.

For example, numSubordinates=0 in a leaf entry.

### Syntax

Integer, single-valued.

### Usage

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

The value of this attribute may only be modified by the server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, numSubordinates Internet Draft

**O**

## Standard LDAP attribute type

**Synopsis**

```
( 2.5.4.10
  NAME ( 'o' 'organizationname' )
  DESC 'Standard LDAP attribute type'
  SUP name
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

**Description**

Identifies the name of the organization.

**Syntax**

Directory String, multi-valued.

**Examples**

organizationName: Example, Inc.

or

o: Example, Inc.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## objectClass

---

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.0
  NAME 'objectClass'
  DESC 'Standard LDAP attribute type'
  EQUALITY objectIdentifierMatch
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256 (XXX: syntax should be ...38)' )
```

### Description

Specifies the object classes of the object. Must include the object.

### Syntax

Directory String, multi-valued.

### Examples

```
objectClass: person
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## objectClasses

Standard LDAP attribute type

### Synopsis

```
( 2.5.21.6  
  NAME 'objectClasses'  
  DESC 'Standard LDAP attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15  
  X-ORIGIN 'RFC 2252' )
```

### Description

Multi-valued attribute that defines the object classes used in a subschema. Each value defines one object class.

### Syntax

Directory String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2252 ( <a href="http://www.ietf.org/rfc/rfc2252.txt">http://www.ietf.org/rfc/rfc2252.txt</a> )

---

## obsoletedByDocument

Pilot attribute type

### Synopsis

```
( 0.9.2342.19200300.102.1.4  
  NAME 'obsoletedByDocument'  
  DESC 'Pilot attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12  
  X-ORIGIN 'Internet White Pages Pilot' )
```

### Description

Contains the distinguished name of a document that obsoletes the document entry.

### Syntax

DN, multi-valued.

### Examples

```
obsoletedbyDocument: cn=Doc Version 2, ou=Document Library,dc=example, dc=com
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Internet White Pages Pilot

---

## obsoletesDocument

Pilot attribute type

### Synopsis

```
( 0.9.2342.19200300.102.1.3
  NAME 'obsoletesDocument'
  DESC 'Pilot attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  X-ORIGIN 'Internet White Pages Pilot' )
```

### Description

Contains the distinguished name of a document that is obsoleted by the document entry.

### Syntax

DN, multi-valued.

### Examples

```
obsoletesDocument: cn=Doc Version 1, ou=Document Library,dc=example, dc=com
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Internet White Pages Pilot

## oncRpcNumber

---

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.18
  NAME 'oncRpcNumber'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  SINGLE-VALUE
  X-ORIGIN 'RFC 2307' )
```

### Description

The Open Network Computing (ONC) Remote Procedure Call (RPC) number.

### Syntax

Integer, single-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

---

## organizationalStatus

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.45
  NAME 'organizationalStatus'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 1274' )
```

### Description

Specifies a category by which a person is often referred to in an organization.

### Syntax

Directory String, multi-valued.

### Examples

```
organizationalStatus: researcher
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## organizationalUnitName

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.11
  NAME ( 'ou' 'organizationalUnitName' )
  DESC 'Standard LDAP attribute type'
  SUP name
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the name of an organizational unit.

### Syntax

Directory String, multi-valued.

### Examples

```
organizationalUnitName: Marketing
```

or

```
ou: Marketing
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## organizationname

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.10
  NAME ( 'o' 'organizationname' )
  DESC 'Standard LDAP attribute type'
  SUP name
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the name of the organization.

### Syntax

Directory String, multi-valued.

### Examples

```
organizationName: Example, Inc.
```

or

```
o: Example, Inc.
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## otherMailbox

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.22  
  NAME 'otherMailbox'  
  DESC 'Standard LDAP attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15  
  X-ORIGIN 'RFC 1274' )
```

### Description

Specifies values for electronic mailbox types other than X.400 and rfc822.

### Syntax

Directory String, multi-valued.

### Examples

```
otherMailbox: Telemail: x378: Joe
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## ou

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.11
  NAME ( 'ou' 'organizationalUnitName' )
  DESC 'Standard LDAP attribute type'
  SUP name
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the name of an organizational unit.

### Syntax

Directory String, multi-valued.

### Examples

```
organizationalUnitName: Marketing
```

or

```
ou: Marketing
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## owner

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.32
  NAME 'owner'
  DESC 'Standard LDAP attribute type'
  SUP distinguishedName
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the distinguished name of the person responsible for the entry.

### Syntax

DN, multi-valued.

### Examples

```
owner: cn=Babs Jensen, dc=example, dc=com
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## pager

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.42
  NAME ( 'pager' 'pagerTelephoneNumber' )
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.50
  X-ORIGIN 'RFC 1274' )
```

### Description

Identifies the entry's pager phone number.

### Syntax

Telephone Number, multi-valued.

### Examples

pagerTelephoneNumber: 415-555-6789

or

pager: 415-555-6789

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

## pagerTelephoneNumber

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.42
  NAME ( 'pager' 'pagerTelephoneNumber' )
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.50
  X-ORIGIN 'RFC 1274' )
```

### Description

Identifies the entry's pager phone number.

### Syntax

Telephone Number, multi-valued.

### Examples

```
pagerTelephoneNumber: 415-555-6789
```

or

```
pager: 415-555-6789
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## passwordAllowChangeTime

Sun ONE defined password policy attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.214
  NAME 'passwordAllowChangeTime'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.24
  SINGLE-VALUE
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Indicates the exact time after which the user can change their password.

### Syntax

Generalized Time, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## passwordChange

Sun ONE defined password policy attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.102
  NAME 'passwordChange'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Indicates whether users may change their passwords.

This attribute may be `on` or `off`. The default value is `on`. If this attribute is not present, a value of `on` is assumed.

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

---

## passwordCheckSyntax

Sun ONE defined password policy attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.103
  NAME 'passwordCheckSyntax'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Indicates whether the password syntax will be checked before the password is saved. The password syntax checking mechanism verifies that the password meets the password minimum length requirement. The password syntax checking mechanism also verifies that the password does not equal any attribute value stored in the uid, cn, sn, givenName, ou, or mail attributes of the user entry.

This attribute may be `on` or `off`. The default value is `off`.

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

## passwordExp

Sun ONE defined password policy attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.98
  NAME 'passwordExp'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Indicates whether user passwords will expire after a specified number of seconds. By default, passwords do not expire. When password expiration is enabled, you can set the number of seconds after which the password will expire with the `passwordMaxAge` attribute.

This attribute may be `on` or `off`. The default value is `off`.

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

---

## passwordExpirationTime

Sun ONE defined password policy attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.91
  NAME 'passwordExpirationTime'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.24
  SINGLE-VALUE
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Indicates the exact time after which the user's password expires.

### Syntax

Generalized Time, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

## passwordExpireWithoutWarning

Sun ONE defined password policy attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.1.86
  NAME 'passwordExpireWithoutWarning'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Indicates whether a password can expire regardless of whether the user was warned about the expiration date.

This attribute may be `on` or `off`. The default value is `off`.

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

---

## passwordExpWarned

Sun ONE defined password policy attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.92
  NAME 'passwordExpWarned'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Indicates that a password expiration warning has been sent to the user.

### Syntax

Directory String, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

## passwordHistory

Sun ONE defined password policy attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.96
  NAME 'passwordHistory'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.5
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Contains the history of the user's previous passwords.

### Syntax

Binary, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

---

## passwordInHistory

Sun ONE defined password policy attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.101
  NAME 'passwordInHistory'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Indicates the number of passwords Directory Server stores in history. The valid range of this attribute is 0 to 24. Passwords that are stored in history cannot be reused.

The password history is disabled by default. The default value of this attribute is 0. This implies that the server does not store any old passwords. By default, users can reuse old passwords.

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

## passwordLockout

Sun ONE defined password policy attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.105
  NAME 'passwordLockout'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Enables the account lockout mechanism. If this attribute is set to `on`, users are locked out of the directory once the maximum number of consecutive failed bind attempts has been reached. The maximum number of consecutive bind attempts is specified by the `passwordMaxFailure` attribute. Users remain locked out for the length of time specified by the `passwordLockoutDuration` attribute.

This attribute may be `on` or `off`. The default value is `off`.

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

---

## passwordLockoutDuration

Sun ONE defined password policy attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.109
  NAME 'passwordLockoutDuration'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Specifies the length of time in seconds during which users will be locked out of the directory. The lockout duration is enabled when `passwordLockout` is set to `on`. If this attribute is not present, or is set to 0, the account remains locked until it is reset by an administrator.

The valid range of this attribute is 0 to the maximum 32-bit integer value (2147483647) in seconds, with a default of 3600 seconds, or one hour.

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

## passwordMaxAge

Sun ONE defined password policy attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.97
  NAME 'passwordMaxAge'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Indicates the number of seconds after which user passwords will expire. The valid range of this attribute is 1 to the maximum 32-bit integer value (2147483647) in seconds. To use this attribute, you must enable password expiration with the passwordExp attribute.

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

---

## passwordMaxFailure

Sun ONE defined password policy attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.106
  NAME 'passwordMaxFailure'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Specifies the number of consecutive failed bind attempts after which a user is locked out of the directory when `passwordLockout` is set to on. Each time an invalid password is used to bind, the password failure counter is incremented. The value of the counter is stored on the operational attribute, `passwordRetryCount`.

The valid range of this attribute is 0 to 32767, with a default value of 3. When set to 0, this attribute disables lockout.

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

## passwordMinAge

Sun ONE defined password policy attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.222
  NAME 'passwordMinAge'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Specifies the number of seconds that must elapse between password modifications. Use this attribute with the `passwordInHistory` attribute to prevent users from quickly cycling through passwords so they can use their old passwords again. The default value, 0, indicates that the user can change the password again immediately after updating the password. The valid range of this attribute is from 0 to 2147472000 seconds, which is 24855 days.

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

---

## passwordMinLength

Sun ONE defined password policy attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.99
  NAME 'passwordMinLength'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Specifies the minimum number of characters that must be used in a password. Syntax checking is performed based on this attribute when `passwordCheckSyntax` is set to on. The valid range of this attribute is 2 to 512 characters, with the default value being 6 characters.

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

## passwordMustChange

Sun ONE defined password policy attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.220
  NAME 'passwordMustChange'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Indicates whether users must change their passwords when they first bind to Directory Server, or when the password has been reset by the administrator.

When this attribute is set to `on`, attempts to bind result in a DSA is unwilling to perform error (53), with additional information, Password was reset and must be changed. For users to change their password, the `passwordChange` attribute must be set to `on`.

This attribute may be `on` or `off`. The default value is `off`.

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

---

## passwordNonRootMayResetUserpwd

LDAP attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.1.782
  NAME 'passwordNonRootMayResetUserpwd'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Whether a user other than Directory Manager may reset user passwords.

### Syntax

Directory String, multi-valued.

### Examples

```
passwordNonRootMayResetUserpwd: on
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

## passwordPolicySubentry

Sun ONE defined password policy attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.1.30
  NAME ('passwordPolicySubentry' 'pwdPolicySubentry')
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  SINGLE-VALUE
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

The DN of an LDAPsubentry containing the password policy attributes that will be applied to a user entry.

### Syntax

DN, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

---

## passwordResetDuration

Sun ONE defined password policy attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.107
  NAME 'passwordResetDuration'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

This attribute specifies in seconds the period of time that passes before the server resets the retry count to zero.

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Examples

```
passwordResetDuration: 600
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

## passwordResetFailureCount

Sun ONE defined password policy attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.223
  NAME 'passwordResetFailureCount'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Specifies the length of time in seconds after which the password failure is reset to 0, even if no successful authentication occurs. The counter is stored in the operational attribute, `passwordRetryCount`.

The valid range for this attribute is 0 to the maximum 32-bit integer value (2147483647) in seconds, with a default of 600 seconds, meaning five minutes. When this attribute is set to 0, the failure counter is reset only when a successful bind occurs.

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

---

## passwordRetryCount

Sun ONE defined password policy attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.93
  NAME 'passwordRetryCount'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Counts the number of consecutive failed attempts at entering the correct password.

### Syntax

Directory String, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

---

## passwordRootdnMayBypassModsChecks

Sun ONE defined password policy attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.1.468
  NAME 'passwordRootdnMayBypassModsChecks'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

When set to `on`, this password policy attribute allows the root DN to modify passwords, even if the modification violates the password policy. This allows exceptions to the password policy. If the Directory Manager changes a password and the server detects that the new password violates the minimum length or the password history, a warning is logged, but the modification proceeds.

The default value is `off`, meaning the server rejects even changes to passwords by the Directory Manager if such changes violate the specified password policy.

### Syntax

Directory String, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Examples

```
passwordRootdnMayBypassModsChecks: on
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

---

## passwordStorageScheme

Sun ONE defined password policy attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.221
  NAME 'passwordStorageScheme'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Specifies the algorithm used to hash Directory Server passwords. The default password storage scheme is the Salted Secure Hash Algorithm (SSHA).

The following hash types are supported:

- SSHA (Salted Secure Hash Algorithm) is the recommended method as it is the most secure.
- SHA (Secure Hash Algorithm) a version in use before SSHA.
- CRYPT is the UNIX crypt algorithm. It is provided for compatibility with UNIX passwords and supports MD5, Blowfish, and other strong algorithms. To specify the algorithm used, give the format of the salt in the `nsslapd-pluginarg()` argument as follows:

```
nsslapd-pluginarg(): value()
```

The value is in the `snprintf` format corresponding to specific salt formats. For example, some of the formats supported include `%.2s, $1$%.8s, $2a$04$%.22s, and $md5$%.8s$`. If the string value maps to an algorithm that is not supported by the operating system, then a warning message is logged and the hash will be made using the default UNIX algorithm with a salt made of 31 random characters.

If this attribute is set to `CLEAR`, passwords are not encrypted and appear in plain text.

You can extend how password attributes are stored by writing your own password storage scheme plug-in.

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Examples

```
passwordStorageScheme: CLEAR
```

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

---

## passwordUnlock

Sun ONE defined password policy attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.108
  NAME 'passwordUnlock'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Specifies whether user accounts will be unlocked after a period of time when `passwordLockout` is set to `on`. The period of time is specified with the `passwordLockoutDuration` attribute.

If this attribute is set to `on`, and the value of the `passwordMaxFailure` attribute has been reached, then the account is unlocked after the number of seconds specified in the `passwordLockoutDuration` attribute. If this attribute is set to `off`, the account remains locked until an administration resets it.

This attribute may be `on` or `off`. The default value is `on`.

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

## passwordWarning

Sun ONE defined password policy attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.104
  NAME 'passwordWarning'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Specifies the number of seconds before a user password expires that the user will receive a password expiration warning on attempting to authenticate to the directory.

The server does not send a warning directly to the end user. Instead, the server returns the warning to the client application.

---

---

**Note:** End users *do not automatically receive email or other notification* as a result of the passwordWarning attribute being set to on. Make sure the warning received by the client application is appropriately delivered to the end user.

---

---

The valid range for this attribute is 1 to the maximum 32-bit integer value (2147483647) in seconds, with the default value set at 86400 seconds, meaning 1 day.

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

---

## personalSignature

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.53
  NAME 'personalSignature'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.5
  X-ORIGIN 'RFC 1274' )
```

### Description

A signature file, in binary format, for the entry.

### Syntax

Binary, multi-valued.

### Examples

```
personalSignature:: AAAAAA==
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

## personalTitle

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.40
  NAME 'personalTitle'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 1274' )
```

### Description

Specifies a personal title for a person. Examples of personal titles are Ms, Dr, Prof, and Rev.

### Syntax

Directory String, multi-valued.

### Examples

```
personalTitle: Mr
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## photo

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.7
  NAME 'photo'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.5
  X-ORIGIN 'RFC 1274' )
```

### Description

Contains a photo, in binary form, of the entry.

### Syntax

Binary, multi-valued.

### Examples

```
photo:: AAAAAA==
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## physicalDeliveryOfficeName

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.19
  NAME 'physicalDeliveryOfficeName'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the name of the city or village in which a physical delivery office is located.

### Syntax

Directory String, multi-valued.

### Examples

physicalDeliveryOfficeName: Santa Clara

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## postalAddress

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.16
  NAME 'postalAddress'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the mailing address for the entry. This field is intended to include multiple lines. When represented in LDIF format, each line should be separated by a dollar sign (\$).

### Syntax

Directory String, multi-valued.

### Examples

```
postalAddress: P.O. Box 3541$Santa Clara, CA$99555
```

To represent an actual dollar sign (\$) or backslash (\) within the text, use the escaped hex values \24 and \5c respectively.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## postalCode

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.17
  NAME 'postalCode'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the entry's zip code in the United States.

### Syntax

Directory String, multi-valued.

### Examples

postalCode: 44224

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## postOfficeBox

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.18  
  NAME 'postOfficeBox'  
  DESC 'Standard LDAP attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15  
  X-ORIGIN 'RFC 2256' )
```

### Description

Specifies a postal mailing address.

### Syntax

Directory String, multi-valued.

### Examples

postOfficeBox: P.O. Box 1234

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## preferredDeliveryMethod

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.28
  NAME 'preferredDeliveryMethod'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the entry's preferred contact or delivery method.

### Syntax

Directory String, single-valued.

### Examples

```
preferredDeliveryMethod: telephone
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## preferredLanguage

inetOrgPerson attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.39
  NAME 'preferredLanguage'
  DESC 'inetOrgPerson attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  X-ORIGIN 'inetOrgPerson Internet Draft' )
```

### Description

Defines a person's preferred written or spoken language. The value for this attribute should conform to the syntax for HTTP Accept-Language header values.

### Syntax

Directory String, single-valued.

### Examples

```
preferredLanguage: en-us
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, RFC 2798 ( <a href="http://www.ietf.org/rfc/rfc2798.txt">http://www.ietf.org/rfc/rfc2798.txt</a> )

## presentationAddress

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.29
  NAME 'presentationAddress'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.26
  SINGLE-VALUE
  X-ORIGIN 'RFC 2256' )
```

### Description

Contains an OSI presentation address for the entry. The presentation address consists of an OSI Network Address and up to three selectors, one each for use by the transport, session, and presentation entities.

### Syntax

IA5 String, single-valued.

### Examples

```
presentationAddress: TELEX+00726322+RFC-1006+02+130.59.2.1
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## protocolInformation

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.48
  NAME 'protocolInformation'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

Used in conjunction with the presentationAddress attribute to provide additional information to the OSI network service.

### Syntax

Directory String, multi-valued.

### Attributes

See attributes(5) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## pwdAccountLockedTime

Directory Server defined password policy attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.8.1.17
  NAME 'pwdAccountLockedTime'
  DESC 'Directory Server defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.24
  SINGLE-VALUE
  NO-USER-MODIFICATION
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Password Policy for LDAP Directories Internet Draft' )
```

### Description

Holds the time that the user's account was locked. A locked account means that the password may no longer be used to authenticate.

A value of 000001010000Z means the account has been locked permanently, and that only a password administrator can unlock the account.

### Syntax

Generalized Time, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

The value of this attribute may only be modified by the server.

### Examples

```
pwdAccountLockedTime: 20050103121520Z
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Password Policy Internet-Draft

---

## pwdAllowUserChange

LDAP attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.8.1.14
  NAME 'pwdAllowUserChange'
  DESC 'Password Allow User Change'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.7
  X-DS-USE 'internal'
  X-ORIGIN 'Password Policy for LDAP Directories Internet Draft' )
```

### Description

Indicates whether users can change their own passwords, although the change operation is still subject to access control.

If this attribute is not present, a value of `TRUE` is assumed. This attribute is intended to be used in the absence of an access control mechanism.

### Syntax

Boolean, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Examples

```
pwdAllowUserChange: TRUE
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Password Policy Internet-Draft

## pwdAttribute

LDAP attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.8.1.1
  NAME 'pwdAttribute'
  EQUALITY objectIdentifierMatch
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.38 )
```

### Description

Holds the name of the attribute to which the password policy is applied. Currently only `userPassword` can be used.

### Syntax

Object Identifier, multi-valued.

### Examples

```
pwdAttribute: userPassword
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Password Policy Internet-Draft

## pwdChangedTime

Directory Server defined password policy attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.8.1.16
  NAME 'pwdChangedTime'
  DESC 'Directory Server defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.24
  SINGLE-VALUE
  NO-USER-MODIFICATION
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Password Policy for LDAP Directories Internet Draft' )
```

### Description

Specifies the last time the entry's password was changed. This is used by the password expiration policy.

If this attribute is not present, the password will never expire.

### Syntax

Generalized Time, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

The value of this attribute may only be modified by the server.

### Examples

```
pwdChangedTime: 20050103121520Z
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Password Policy Internet-Draft

## pwdCheckQuality

LDAP attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.8.1.5
  NAME 'pwdCheckQuality'
  DESC 'Level of required quality'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  X-DS-USE 'internal'
  X-ORIGIN 'Password Policy for LDAP Directories Internet Draft' )
```

### Description

Indicates how the password quality will be verified while being modified or added. This attribute can take the following values:

0

Default. Quality checking is not enforced.

1

Directory Server checks the quality of the password. If Directory Server cannot determine the quality of the password, because the password is hashed for example, it accepts the password and logs a warning message.

2

Directory Server checks the quality of the password. If Directory Server cannot determine the quality of the password, it returns `LDAP_CONSTRAINT_VIOLATION` and refuses the operation.

If the password value is already hashed, and prefixed by a tag other than `{CLEAR}` setting this attribute to 1 means the server does not check quality and logs a warning. Setting this attribute to 2 in this case causes the server to reject the modification because it cannot check the password quality.

### Syntax

Integer, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Examples

```
pwdCheckQuality: 1
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	External: IETF, Password Policy Internet-Draft

## pwdExpireWarning

Password Warning Expiration

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.8.1.7
  NAME 'pwdExpireWarning'
  DESC 'Password Warning Expiration'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  X-DS-USE 'internal'
  X-ORIGIN 'Password Policy for LDAP Directories Internet Draft' )
```

### Description

Specifies the maximum number of seconds before a password is due to expire that expiration warning messages will be returned to an authenticating user.

If this attribute is not present, or if the value is 0 no warnings will be returned. If not 0, the value must be smaller than the value of the pwdMaxAge attribute.

The maximum allowed values in seconds are: Off - 0, Minimum - 1, Maximum - 31560000.

### Syntax

Integer, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Examples

```
pwdExpireWarning: 604800
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Password Policy Internet-Draft

---

## pwdFailureCountInterval

Password Failure Count Interval

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.8.1.12
  NAME 'pwdFailureCountInterval'
  DESC 'Password Failure Count Interval'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  X-DS-USE 'internal'
  X-ORIGIN 'Password Policy for LDAP Directories Internet Draft' )
```

### Description

Holds the number of seconds after which the password failures are purged from the failure counter, even though no successful authentication occurred.

If this attribute is not present, or if the value is 0 the failure counter is only reset by a successful authentication.

### Syntax

Integer, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Examples

```
pwdFailureCountInterval: 600
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Password Policy Internet-Draft

## pwdFailureTime

Directory Server defined password policy attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.8.1.19
  NAME 'pwdFailureTime'
  DESC 'Directory Server defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.24
  NO-USER-MODIFICATION
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Password Policy for LDAP Directories Internet Draft' )
```

### Description

Holds the timestamps of consecutive authentication failures.

### Syntax

Generalized Time, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

The value of this attribute may only be modified by the server.

### Examples

```
pwdFailureTime: 20050103121520Z
pwdFailureTime: 20050103121742Z
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Password Policy Internet-Draft

---

## pwdGraceAuthNLimit

Password Grace Login

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.8.1.8
  NAME 'pwdGraceAuthNLimit'
  DESC 'Password Grace Login'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  X-DS-USE 'internal'
  X-ORIGIN 'Password Policy for LDAP Directories Internet Draft' )
```

### Description

Specifies the number of times an expired password can be used to authenticate. If this attribute is not present, or if the value is 0 authentication will fail.

### Syntax

Integer, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Examples

```
pwdGraceAuthNLimit: 3
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Password Policy Internet-Draft

## pwdGraceUseTime

Directory Server defined password policy attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.8.1.21
  NAME 'pwdGraceUseTime'
  DESC 'Directory Server defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.24
  NO-USER-MODIFICATION
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Password Policy for LDAP Directories Internet Draft' )
```

### Description

Holds the timestamps of the grace authentications allowed after the password expired.

### Syntax

Generalized Time, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

The value of this attribute may only be modified by the server.

### Examples

```
pwdGraceUseTime: 20050103121520Z
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Password Policy Internet-Draft

## pwdHistory

Directory Server defined password policy attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.8.1.20
  NAME 'pwdHistory'
  DESC 'Directory Server defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.5
  NO-USER-MODIFICATION
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Password Policy for LDAP Directories Internet Draft' )
```

### Description

Holds a history of previously used passwords.

### Syntax

Binary, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

The value of this attribute may only be modified by the server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Password Policy Internet-Draft

## pwdInHistory

Number of Passwords in history

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.8.1.4
  NAME 'pwdInHistory'
  DESC 'Number of Passwords in history'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  X-DS-USE 'internal'
  X-ORIGIN 'Password Policy for LDAP Directories Internet Draft' )
```

### Description

Specifies the maximum number of used passwords stored in the pwdHistory attribute.

If this attribute is not present, or if the value is 0, used passwords are not stored in the pwdHistory attribute and thus may be reused.

Maximum allowed values in seconds are: Off - 0, Minimum - 1, Maximum - 24.

### Syntax

Integer, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Examples

```
pwdInHistory: 3
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	External: IETF, Password Policy Internet-Draft

---

## pwdIsLockoutPrioritized

LDAP attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.1.794
  NAME 'pwdIsLockoutPrioritized'
  DESC 'Password Lockout Replication Priority'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.7
  SINGLE-VALUE
  X-DS-USE 'internal'
  X-ORIGIN 'Sun Directory Server' )
```

### Description

This attribute specifies whether prioritized replication is used to copy account lockout attribute values.

### Syntax

Boolean, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Examples

```
pwdIsLockoutPrioritized: TRUE
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## pwdKeepLastAuthTime

Enable last authentication time recording

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.1.798
  NAME 'pwdKeepLastAuthTime'
  DESC 'Enable last authentication time recording'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.7
  SINGLE-VALUE
  X-DS-USE 'internal'
  X-ORIGIN 'Sun Directory Server' )
```

### Description

Whether the timestamp of the last successful authentication should be stored in the operational attribute `pwdLastAuthTime` on the entry.

---

---

**Note:** Using this feature can affect performance. When you configure Directory Server to save `pwdLastAuthTime` timestamps, the server must perform an internal modify operation for each successful bind.

---

---

### Syntax

Boolean, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Examples

```
pwdKeepLastAuthTime: TRUE
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

---

## pwdLastAuthTime

Last authentication time

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.1.797
  NAME 'pwdLastAuthTime'
  DESC 'Last authentication time'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.24
  SINGLE-VALUE
  NO-USER-MODIFICATION
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Sun Directory Server' )
```

### Description

The timestamp of the last successful authentication involving the entry. Activate this attribute by setting `pwdKeepLastAuthTime` in the password policy entry to on.

### Syntax

Generalized Time, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

The value of this attribute may only be modified by the server.

### Examples

```
pwdLastAuthTime: 20060103121520Z
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## pwdLockout

Password Lockout

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.8.1.9
  NAME 'pwdLockout'
  DESC 'Password Lockout'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.7
  X-DS-USE 'internal'
  X-ORIGIN 'Password Policy for LDAP Directories Internet Draft' )
```

### Description

Indicates, when its value is `TRUE`, that the password may not be used to authenticate after a specified number of consecutive failed bind attempts. The maximum number of consecutive failed bind attempts is specified in `pwdMaxFailure`.

If this attribute is not present, or if the value is `FALSE` the password may be used to authenticate when the number of failed bind attempts has been reached.

### Syntax

Boolean, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Examples

```
pwdLockout: TRUE
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Password Policy Internet-Draft

---

## pwdLockoutDuration

Password Lockout Duration

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.8.1.10
  NAME 'pwdLockoutDuration'
  DESC 'Password Lockout Duration'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  X-DS-USE 'internal'
  X-ORIGIN 'Password Policy for LDAP Directories Internet Draft' )
```

### Description

Holds the number of seconds that the password cannot be used to authenticate due to too many failed bind attempts.

If this attribute is not present, or if the value is 0 the password cannot be used to authenticate until reset by a password administrator.

The maximum value allowed in seconds is 315360000.

### Syntax

Integer, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Examples

```
pwdLockoutDuration: 300
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Password Policy Internet-Draft

## pwdMaxAge

Password Max Age

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.8.1.3
  NAME 'pwdMaxAge'
  DESC 'Password Max Age'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  X-DS-USE 'internal'
  X-ORIGIN 'Password Policy for LDAP Directories Internet Draft' )
```

### Description

Holds the number of seconds after which a modified password will expire.

If this attribute is not present, or if the value is 0 the password does not expire. If not 0, the value must be greater than or equal to the value of pwdMinAge.

Maximum allowed value in seconds is 315360000.

### Syntax

Integer, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Examples

```
pwdMaxAge: 8640000
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Password Policy Internet-Draft

---

## pwdMaxFailure

Password Max Failure

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.8.1.11
  NAME 'pwdMaxFailure'
  DESC 'Password Max Failure'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  X-DS-USE 'internal'
  X-ORIGIN 'Password Policy for LDAP Directories Internet Draft' )
```

### Description

Specifies the number of consecutive failed bind attempts after which the password may not be used to authenticate.

If this attribute is not present, or if the value is 0 this policy is not checked, and the value of pwdLockout is ignored.

The maximum value allowed is for rangeMax is 32767.

### Syntax

Integer, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Examples

```
pwdMaxFailure: 3
```

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Password Policy Internet-Draft

## pwdMinAge

Password Min Age

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.8.1.2
  NAME 'pwdMinAge'
  DESC 'Password Min Age'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  X-DS-USE 'internal'
  X-ORIGIN 'Password Policy for LDAP Directories Internet Draft' )
```

### Description

Holds the number of seconds that must elapse between modifications to the password.

If this attribute is not present, 0 seconds is assumed.

Maximum allowed values in seconds are: Off - 30, Minimum - 1, Maximum - 314360000.

### Syntax

Integer, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Examples

```
pwdMinAge: 604800
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Password Policy Internet-Draft

## pwdMinLength

Password Min Length

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.8.1.6
  NAME 'pwdMinLength'
  DESC 'Password Min Length'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  X-DS-USE 'internal'
  X-ORIGIN 'Password Policy for LDAP Directories Internet Draft' )
```

### Description

When quality checking is enabled, this attribute holds the minimum number of characters that must be used in a password. If this attribute is not present, no minimum password length will be enforced. If Directory Server is unable to check the length, because the password is hashed for example, Directory Server will, depending on the value of the pwdCheckQuality attribute, either accept the password without checking it (when pwdCheckQuality is 0 or 1) or return LDAP\_CONSTRAINT\_VIOLATION and refuse to add or modify the password.

The maximum allowed values in seconds are: Off - 0, Minimum - 2, Maximum - 512.

### Syntax

Integer, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Examples

```
pwdMinLength: 6
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Password Policy Internet-Draft

## pwdMustChange

Password Must Change

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.8.1.13
  NAME 'pwdMustChange'
  DESC 'Password Must Change'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.7
  X-DS-USE 'internal'
  X-ORIGIN 'Password Policy for LDAP Directories Internet Draft' )
```

### Description

Specifies with a value of `TRUE` that users must change their passwords when they first bind to the directory after a password is set or reset by any other user, such as a password administrator, who has the access rights to modify the password.

If this attribute is not present, or if the value is `FALSE` users are not required to change their password upon binding after the password administrator sets or resets the password. This attribute is typically set by a password administrator after resetting a user's password.

When this attribute is set to `TRUE`, attempts to bind result in a DSA is unwilling to perform error (53), with additional information, Password was reset and must be changed.

### Syntax

Boolean, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Examples

```
pwdMustChange: TRUE
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Password Policy Internet-Draft

## pwdPolicySubentry

Directory Server defined password policy attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.8.1.23
  NAME 'pwdPolicySubEntry'
  DESC 'Directory Server defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.24
  SINGLE-VALUE
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Password Policy for LDAP Directories Internet Draft' )
```

### Description

Points to the pwdPolicy subentry in effect for this object.

### Syntax

DN, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

### Examples

```
pwdPolicySubentry: cn=myPwdPolicy,cn=pwp,cn=config
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Password Policy Internet-Draft

## pwdReset

Directory Server defined password policy attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.8.1.22
  NAME 'pwdReset'
  DESC 'Directory Server defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.7
  SINGLE-VALUE
  NO-USER-MODIFICATION
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Password Policy for LDAP Directories Internet Draft' )
```

### Description

Holds a flag to indicate, when `TRUE`, that the password has been updated by the password administrator and must be changed by the user.

### Syntax

Boolean, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

The value of this attribute may only be modified by the server.

### Examples

```
pwdReset: TRUE
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Password Policy Internet-Draft

---

## pwdSafeModify

Password Safe Modify

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.8.1.15
  NAME 'pwdSafeModify'
  DESC 'Password Safe Modify'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.7
  X-DS-USE 'internal'
  X-ORIGIN 'Password Policy for LDAP Directories Internet Draft' )
```

### Description

Specifies whether or not the existing password must be sent along with the new password when being changed.

If this attribute is not present, a value of FALSE is assumed.

### Syntax

Boolean, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Examples

```
pwdSafeModify: TRUE
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Password Policy Internet-Draft

## ref

Standard LDAP referral attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.34
  NAME 'ref'
  DESC 'Standard LDAP referral attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.26
  X-ORIGIN 'RFC 3296' )
```

### Description

Used in LDAPv3 to support smart referrals. Contains an LDAP URL in the format:

```
ldap://servername:portnumber/DN
```

The port number is optional.

### Syntax

IA5 String, multi-valued.

### Examples

```
ref: ldap://server.example.com:389/ou=People, o=example.com
```

Note that DN special characters must be escaped. For example:

```
ref: ldap://server.example.com:389/ou=People, o=example%Inc
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 3296 ( <a href="http://www.ietf.org/rfc/rfc3296.txt">http://www.ietf.org/rfc/rfc3296.txt</a> )

---

## registeredAddress

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.26  
  NAME 'registeredAddress'  
  DESC 'Standard LDAP attribute type'  
  SUP postalAddress  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15  
  X-ORIGIN 'RFC 2256' )
```

### Description

This attribute contains a postal address for receiving telegrams or expedited documents. The recipient's signature is usually required on delivery.

### Syntax

Directory String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## replicaIdentifier

---

RetroChangelog attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.1.724
  NAME 'replicaIdentifier'
  DESC 'RetroChangelog attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  NO-USER-MODIFICATION
  USAGE directoryOperation
  X-ORIGIN 'Sun Directory Server' )
```

### Syntax

Directory String, single-valued.

### Usage

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

The value of this attribute may only be modified by the server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

---

## replicationCSN

RetroChangelog attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.1.725
  NAME 'replicationCSN'
  DESC 'RetroChangelog attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  NO-USER-MODIFICATION
  USAGE directoryOperation
  X-ORIGIN 'Sun Directory Server' )
```

### Description

This attribute is used for the retro change log. When the retro change log is enabled, this attribute specifies a change sequence number (CSN) for each record in the retro change log corresponding to a replicated operation. The CSN uniquely identifies each change made to the replicated data.

The CSN contains a timestamp, sequence number, replica ID, and subsequence number.

### Syntax

Directory String, single-valued.

### Usage

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

The value of this attribute may only be modified by the server.

### Examples

```
replicationCSN: 451d2c6d000200010000
```

In this example, the change sequence number is concatenated from the following values.

```
451d2c6d
```

This represents time as the number of seconds since January 1, 1970.

```
0002
```

This is the sequence number, which is used to distinguish between operations that happened during the same second.

```
0001
```

This is the replica ID, which in this example is 1.

```
0000
```

This is the subsequence number, which is not always used, but helps the server to manage information about the state of replication.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

---

## retryCountResetTime

Sun ONE defined password policy attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.94
  NAME 'retryCountResetTime'
  DESC 'Sun ONE defined password policy attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.24
  SINGLE-VALUE
  USAGE directoryOperation
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Specifies the exact time after which the passwordRetryCount is reset.

### Syntax

Generalized Time, single-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## rfc822mailbox

---

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.3
  NAME ( 'mail' 'rfc822mailbox' )
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 1274' )
```

### Description

Identifies a user's primary email address (the email address retrieved and displayed by white pages lookup applications).

### Syntax

Directory String, multi-valued.

### Examples

```
mail: banderson@example.com
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## roleOccupant

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.33  
  NAME 'roleOccupant'  
  DESC 'Standard LDAP attribute type'  
  SUP distinguishedName  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12  
  X-ORIGIN 'RFC 2256' )
```

### Description

Contains the distinguished name of the person acting in the role defined in the `organizationalRole` entry.

### Syntax

DN, multi-valued.

### Examples

```
roleOccupant: uid=jdoe, dc=example, dc=com
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## roomNumber

---

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.6
  NAME 'roomNumber'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 1274' )
```

### Description

Specifies the room number of an object. Note that the `commonName` attribute should be used for naming room objects.

### Syntax

Directory String, multi-valued.

### Examples

```
roomNumber: 230
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## searchGuide

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.14
  NAME 'searchGuide'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.26
  X-ORIGIN 'RFC 2256' )
```

### Description

Specifies information for a suggested search criteria when using the entry as the base object in the directory tree for a search operation. When constructing search filters, use `enhancedSearchGuide` instead.

### Syntax

IA5 String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## secretary

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.21
  NAME 'secretary'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  X-ORIGIN 'RFC 1274' )
```

### Description

Identifies the entry's secretary or administrative assistant.

### Syntax

DN, multi-valued.

### Examples

```
secretary: cn=John Doe, dc=example, dc=com
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## seeAlso

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.34
  NAME 'seeAlso'
  DESC 'Standard LDAP attribute type'
  SUP distinguishedName
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies another Directory Server entry that may contain information related to this entry.

### Syntax

DN, multi-valued.

### Examples

```
seeAlso: cn=Quality Control Inspectors,ou=manufacturing,dc=example, dc=com
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## serialNumber

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.5  
  NAME 'serialNumber'  
  DESC 'Standard LDAP attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15  
  X-ORIGIN 'RFC 2256' )
```

### Description

Specifies the serial number of a device.

### Syntax

Directory String, multi-valued.

### Examples

```
serialNumber: 555-1234-AZ
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## shadowExpire

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.10
  NAME 'shadowExpire'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  SINGLE-VALUE
  X-ORIGIN 'RFC 2307' )
```

### Description

Related to the `/etc/shadow` file, this attribute contains an absolute date specifying when the login may no longer be used.

### Syntax

Integer, single-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

## shadowFlag

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.11
  NAME 'shadowFlag'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  SINGLE-VALUE
  X-ORIGIN 'RFC 2307' )
```

### Description

Related to the `/etc/shadow` file, this attribute is currently not used and is reserved for future use.

### Syntax

Integer, single-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

---

## shadowInactive

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.9
  NAME 'shadowInactive'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  SINGLE-VALUE
  X-ORIGIN 'RFC 2307' )
```

### Description

Related to the `/etc/shadow` file, this attribute specifies the number of days of inactivity allowed for the specified user.

### Syntax

Integer, single-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

## shadowLastChange

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.5
  NAME 'shadowLastChange'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  SINGLE-VALUE
  X-ORIGIN 'RFC 2307' )
```

### Description

Related to the `/etc/shadow` file, this attribute specifies number of days between January 1, 1970, and the date that the password was last modified.

### Syntax

Integer, single-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

---

## shadowMax

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.7
  NAME 'shadowMax'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  SINGLE-VALUE
  X-ORIGIN 'RFC 2307' )
```

### Description

Related to the `/etc/shadow` file, this attribute specifies the maximum number of days the password is valid.

### Syntax

Integer, single-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

## shadowMin

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.6  
  NAME 'shadowMin'  
  DESC 'Standard LDAP attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27  
  SINGLE-VALUE  
  X-ORIGIN 'RFC 2307' )
```

### Description

Related to the `/etc/shadow` file, this attribute specifies the minimum number of days required between password changes.

### Syntax

Integer, single-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

---

## shadowWarning

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.8
  NAME 'shadowWarning'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  SINGLE-VALUE
  X-ORIGIN 'RFC 2307' )
```

### Description

Related to the `/etc/shadow` file, this attribute specifies the number of days before the password expires that the user is warned.

### Syntax

Integer, single-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

## singleLevelQuality

---

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.50
  NAME 'singleLevelQuality'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  X-ORIGIN 'RFC 1274' )
```

### Description

Specifies the purported data quality at the level immediately below in the DIT.

### Syntax

Directory String, single-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## sn

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.4
  NAME ( 'sn' 'surName' )
  DESC 'Standard LDAP attribute type'
  SUP name
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the entry's surname, also referred to as last name or family name.

### Syntax

Directory String, multi-valued.

### Examples

surname: Anderson

or

sn: Anderson

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## st

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.8  
  NAME ( 'st' 'stateOrProvinceName' )  
  DESC 'Standard LDAP attribute type'  
  SUP name  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15  
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the state or province in which the entry resides. Abbreviation: st.

### Syntax

Directory String, multi-valued.

### Examples

```
stateOrProvinceName: California
```

or

```
st: California
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## stateOrProvinceName

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.8
  NAME ( 'st' 'stateOrProvinceName' )
  DESC 'Standard LDAP attribute type'
  SUP name
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the state or province in which the entry resides. Abbreviation: st.

### Syntax

Directory String, multi-valued.

### Examples

```
stateOrProvinceName: California
```

or

```
st: California
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## street

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.9
  NAME ( 'street' 'streetaddress' )
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the entry's house number and street name.

### Syntax

Directory String, multi-valued.

### Examples

```
streetAddress: 1234 Ridgeway Drive
```

or

```
street: 1234 Ridgeway Drive
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## streetaddress

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.9
  NAME ( 'street' 'streetaddress' )
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the entry's house number and street name.

### Syntax

Directory String, multi-valued.

### Examples

```
streetAddress: 1234 Ridgeway Drive
```

or

```
street: 1234 Ridgeway Drive
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## subject

Pilot attribute type

### Synopsis

```
( 0.9.2342.19200300.102.1.8  
  NAME 'subject'  
  DESC 'Pilot attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15  
  X-ORIGIN 'Internet White Pages Pilot' )
```

### Description

Contains information about the subject matter of the document entry.

### Syntax

Directory String, multi-valued.

### Examples

```
subject: employee option grants
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Internet White Pages Pilot

---

## subschemaSubentry

Standard LDAP attribute type

### Synopsis

```
( 2.5.18.10
  NAME 'subschemaSubentry'
  DESC 'Standard LDAP attribute type'
  EQUALITY distinguishedNameMatch
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  SINGLE-VALUE
  NO-USER-MODIFICATION
  USAGE directoryOperation
  X-ORIGIN 'RFC 2252' )
```

### Description

DN of the entry that contains schema information for this entry. This attribute is present for every entry in the directory.

### Syntax

DN, single-valued.

### Usage

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

The value of this attribute may only be modified by the server.

### Examples

```
subschemaSubentry: cn=schema
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2252 ( <a href="http://www.ietf.org/rfc/rfc2252.txt">http://www.ietf.org/rfc/rfc2252.txt</a> )

## subtreeMaximumQuality

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.52
  NAME 'subtreeMaximumQuality'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  X-ORIGIN 'RFC 1274' )
```

### Description

Specifies the purported maximum data quality for a DIT subtree.

### Syntax

Directory String, single-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## subtreeMinimumQuality

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.51
  NAME 'subtreeMinimumQuality'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  X-ORIGIN 'RFC 1274' )
```

### Description

Specifies the purported minimum data quality for a DIT subtree.

### Syntax

Directory String, single-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

## supportedAlgorithms

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.52
  NAME 'supportedAlgorithms'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.5
  X-ORIGIN 'RFC 2256' )
```

### Description

This attribute is to be stored and requested in the binary form, as `supportedAlgorithms;binary`.

### Syntax

Binary, multi-valued.

### Examples

```
supportedAlgorithms;binary: AAAAAA==
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## supportedApplicationContext

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.30
  NAME 'supportedApplicationContext'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

This attribute contains the identifiers of OSI application contexts.

### Syntax

Directory String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## supportedControl

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.4.1.1466.101.120.13
  NAME 'supportedControl'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  USAGE dsaOperation
  X-ORIGIN 'RFC 2252' )
```

### Description

The values of this attribute are the object identifiers (OIDs) that identify the controls supported by the server. When the server does not support controls, this attribute is absent.

### Syntax

Directory String, multi-valued.

### Usage

Operational attribute used by a Directory Server instance; returned in `ldapsearch` only when specifically requested.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2252 ( <a href="http://www.ietf.org/rfc/rfc2252.txt">http://www.ietf.org/rfc/rfc2252.txt</a> )

---

## supportedExtension

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.4.1.1466.101.120.7
  NAME 'supportedExtension'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  USAGE dsaOperation
  X-ORIGIN 'RFC 2252' )
```

### Description

The values of this attribute are the object identifiers (OIDs) that identify the supported extended operations supported by the server. When the server does not support extensions, this attribute is absent.

### Syntax

Directory String, multi-valued.

### Usage

Operational attribute used by a Directory Server instance; returned in `ldapsearch` only when specifically requested.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2252 ( <a href="http://www.ietf.org/rfc/rfc2252.txt">http://www.ietf.org/rfc/rfc2252.txt</a> )

## supportedLDAPVersion

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.4.1.1466.101.120.15
  NAME 'supportedLDAPVersion'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  USAGE dsaOperation
  X-ORIGIN 'RFC 2252' )
```

### Description

Identifies the versions of the LDAP protocol implemented by the server. This attribute is defined in RFC 2252.

### Syntax

Integer, multi-valued.

### Usage

Operational attribute used by a Directory Server instance; returned in `ldapsearch` only when specifically requested.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2252 ( <a href="http://www.ietf.org/rfc/rfc2252.txt">http://www.ietf.org/rfc/rfc2252.txt</a> )

---

## supportedSASLMechanisms

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.4.1.1466.101.120.14
  NAME 'supportedSASLMechanisms'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  USAGE dsaOperation
  X-ORIGIN 'RFC 2252' )
```

### Description

Identifies the names of supported SASL mechanisms supported by the server. When the server does not support SASL attributes, this attribute is absent.

### Syntax

Directory String, multi-valued.

### Usage

Operational attribute used by a Directory Server instance; returned in `ldapsearch` only when specifically requested.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2252 ( <a href="http://www.ietf.org/rfc/rfc2252.txt">http://www.ietf.org/rfc/rfc2252.txt</a> )

## supportedSSLCiphers

List of ciphers supported by SSL lib

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.1.800
  NAME 'supportedSSLCiphers'
  DESC 'List of ciphers supported by SSL lib'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  USAGE dSAOperation
  X-ORIGIN 'Sun Directory Server' )
```

### Description

This attribute contains the list of SSL ciphers supported by Directory Server, and can be read from the root DSE. The content of this attribute is dynamically loaded from the library providing SSL support. The ciphers listed here can be enabled by adding the values to the list contained in nsSSL3Ciphers on cn=encryption,cn=config.

### Syntax

Directory String, multi-valued.

### Usage

Operational attribute used by a Directory Server instance; returned in `ldapsearch` only when specifically requested.

### Examples

```
supportedSSLCiphers: TLS_DHE_RSA_WITH_AES_256_CBC_SHA
supportedSSLCiphers: TLS_DHE_DSS_WITH_AES_256_CBC_SHA
supportedSSLCiphers: TLS_RSA_WITH_AES_256_CBC_SHA
supportedSSLCiphers: TLS_DHE_DSS_WITH_RC4_128_SHA
supportedSSLCiphers: TLS_DHE_RSA_WITH_AES_128_CBC_SHA
supportedSSLCiphers: TLS_DHE_DSS_WITH_AES_128_CBC_SHA
supportedSSLCiphers: SSL_RSA_WITH_RC4_128_MD5
supportedSSLCiphers: SSL_RSA_WITH_RC4_128_SHA
supportedSSLCiphers: TLS_RSA_WITH_AES_128_CBC_SHA
supportedSSLCiphers: SSL_DHE_RSA_WITH_3DES_EDE_CBC_SHA
supportedSSLCiphers: SSL_DHE_DSS_WITH_3DES_EDE_CBC_SHA
supportedSSLCiphers: SSL_RSA_FIPS_WITH_3DES_EDE_CBC_SHA
supportedSSLCiphers: SSL_RSA_WITH_3DES_EDE_CBC_SHA
supportedSSLCiphers: SSL_DHE_RSA_WITH_DES_CBC_SHA
supportedSSLCiphers: SSL_DHE_DSS_WITH_DES_CBC_SHA
supportedSSLCiphers: SSL_RSA_FIPS_WITH_DES_CBC_SHA
supportedSSLCiphers: SSL_RSA_WITH_DES_CBC_SHA
supportedSSLCiphers: TLS_RSA_EXPORT1024_WITH_RC4_56_SHA
supportedSSLCiphers: TLS_RSA_EXPORT1024_WITH_DES_CBC_SHA
supportedSSLCiphers: SSL_RSA_EXPORT_WITH_RC4_40_MD5
supportedSSLCiphers: SSL_RSA_EXPORT_WITH_RC2_CBC_40_MD5
supportedSSLCiphers: SSL_RSA_WITH_NULL_SHA
supportedSSLCiphers: SSL_RSA_WITH_NULL_MD5
supportedSSLCiphers: SSL_CK_RC4_128_WITH_MD5
supportedSSLCiphers: SSL_CK_RC2_128_CBC_WITH_MD5
```

supportedSSLCiphers: SSL\_CK\_DES\_192\_EDE3\_CBC\_WITH\_MD5  
supportedSSLCiphers: SSL\_CK\_DES\_64\_CBC\_WITH\_MD5  
supportedSSLCiphers: SSL\_CK\_RC4\_128\_EXPORT40\_WITH\_MD5  
supportedSSLCiphers: SSL\_CK\_RC2\_128\_CBC\_EXPORT40\_WITH\_MD5

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## surName

---

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.4
  NAME ( 'sn' 'surName' )
  DESC 'Standard LDAP attribute type'
  SUP name
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the entry's surname, also referred to as last name or family name.

### Syntax

Directory String, multi-valued.

### Examples

surname: Anderson

or

sn: Anderson

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## targetDn

Changelog attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.6
  NAME 'targetDn'
  DESC 'Changelog attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  X-ORIGIN 'Changelog Internet Draft' )
```

### Description

Contains the DN of the entry that was affected by the LDAP operation. In the case of a `modrdn` operation, the `targetDn` attribute contains the DN of the entry before it was modified or moved.

### Syntax

DN, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Changelog Internet Draft

## targetUniqueld

RetroChangelog attribute type

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.1.596
  NAME 'targetUniqueId'
  DESC 'RetroChangelog attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  NO-USER-MODIFICATION
  USAGE directoryOperation
  X-ORIGIN 'Sun Directory Server' )
```

### Description

This attribute is used for the retro change log. When the retro change log is enabled, this attribute provides the unique ID of the target entry for each record in the retro change log.

### Syntax

Directory String, single-valued.

### Usage

Operational attribute used by the directory service; returned in `ldapsearch` only when specifically requested.

The value of this attribute may only be modified by the server.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

---

## telephoneNumber

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.20
  NAME 'telephoneNumber'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.50
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the entry's phone number.

### Syntax

Telephone Number, multi-valued.

### Examples

telephoneNumber: 415-555-2233

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## teletexTerminalIdentifier

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.22
  NAME 'teletexTerminalIdentifier'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the entry's teletex terminal identifier. The format of the attribute is as follows:

```
teletex-id = ttx-term 0*("$" ttx-param)
```

```
ttx-term = printablestring
```

```
ttx-param = ttx-key ":" ttx-value
```

```
ttx-key = "graphic" / "control" / "misc" / "page" / "private"
```

```
ttx-value = octetstring
```

The first printable string is the encoding of the first portion of the teletex terminal identifier to be encoded, and the subsequent 0 or more octet strings are subsequent portions of the teletex terminal identifier.

### Syntax

Directory String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## telexNumber

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.21
  NAME 'telexNumber'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 2256' )
```

### Description

Defines the telex number of the entry. The format of the telex number is as follows:

actual-number "\$" country "\$" answerback

where:

- actual-number: the syntactic representation of the number portion of the TELEX number being encoded.
- country: the TELEX country code.
- answerback: the answerback code of a TELEX terminal.

### Syntax

Directory String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## textEncodedORAddress

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.2
  NAME 'textEncodedORAddress'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 1274' )
```

### Description

Defines the text-encoded Originator/Recipient (X.400) address of the entry as defined in RFC987.

### Syntax

Directory String, multi-valued.

### Examples

```
textEncodedORAddress: /S=doe/OU=eng/O=example/ADMD=telemail/C=us/
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## title

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.12  
  NAME 'title'  
  DESC 'Standard LDAP attribute type'  
  SUP name  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15  
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the title of a person in the organization.

### Syntax

Directory String, multi-valued.

### Examples

title: Senior QC Inspector

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## uid

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.1
  NAME ( 'uid' 'userid' )
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 1274' )
```

### Description

Identifies the entry's userid (usually the logon ID). Abbreviation: uid.

### Syntax

Directory String, multi-valued.

### Examples

```
userid: banderson
```

or

```
uid: banderson
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## uidNumber

Standard LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.1.1.0
  NAME 'uidNumber'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  SINGLE-VALUE
  X-ORIGIN 'RFC 2307' )
```

### Description

Related to the `/etc/shadow` file, this attribute specifies the user's login ID.

### Syntax

Integer, single-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

## uniqueIdentifier

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.44
  NAME 'uniqueIdentifier'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 1274' )
```

### Description

Identifies a specific item used to distinguish between two entries when a distinguished name has been reused. This attribute is intended to detect an instance of a reference to a distinguished name that has been deleted. This attribute is assigned by the server.

### Syntax

Directory String, multi-valued.

### Examples

uniqueIdentifier: 17B

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## uniqueMember

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.50
  NAME 'uniqueMember'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies a group of names associated with an entry where each name was given a uniqueIdentifier to ensure its uniqueness. A value for the uniqueMember attribute is a DN followed by an optional hash (#) and uniqueIdentifier.

### Syntax

DN, multi-valued.

### Examples

```
uniqueMember: cn=John Doe, dc=example, dc=com #17
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## updatedByDocument

Pilot attribute type

### Synopsis

```
( 0.9.2342.19200300.102.1.6  
  NAME 'updatedByDocument'  
  DESC 'Pilot attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12  
  X-ORIGIN 'Internet White Pages Pilot' )
```

### Description

Contains the distinguished name of a document that is an updated version of the document entry.

### Syntax

DN, multi-valued.

### Examples

```
updatedByDocument: cn=Doc Version 2, ou=Document Library,dc=example, dc=com
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Internet White Pages Pilot

---

## updatesDocument

Pilot attribute type

### Synopsis

```
( 0.9.2342.19200300.102.1.5  
  NAME 'updatesDocument'  
  DESC 'Pilot attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12  
  X-ORIGIN 'Internet White Pages Pilot' )
```

### Description

Contains the distinguished name of a document for which this document is an updated version.

### Syntax

DN, multi-valued.

### Examples

updatesDocument: cn=Doc Version 1, ou=Document Library,dc=example, dc=com

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Internet White Pages Pilot

## userCertificate

---

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.36
  NAME 'userCertificate'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.5
  X-ORIGIN 'RFC 2256' )
```

### Description

This attribute contains a certificate. It is to be stored and requested in the binary form, as `userCertificate;binary`.

### Syntax

Binary, multi-valued.

### Examples

```
userCertificate;binary:: AAAAAA==
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## userClass

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.8  
  NAME 'userClass'  
  DESC 'Standard LDAP attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15  
  X-ORIGIN 'RFC 1274' )
```

### Description

Specifies a category of computer user. The semantics of this attribute are arbitrary. The `organizationalStatus` attribute makes no distinction between computer users and others users and may be more applicable.

### Syntax

Directory String, multi-valued.

### Examples

```
userClass: intern
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

## userid

Standard LDAP attribute type

### Synopsis

```
( 0.9.2342.19200300.100.1.1
  NAME ( 'uid' 'userid' )
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-ORIGIN 'RFC 1274' )
```

### Description

Identifies the entry's userid (usually the logon ID). Abbreviation: uid.

### Syntax

Directory String, multi-valued.

### Examples

```
userid: banderson
```

or

```
uid: banderson
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## userPassword

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.35
  NAME 'userPassword'
  DESC 'Standard LDAP attribute type'
  EQUALITY octetStringMatch
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.40{128}
  X-ORIGIN 'RFC 2256' )
```

### Description

Identifies the entry's password and encryption method in the following format:

```
{encryption method}encrypted password
```

Transfer of clear text passwords is strongly discouraged where the underlying transport service cannot guarantee confidentiality. Transfer of clear text may result in disclosure of the password to unauthorized parties.

### Syntax

Octet String, multi-valued.

### Examples

```
userPassword: {ssha}9LsFG7RT+dFnPErwsfxDlaQTn6dbIFGklMNFRR==
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## userPKCS12

---

inetOrgPerson attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.216
  NAME 'userPKCS12'
  DESC 'inetOrgPerson attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.5
  X-ORIGIN 'inetOrgPerson Internet Draft' )
```

### Description

This attribute provides a format for the exchange of personal identity information. The attribute is to be stored and requested in binary form, as `userPKCS12;binary`. The attribute values are PFX PDUs stored as binary data.

### Syntax

Binary, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, RFC 2798 ( <a href="http://www.ietf.org/rfc/rfc2798.txt">http://www.ietf.org/rfc/rfc2798.txt</a> )

---

## userSMIMECertificate

inetOrgPerson attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.40
  NAME 'userSMIMECertificate'
  DESC 'inetOrgPerson attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.5
  X-ORIGIN 'inetOrgPerson Internet Draft' )
```

### Description

Used by Netscape Communicator for S/MIME. This attribute is to be stored and requested in the binary form, as `userSMIMECertificate;binary`.

### Syntax

Binary, multi-valued.

### Examples

```
userSMIMECertificate;binary:: AAAAAA==
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, RFC 2798 ( <a href="http://www.ietf.org/rfc/rfc2798.txt">http://www.ietf.org/rfc/rfc2798.txt</a> )

## vendorName

LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.4
  NAME 'vendorName'
  EQUALITY 1.3.6.1.4.1.1466.109.114.1
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  NO-USER-MODIFICATION
  USAGE dsaOperation
  X-ORIGIN 'RFC 3045' )
```

### Description

Represents the name of the LDAP server implementer. This attribute must not be used by client applications to gather information related to supported features of the LDAP implementation.

### Syntax

Directory String, single-valued.

### Usage

Operational attribute used by a Directory Server instance; returned in `ldapsearch` only when specifically requested.

The value of this attribute may only be modified by the server.

### Examples

```
vendorName: Oracle Corporation
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 3045 ( <a href="http://www.ietf.org/rfc/rfc3045.txt">http://www.ietf.org/rfc/rfc3045.txt</a> )

---

## vendorVersion

LDAP attribute type

### Synopsis

```
( 1.3.6.1.1.5
  NAME 'vendorVersion'
  EQUALITY 1.3.6.1.4.1.1466.109.114.1
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  SINGLE-VALUE
  NO-USER-MODIFICATION
  USAGE dsaOperation
  X-ORIGIN 'RFC 3045' )
```

### Description

Represents the version of the LDAP server implementation. This attribute must not be used by client applications to gather information related to supported features of the LDAP implementation.

### Syntax

Directory String, single-valued.

### Usage

Operational attribute used by a Directory Server instance; returned in `ldapsearch` only when specifically requested.

The value of this attribute may only be modified by the server.

### Examples

```
vendorVersion: v6
```

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 3045 ( <a href="http://www.ietf.org/rfc/rfc3045.txt">http://www.ietf.org/rfc/rfc3045.txt</a> )

## vlvBase

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.207
  NAME 'vlvBase'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.12
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Defines the base DN of a VLV search.

### Syntax

DN, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

---

## vlvEnabled

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.213
  NAME 'vlvEnabled'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Used by the server to signal whether the index is available or unavailable. When VLV indexes are created offline, new `vlvSearch` entries are enabled when the indexes are rebuilt. VLV indexes can also be created while the server is running in read-only mode. This attribute is read-only and single-valued.

### Syntax

Integer, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## vlvFilter

---

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.209
  NAME 'vlvFilter'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.26
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Defines the filter for a VLV search.

### Syntax

IA5 String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

---

## vlvScope

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.208
  NAME 'vlvScope'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Defines the scope of a VLV search.

### Syntax

Integer, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## vlvSort

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.210
  NAME 'vlvSort'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.15
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Defines the sort specification for a VLV search. Consists of a list of comma-delimited attribute names. A minus sign is used to denote a reverse sort. The example below will result in a sort by `uid`, then by reverse common name.

### Syntax

Directory String, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

---

## vlvUses

Sun ONE defined attribute type

### Synopsis

```
( 2.16.840.1.113730.3.1.219
  NAME 'vlvUses'
  DESC 'Sun ONE defined attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.27
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

This read-only attribute displays the number of times the VLV index was used. The value is reset when the server is restarted.

### Syntax

Integer, multi-valued.

### Usage

Attribute specific to this Directory Server instance and version of the schema.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## x121Address

---

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.24  
  NAME 'x121Address'  
  DESC 'Standard LDAP attribute type'  
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.26  
  X-ORIGIN 'RFC 2256' )
```

### Description

Defines the X.121 address of a person.

### Syntax

IA5 String, multi-valued.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## x500UniqueIdentifier

Standard LDAP attribute type

### Synopsis

```
( 2.5.4.45
  NAME 'x500UniqueIdentifier'
  DESC 'Standard LDAP attribute type'
  SYNTAX 1.3.6.1.4.1.1466.115.121.1.5
  X-ORIGIN 'RFC 2256' )
```

### Description

Reserved for future use. A binary method of identification useful for differentiating objects when a distinguished name has been reused.

### Syntax

Binary, multi-valued.

### Examples

x500UniqueIdentifier: 17B

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )



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---

# LDAP Schema Object Classes

This section describes object classes defined in the LDAP schema that Directory Server provides.

## Intro\_8Classes

introduction to LDAP schema object classes

### Description

This section describes object classes defined in the LDAP schema that Directory Server provides.

For an overview of LDAP schema provided by Directory Server, see [Intro\\_6Schema\(5DSSD\)](#).

### LIST OF OBJECT CLASSES

This reference manual section includes the following pages.

**[account\(5DSOC\)](#)**

Standard LDAP objectclass

**[alias\(5DSOC\)](#)**

Standard LDAP objectclass

**[applicationEntity\(5DSOC\)](#)**

Standard LDAP objectclass

**[bootableDevice\(5DSOC\)](#)**

Standard LDAP objectclass

**[changeLogEntry\(5DSOC\)](#)**

LDAP changelog objectclass

**[cosClassicDefinition\(5DSOC\)](#)**

Sun ONE defined objectclass

**[cosDefinition\(5DSOC\)](#)**

Sun ONE defined objectclass

**[cosIndirectDefinition\(5DSOC\)](#)**

Sun ONE defined objectclass

**[cosPointerDefinition\(5DSOC\)](#)**

Sun ONE defined objectclass

**[cosSuperDefinition\(5DSOC\)](#)**

Sun ONE defined objectclass

**[costemplate\(5DSOC\)](#)**

Sun ONE defined objectclass

**[country\(5DSOC\)](#)**

Standard LDAP objectclass

**[dcObject\(5DSOC\)](#)**

Standard LDAP objectclass

**[device\(5DSOC\)](#)**

Standard LDAP objectclass

---

**document(5DSOC)**  
Standard LDAP objectclass

**documentSeries(5DSOC)**  
Standard LDAP objectclass

**domain(5DSOC)**  
Standard LDAP objectclass

**domainRelatedObject(5DSOC)**  
Standard LDAP objectclass

**dsa(5DSOC)**  
Standard LDAP objectclass

**dsSaslConfig(5DSOC)**  
Sun ONE defined objectclass

**extensibleObject(5DSOC)**  
LDAPv3 extensible object

**friendlyCountry(5DSOC)**  
Standard LDAP objectclass

**groupOfCertificates(5DSOC)**  
Sun ONE defined objectclass

**groupOfNames(5DSOC)**  
Standard LDAP objectclass

**groupOfUniqueNames(5DSOC)**  
Standard LDAP objectclass

**groupOfURLs(5DSOC)**  
Sun ONE defined objectclass

**ieee802Device(5DSOC)**  
Standard LDAP objectclass

**inetOrgPerson(5DSOC)**  
Internet extended organizational person objectclass

**ipHost(5DSOC)**  
Standard LDAP objectclass

**ipNetwork(5DSOC)**  
Standard LDAP objectclass

**ipProtocol(5DSOC)**  
Standard LDAP objectclass

**ipService(5DSOC)**  
Standard LDAP objectclass

**javaContainer(5DSOC)**  
Container for a Java object

**javaMarshaledObject(5DSOC)**

Java marshalled object

**javaNamingReference(5DSOC)**

JNDI reference

**javaObject(5DSOC)**

Java object representation

**javaSerializedObject(5DSOC)**

Java serialized object

**labeledURIObject(5DSOC)**

object that contains the URI attribute type

**ldapSubEntry(5DSOC)**

LDAP Subentry class, version 1

**locality\_5dsoc(5DSOC)**

Standard LDAP attribute type

**newPilotPerson(5DSOC)**

Pilot objectclass

**nisMap(5DSOC)**

Standard LDAP objectclass

**nisNetgroup(5DSOC)**

Standard LDAP objectclass

**nisObject(5DSOC)**

Standard LDAP objectclass

**nsComplexRoleDefinition(5DSOC)**

Sun ONE defined objectclass

**nsFilteredRoleDefinition(5DSOC)**

Sun ONE defined objectclass

**nsLicenseUser(5DSOC)**

Sun ONE defined objectclass

**nsManagedRoleDefinition(5DSOC)**

Sun ONE defined objectclass

**nsNestedRoleDefinition(5DSOC)**

Sun ONE defined objectclass

**nsRoleDefinition(5DSOC)**

Sun ONE defined objectclass

**nsSimpleRoleDefinition(5DSOC)**

Sun ONE defined objectclass

**oncRpc(5DSOC)**

Standard LDAP objectclass

---

**organization(5DSOC)**  
Standard LDAP objectclass

**organizationalPerson(5DSOC)**  
Standard LDAP objectclass

**organizationalRole(5DSOC)**  
Standard LDAP objectclass

**organizationalUnit(5DSOC)**  
Standard LDAP objectclass

**passwordPolicy(5DSOC)**  
Sun ONE defined password policy objectclass

**person(5DSOC)**  
Standard LDAP objectclass

**pilotObject(5DSOC)**  
Standard LDAP objectclass

**pilotOrganization(5DSOC)**  
Standard LDAP objectclass

**posixAccount(5DSOC)**  
Standard LDAP objectclass

**posixGroup(5DSOC)**  
Standard LDAP objectclass

**pwdPolicy(5DSOC)**  
Password Policy objectclass

**referral(5DSOC)**  
Standard LDAP referral objectclass

**residentialPerson(5DSOC)**  
Standard LDAP objectclass

**RFC822localPart(5DSOC)**  
Pilot objectclass

**room(5DSOC)**  
Standard LDAP objectclass

**shadowAccount(5DSOC)**  
Standard LDAP objectclass

**simpleSecurityObject(5DSOC)**  
Standard LDAP objectclass

**strongAuthenticationUser(5DSOC)**  
Standard LDAP objectclass

**subschema(5DSOC)**  
Standard LDAP objectclass

**sunPwPolicy(5DSOC)**

Sun Directory Server Password Policy objectclass

**top(5DSOC)**

Standard LDAP objectclass

---

## account

Standard LDAP objectclass

### Synopsis

```
( 0.9.2342.19200300.100.4.5
  NAME 'account'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST uid
  MAY ( description $
        host $
        l $
        o $
        ou $
        seeAlso )
  X-ORIGIN 'RFC 1274' )
```

### Description

Used to define entries representing computer accounts.

### Origin

This object class is defined by RFC 1274  
(<http://www.ietf.org/rfc/rfc1274.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[uid\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[description\\_5dsat\(5DSAT\)](#), [host\(5DSAT\)](#), [l\(5DSAT\)](#), [o\(5DSAT\)](#), [ou\(5DSAT\)](#),  
[seeAlso\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## alias

Standard LDAP objectclass

### Synopsis

```
( 2.5.6.1
  NAME 'alias'
  DESC 'Standard LDAP objectclass'
  SUP top
  ABSTRACT
  MUST aliasedObjectName
  X-ORIGIN 'RFC 2256' )
```

### Description

Abstract object class, used to point to other entries in the directory tree.  
Note that alias dereferencing is not supported in Directory Server.

### Origin

This object class is defined by RFC 2256  
(<http://www.ietf.org/rfc/rfc2256.txt>).

### Type

Abstract object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[aliasedObjectName\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class have no optional attribute types other than those inherited from the superior(s).

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## applicationEntity

Standard LDAP objectclass

### Synopsis

```
( 2.5.6.12
  NAME 'applicationEntity'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST ( presentationAddress $
        cn )
  MAY ( description $
        l $
        o $
        ou $
        seeAlso $
        supportedApplicationContext )
  X-ORIGIN 'RFC 2256' )
```

### Description

Used to describe entries representing applications.

### Origin

This object class is defined by RFC 2256  
(<http://www.ietf.org/rfc/rfc2256.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#), [presentationAddress\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[description\\_5dsat\(5DSAT\)](#), [l\(5DSAT\)](#), [o\(5DSAT\)](#), [ou\(5DSAT\)](#), [seeAlso\(5DSAT\)](#), [supportedApplicationContext\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

---

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## bootableDevice

Standard LDAP objectclass

### Synopsis

```
( 1.3.6.1.1.1.2.12
  NAME 'bootableDevice'
  DESC 'Standard LDAP objectclass'
  SUP top
  AUXILIARY
  MAY ( bootFile $
       bootParameter $
       cn )
  X-ORIGIN 'RFC 2307' )
```

### Description

Auxiliary object class that specifies a device with boot parameters.

### Origin

This object class is defined by RFC 2307  
(<http://www.ietf.org/rfc/rfc2307.txt>).

### Type

Auxiliary object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[bootFile\(5DSAT\)](#), [bootParameter\(5DSAT\)](#), [cn\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

---

## changeLogEntry

LDAP changelog objectclass

### Synopsis

```
( 2.16.840.1.113730.3.2.1
  NAME 'changeLogEntry'
  DESC 'LDAP changelog objectclass'
  SUP top
  STRUCTURAL
  MUST ( targetDn $
        changeTime $
        changeNumber $
        changeType )
  MAY ( changes $
        newRdn $
        deleteOldRdn $
        newSuperior )
  X-ORIGIN 'Changelog Internet Draft' )
```

### Description

Internal object class, used to represent changes made to Directory Server. You can configure Directory Server to maintain a change log that is compatible with the change log implemented in earlier versions of Directory Server by enabling the Retro Changelog plug-in. Each entry in the change log has the object class `changeLogEntry`.

### Origin

This object class is defined by Changelog Internet Draft.

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[changeNumber\(5DSAT\)](#), [changeTime\(5DSAT\)](#), [changeType\(5DSAT\)](#),  
[targetDn\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[changeHasReplFixupOp\(5DSAT\)](#), [changeIsReplFixupOp\(5DSAT\)](#),  
[changes\(5DSAT\)](#), [deleteOldRdn\(5DSAT\)](#), [deletedEntryAttrs\(5DSAT\)](#),

`newRdn(5DSAT), newSuperior(5DSAT), replicaIdentifier(5DSAT), replicationCSN(5DSAT), targetUniqueId(5DSAT)`

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	External: IETF, Changelog Internet Draft

---

## cosClassicDefinition

Sun ONE defined objectclass

### Synopsis

```
( 2.16.840.1.113730.3.2.100
  NAME 'cosClassicDefinition'
  DESC 'Sun ONE defined objectclass'
  SUP cosSuperDefinition
  STRUCTURAL
  MAY ( costemplatedn $
        cosspecifier )
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Identifies the template entry using both the template entry's DN (as specified in the `cosTemplateDn` attribute) and the value of one of the target entry's attributes (as specified in the `cosSpecifier` attribute).

### Origin

This object class is defined by Directory Server.

### Type

Structural object class

### Superior

[cosSuperDefinition\(5DSOC\)](#)

### Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[cosspecifier\(5DSAT\)](#), [costemplatedn\(5DSAT\)](#)

### Usage

Configuration object specific to this Directory Server instance, not replicated.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

---

## cosDefinition

Sun ONE defined objectclass

### Synopsis

```
( 2.16.840.1.113730.3.2.84
  NAME 'cosDefinition'
  DESC 'Sun ONE defined objectclass'
  SUP top
  STRUCTURAL
  MAY ( costargettree $
    costemplatedn $
    cosspecifier $
    cosAttribute $
    aci $
    cn $
    uid )
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Defines the Class of Service you are using. This object class is supported for compatibility with an earlier version of the Directory Server CoS Plugin. Its use is deprecated.

### Origin

This object class is defined by Directory Server.

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[aci\(5DSAT\)](#), [cn\(5DSAT\)](#), [cosAttribute\(5DSAT\)](#), [cosspecifier\(5DSAT\)](#), [costargettree\(5DSAT\)](#), [costemplatedn\(5DSAT\)](#), [uid\(5DSAT\)](#)

### Usage

Configuration object specific to this Directory Server instance, not replicated.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

---

## cosIndirectDefinition

Sun ONE defined objectclass

### Synopsis

```
( 2.16.840.1.113730.3.2.102
  NAME 'cosIndirectDefinition'
  DESC 'Sun ONE defined objectclass'
  SUP cosSuperDefinition
  STRUCTURAL
  MAY cosIndirectSpecifier
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Identifies the template entry using the value of one of the target entry's attributes. The attribute of the target entry is specified in the `cosIndirectSpecifier` attribute.

### Origin

This object class is defined by Sun Directory Server.

### Type

Structural object class

### Superior

[cosSuperDefinition\(5DSOC\)](#)

### Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[cosIndirectSpecifier\(5DSAT\)](#)

### Usage

Configuration object specific to this Directory Server instance, not replicated.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## cosPointerDefinition

Sun ONE defined objectclass

### Synopsis

```
( 2.16.840.1.113730.3.2.101
  NAME 'cosPointerDefinition'
  DESC 'Sun ONE defined objectclass'
  SUP cosSuperDefinition
  STRUCTURAL
  MAY costemplatedn
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Identifies the template entry associated with the CoS definition using the template entry's DN value. The DN of the template entry is specified in the `costemplatedn` attribute.

### Origin

This object class is defined by Directory Server.

### Type

Structural object class

### Superior

[cosSuperDefinition\(5DSOC\)](#)

### Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[costemplatedn\(5DSAT\)](#)

### Usage

Configuration object specific to this Directory Server instance, not replicated.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Stability Level	Evolving

## cosSuperDefinition

Sun ONE defined objectclass

### Synopsis

```
( 2.16.840.1.113730.3.2.99
  NAME 'cosSuperDefinition'
  DESC 'Sun ONE defined objectclass'
  SUP ldapSubEntry
  STRUCTURAL
  MUST cosAttribute
  MAY description
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

All CoS definition object classes inherit from the `cosSuperDefinition` object class.

### Origin

This object class is defined by Directory Server.

### Type

Structural object class

### Superior

[ldapSubEntry\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cosAttribute\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[description\\_5dsat\(5DSAT\)](#)

### Usage

Configuration object specific to this Directory Server instance, not replicated.

### Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Stability Level	Evolving

## costemplate

---

Sun ONE defined objectclass

### Synopsis

```
( 2.16.840.1.113730.3.2.128
  NAME 'costemplate'
  DESC 'Sun ONE defined objectclass'
  SUP top
  STRUCTURAL
  MAY ( cn $
        cosPriority )
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Contains a list of the shared attribute values.

### Origin

This object class is defined by Directory Server.

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#), [cosPriority\(5DSAT\)](#)

### Usage

Configuration object specific to this Directory Server instance, not replicated.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

---

## country

Standard LDAP objectclass

### Synopsis

```
( 2.5.6.2
  NAME 'country'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST c
  MAY ( searchGuide $
        description )
  X-ORIGIN 'RFC 2256' )
```

### Description

Contains the two-character code representing country names, as defined in ISO-3166.

### Origin

This object class is defined by RFC 2256  
(<http://www.ietf.org/rfc/rfc2256.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[c\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[description\\_5dsat\(5DSAT\)](#), [searchGuide\(5DSAT\)](#)

### Examples

```
countryName: IE
```

or

```
c: IE
```

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## dcObject

Standard LDAP objectclass

### Synopsis

```
( 1.3.6.1.4.1.1466.344
  NAME 'dcObject'
  DESC 'Standard LDAP objectclass'
  SUP top
  AUXILIARY
  MUST dc
  X-ORIGIN 'RFC 2247' )
```

### Description

This auxiliary object class defines a domain component, such as a network domain that is associated with the entry. This object class is defined as auxiliary because it is commonly used in combination with another object class, such as `organization`, `organizationUnit`, or `locality`.

### Origin

This object class is defined by RFC 2247 (<http://www.ietf.org/rfc/rfc2247.txt>).

### Type

Auxiliary object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[dc\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class have no optional attribute types other than those inherited from the superior(s).

### Examples

```
dn: ou=Engineering,dc=example,dc=com
objectClass: top
objectClass: organizationalUnit
objectClass: dcObject
ou: Engineering
dc: example
```

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2247 ( <a href="http://www.ietf.org/rfc/rfc2247.txt">http://www.ietf.org/rfc/rfc2247.txt</a> )

---

## device

Standard LDAP objectclass

### Synopsis

```
( 2.5.6.14
  NAME 'device'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST cn
  MAY ( description $
        1 $
        o $
        ou $
        owner $
        seeAlso $
        serialNumber )
  X-ORIGIN 'RFC 2256' )
```

### Description

Used to store information about network devices, such as printers, in the directory.

### Origin

This object class is defined by RFC 2256  
(<http://www.ietf.org/rfc/rfc2256.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[description\\_5dsat\(5DSAT\)](#), [1\(5DSAT\)](#), [o\(5DSAT\)](#), [ou\(5DSAT\)](#), [owner\(5DSAT\)](#),  
[seeAlso\(5DSAT\)](#), [serialNumber\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## document

Standard LDAP objectclass

### Synopsis

```
( 0.9.2342.19200300.100.4.6
  NAME 'document'
  DESC 'Standard LDAP objectclass'
  SUP pilotObject
  STRUCTURAL
  MUST documentIdentifier
  MAY ( abstract $
    authorCn $
    authorSn $
    cn $
    description $
    documentAuthor $
    documentLocation $
    documentPublisher $
    documentStore $
    documentTitle $
    documentVersion $
    keyWords $
    l $
    o $
    obsoletedByDocument $
    obsoletesDocument $
    ou $
    seeAlso $
    subject $
    updatedByDocument $
    updatesDocument )
  X-ORIGIN 'RFC 1274' )
```

### Description

Used to define entries that represent documents in the directory.

### Origin

This object class is defined by RFC 1274  
(<http://www.ietf.org/rfc/rfc1274.txt>).

### Type

Structural object class

### Superior

[pilotObject\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[documentIdentifier\(5DSAT\)](#)

## Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[abstract\(5DSAT\)](#), [authorCn\(5DSAT\)](#), [authorSn\(5DSAT\)](#), [cn\(5DSAT\)](#),  
[description\\_5dsat\(5DSAT\)](#), [documentAuthor\(5DSAT\)](#),  
[documentLocation\(5DSAT\)](#), [documentPublisher\(5DSAT\)](#),  
[documentStore\(5DSAT\)](#), [documentTitle\(5DSAT\)](#), [documentVersion\(5DSAT\)](#),  
[keyWords\(5DSAT\)](#), [l\(5DSAT\)](#), [o\(5DSAT\)](#), [obsoletedByDocument\(5DSAT\)](#),  
[obsoletesDocument\(5DSAT\)](#), [ou\(5DSAT\)](#), [seeAlso\(5DSAT\)](#), [subject\(5DSAT\)](#),  
[updatedByDocument\(5DSAT\)](#), [updatesDocument\(5DSAT\)](#)

## Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## documentSeries

Standard LDAP objectclass

### Synopsis

```
( 0.9.2342.19200300.100.4.9
  NAME 'documentSeries'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST cn
  MAY ( description $
        1 $
        o $
        ou $
        seeAlso $
        telephoneNumber )
  X-ORIGIN 'RFC 1274' )
```

### Description

Used to define an entry that represents a series of documents.

### Origin

This object class is defined by RFC 1274  
(<http://www.ietf.org/rfc/rfc1274.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[description\\_5dsat\(5DSAT\)](#), [1\(5DSAT\)](#), [o\(5DSAT\)](#), [ou\(5DSAT\)](#), [seeAlso\(5DSAT\)](#), [telephoneNumber\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## domain

Standard LDAP objectclass

### Synopsis

```
( 0.9.2342.19200300.100.4.13
  NAME 'domain'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST dc
  MAY ( associatedName $
        businessCategory $
        description $
        destinationIndicator $
        facsimileTelephoneNumber $
        internationaliSDNNumber $
        l $
        o $
        physicalDeliveryOfficeName $
        postOfficeBox $
        postalAddress $
        postalCode $
        preferredDeliveryMethod $
        registeredAddress $
        searchGuide $
        seeAlso $
        st $
        street $
        telephoneNumber $
        teletexTerminalIdentifier $
        telexNumber $
        userPassword $
        x121Address )
  X-ORIGIN 'RFC 2247' )
```

### Description

Used to represent Internet Domains (for example, *example.com*). The `domainComponent` attribute should be used for naming entries of this object class.

The `domain` object class can only be used with an entry that does not correspond to an organization, organizational unit, or other type of object for which an object class has been defined. The `domain` object class requires that the `domainComponent` attribute be present, and allows several other attributes to be present in the entry. These allowed attributes are used to describe the object represented by the domain, and may also be useful when searching.

### Origin

This object class is defined by RFC 2247 (<http://www.ietf.org/rfc/rfc2247.txt>).

**Type**

Structural object class

**Superior**[top\(5DSOC\)](#)**Required Attributes**

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[dc\(5DSAT\)](#)**Allowed Attributes**

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[associatedName\(5DSAT\)](#), [businessCategory\(5DSAT\)](#), [description\\_5dsat\(5DSAT\)](#), [destinationIndicator\(5DSAT\)](#), [facsimileTelephoneNumber\(5DSAT\)](#), [internationaliSDNNNumber\(5DSAT\)](#), [l\(5DSAT\)](#), [o\(5DSAT\)](#), [physicalDeliveryOfficeName\(5DSAT\)](#), [postOfficeBox\(5DSAT\)](#), [postalAddress\(5DSAT\)](#), [postalCode\(5DSAT\)](#), [preferredDeliveryMethod\(5DSAT\)](#), [registeredAddress\(5DSAT\)](#), [searchGuide\(5DSAT\)](#), [seeAlso\(5DSAT\)](#), [st\(5DSAT\)](#), [street\(5DSAT\)](#), [telephoneNumber\(5DSAT\)](#), [teletexTerminalIdentifier\(5DSAT\)](#), [telexNumber\(5DSAT\)](#), [userPassword\(5DSAT\)](#), [x121Address\(5DSAT\)](#)

**Attributes**

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2247 ( <a href="http://www.ietf.org/rfc/rfc2247.txt">http://www.ietf.org/rfc/rfc2247.txt</a> )

---

## domainRelatedObject

Standard LDAP objectclass

### Synopsis

```
( 0.9.2342.19200300.100.4.17
  NAME 'domainRelatedObject'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST associatedDomain
  X-ORIGIN 'RFC 1274' )
```

### Description

Used to define entries that represent DNS/NRS domains that are equivalent to an X.500 domain, for example, an organization or organizational unit.

### Origin

This object class is defined by RFC 1274  
(<http://www.ietf.org/rfc/rfc1274.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[associatedDomain\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class have no optional attribute types other than those inherited from the superior(s).

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

## dSA

Standard LDAP objectclass

### Synopsis

```
( 2.5.6.13
  NAME 'dSA'
  DESC 'Standard LDAP objectclass'
  SUP applicationEntity
  STRUCTURAL
  MAY knowledgeInformation
  X-ORIGIN 'RFC 2256' )
```

### Description

Used to define entries representing Directory Server Agents.

### Origin

This object class is defined by RFC 2256  
(<http://www.ietf.org/rfc/rfc2256.txt>).

### Type

Structural object class

### Superior

[applicationEntity\(5DSOC\)](#)

### Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[knowledgeInformation\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## dsSaslConfig

Sun ONE defined objectclass

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.2.116
  NAME 'dsSaslConfig'
  DESC 'Sun ONE defined objectclass'
  SUP top
  STRUCTURAL
  MUST ( dsSaslPluginsEnable $
         dsSaslPluginsPath )
  MAY ( dsSaslMinSSF $
        dsSaslMaxSSF $
        dsSaslMaxBufSize )
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Used as the object class for the SASL configuration entry. The `dse.ldif` entry governing SASL configuration has DN `cn=SASL, cn=security, cn=config`.

### Origin

This object class is defined by Directory Server.

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[dsSaslPluginsEnable\(5DSAT\)](#), [dsSaslPluginsPath\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[dsSaslMaxBufSize\(5DSAT\)](#), [dsSaslMaxSSF\(5DSAT\)](#), [dsSaslMinSSF\(5DSAT\)](#)

### Usage

Configuration object specific to this Directory Server instance, not replicated.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

---

## extensibleObject

LDAPv3 extensible object

### Synopsis

```
( 1.3.6.1.4.1.1466.101.120.111
  NAME 'extensibleObject'
  DESC 'LDAPv3 extensible object'
  SUP top
  AUXILIARY
  X-ORIGIN 'RFC 2252' )
```

### Description

Auxiliary object class which, when present in an entry, permits the entry to optionally hold any attribute. The allowed attribute list of this class is implicitly the set of all attributes known to the server.

In general it is better to use a more restrictive object class when designing schema for your deployment, as the server can do very little checking for `extensibleObject`. In particular, a good practice for new applications is to add specific auxiliary object classes where specific new attribute sets are needed, rather than to leave everything wide open and undecided with `extensibleObject`.

### Origin

This object class is defined by RFC 2252  
(<http://www.ietf.org/rfc/rfc2252.txt>).

### Type

Auxiliary object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

### Allowed Attributes

Entries of this object class have no optional attribute types other than those inherited from the superior(s).

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Stability Level	Standard: IETF, RFC 2252 ( <a href="http://www.ietf.org/rfc/rfc2252.txt">http://www.ietf.org/rfc/rfc2252.txt</a> )

---

## friendlyCountry

Standard LDAP objectclass

### Synopsis

```
( 0.9.2342.19200300.100.4.18
  NAME 'friendlyCountry'
  DESC 'Standard LDAP objectclass'
  SUP country
  STRUCTURAL
  MUST co
  X-ORIGIN 'RFC 1274' )
```

### Description

Used to define country entries in the directory tree. This object class is used to allow more user-friendly country names than those allowed by the country object class.

### Origin

This object class is defined by RFC 1274  
(<http://www.ietf.org/rfc/rfc1274.txt>).

### Type

Structural object class

### Superior

[country\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[co\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class have no optional attribute types other than those inherited from the superior(s).

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

## groupOfCertificates

Sun ONE defined objectclass

### Synopsis

```
( 2.16.840.1.113730.3.2.31
  NAME 'groupOfCertificates'
  DESC 'Sun ONE defined objectclass'
  SUP top
  STRUCTURAL
  MUST cn
  MAY ( memberCertificateDescription $
        businessCategory $
        description $
        o $
        ou $
        owner $
        seeAlso )
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Used to describe a set of X.509 certificates. Any certificate that matches one of the memberCertificateDescription values is considered a member of the group.

### Origin

This object class is defined by Directory Server.

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[businessCategory\(5DSAT\)](#), [description\\_5dsat\(5DSAT\)](#),  
[memberCertificateDescription\(5DSAT\)](#), [o\(5DSAT\)](#), [ou\(5DSAT\)](#),  
[owner\(5DSAT\)](#), [seeAlso\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## groupOfNames

Standard LDAP objectclass

### Synopsis

```
( 2.5.6.9
  NAME 'groupOfNames'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST cn
  MAY ( member $
        businessCategory $
        description $
        o $
        ou $
        owner $
        seeAlso )
  X-ORIGIN 'RFC 2256' )
```

### Description

Used to define entries for a group of names.

### Origin

This object class is defined by RFC 2256 (<http://www.ietf.org/rfc/rfc2256.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[businessCategory\(5DSAT\)](#), [description\\_5dsat\(5DSAT\)](#), [member\(5DSAT\)](#), [o\(5DSAT\)](#), [ou\(5DSAT\)](#), [owner\(5DSAT\)](#), [seeAlso\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## groupOfUniqueNames

Standard LDAP objectclass

### Synopsis

```
( 2.5.6.17
  NAME 'groupOfUniqueNames'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST cn
  MAY ( uniqueMember $
        businessCategory $
        description $
        o $
        ou $
        owner $
        seeAlso )
  X-ORIGIN 'RFC 2256' )
```

### Description

Used to define entries for a group of unique names.

### Origin

This object class is defined by RFC 2256  
(<http://www.ietf.org/rfc/rfc2256.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[businessCategory\(5DSAT\)](#), [description\\_5dsat\(5DSAT\)](#), [o\(5DSAT\)](#),  
[ou\(5DSAT\)](#), [owner\(5DSAT\)](#), [seeAlso\(5DSAT\)](#), [uniqueMember\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## groupOfURLs

Sun ONE defined objectclass

### Synopsis

```
( 2.16.840.1.113730.3.2.33
  NAME 'groupOfURLs'
  DESC 'Sun ONE defined objectclass'
  SUP top
  STRUCTURAL
  MUST cn
  MAY ( memberURL $
        businessCategory $
        description $
        o $
        ou $
        owner $
        seeAlso )
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

An auxiliary object class of `groupOfUniqueNames` or `groupOfNames`. The group consists of a list of labeled URLs.

### Origin

This object class is defined by Directory Server.

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[businessCategory\(5DSAT\)](#), [description\\_5dsat\(5DSAT\)](#), [memberURL\(5DSAT\)](#), [o\(5DSAT\)](#), [ou\(5DSAT\)](#), [owner\(5DSAT\)](#), [seeAlso\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## ieee802Device

Standard LDAP objectclass

### Synopsis

```
( 1.3.6.1.1.1.2.11
  NAME 'ieee802Device'
  DESC 'Standard LDAP objectclass'
  SUP top
  AUXILIARY
  MAY ( macAddress $
        cn )
  X-ORIGIN 'RFC 2307' )
```

### Description

Auxiliary object class, specifying a device with a MAC address.

### Origin

This object class is defined by RFC 2307  
(<http://www.ietf.org/rfc/rfc2307.txt>).

### Type

Auxiliary object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#), [macAddress\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

## inetOrgPerson

Internet extended organizational person objectclass

### Synopsis

```
( 2.16.840.1.113730.3.2.2
  NAME 'inetOrgPerson'
  DESC 'Internet extended organizational person objectclass'
  SUP organizationalPerson
  STRUCTURAL
  MAY ( audio $
        businessCategory $
        carLicense $
        departmentNumber $
        displayName $
        employeeType $
        employeeNumber $
        givenName $
        homePhone $
        homePostalAddress $
        initials $
        jpegPhoto $
        labeledUri $
        manager $
        mobile $
        pager $
        photo $
        preferredLanguage $
        mail $
        o $
        roomNumber $
        secretary $
        uid $
        x500UniqueIdentifier $
        userCertificate $
        userSMIMECertificate $
        userPKCS12 )
  X-ORIGIN 'inetOrgPerson Internet Draft' )
```

### Description

Used to define entries representing people in an organization's enterprise network.

### Origin

This object class is defined by RFC 2798  
(<http://www.ietf.org/rfc/rfc2798.txt>).

### Type

Structural object class

### Superior

[organizationalPerson\(5DSOC\)](#)

## Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

## Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

`audio(5DSAT)`, `businessCategory(5DSAT)`, `carLicense(5DSAT)`,  
`departmentNumber(5DSAT)`, `displayName(5DSAT)`, `employeeNumber(5DSAT)`,  
`employeeType(5DSAT)`, `givenName(5DSAT)`, `homePhone(5DSAT)`,  
`homePostalAddress(5DSAT)`, `initials(5DSAT)`, `jpegPhoto(5DSAT)`,  
`labeledUri(5DSAT)`, `mail(5DSAT)`, `manager(5DSAT)`, `mobile(5DSAT)`, `o(5DSAT)`,  
`pager(5DSAT)`, `photo(5DSAT)`, `preferredLanguage(5DSAT)`,  
`roomNumber(5DSAT)`, `secretary(5DSAT)`, `uid(5DSAT)`,  
`userCertificate(5DSAT)`, `userPKCS12(5DSAT)`,  
`userSMIMECertificate(5DSAT)`, `x500UniqueIdentifier(5DSAT)`

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, RFC 2798 ( <a href="http://www.ietf.org/rfc/rfc2798.txt">http://www.ietf.org/rfc/rfc2798.txt</a> )

## ipHost

Standard LDAP objectclass

### Synopsis

```
( 1.3.6.1.1.1.2.6
  NAME 'ipHost'
  DESC 'Standard LDAP objectclass'
  SUP top
  AUXILIARY
  MUST ( ipHostNumber $
        cn )
  MAY ( manager $
        description $
        1 )
  X-ORIGIN 'RFC 2307' )
```

### Description

Auxiliary object class, specifying an abstraction of a host, an IP device. The distinguished value of the cn attribute denotes the canonical name of the host.

### Origin

This object class is defined by RFC 2307 (<http://www.ietf.org/rfc/rfc2307.txt>).

### Type

Auxiliary object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#), [ipHostNumber\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[description\\_5dsat\(5DSAT\)](#), [1\(5DSAT\)](#), [manager\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

---

## ipNetwork

Standard LDAP objectclass

### Synopsis

```
( 1.3.6.1.1.1.2.7
  NAME 'ipNetwork'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST ( ipNetworkNumber $
        cn )
  MAY ( ipNetmaskNumber $
        manager $
        1 $
        description )
  X-ORIGIN 'RFC 2307' )
```

### Description

Auxiliary object class, specifying an abstraction of a host, an IP device. The distinguished value of the cn attribute denotes the canonical name of the host.

### Origin

This object class is defined by RFC 2307  
(<http://www.ietf.org/rfc/rfc2307.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#), [ipNetworkNumber\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[description\\_5dsat\(5DSAT\)](#), [ipNetmaskNumber\(5DSAT\)](#), [1\(5DSAT\)](#),  
[manager\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

---

## ipProtocol

Standard LDAP objectclass

### Synopsis

```
( 1.3.6.1.1.1.2.4
  NAME 'ipProtocol'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST ( cn $
         ipProtocolNumber )
  MAY description
  X-ORIGIN 'RFC 2307' )
```

### Description

Abstraction of an IP protocol. This object class maps a protocol number to one or more names. The distinguished value of the cn attribute denotes the protocol's canonical name.

### Origin

This object class is defined by RFC 2307  
(<http://www.ietf.org/rfc/rfc2307.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#), [ipProtocolNumber\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[description\\_5dsat\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

---

## ipService

Standard LDAP objectclass

### Synopsis

```
( 1.3.6.1.1.1.2.3
  NAME 'ipService'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST ( cn $
        ipServicePort $
        ipServiceProtocol )
  MAY description
  X-ORIGIN 'RFC 2307' )
```

### Description

Abstraction of an Internet Protocol service. This object class maps an IP port and protocol (such as TCP or UDP) to one or more names. The distinguished value of the cn attribute denotes the service's canonical name.

### Origin

This object class is defined by RFC 2307 (<http://www.ietf.org/rfc/rfc2307.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#), [ipServicePort\(5DSAT\)](#), [ipServiceProtocol\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[description\\_5dsat\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

---

## javaContainer

Container for a Java object

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.4.2.1
  NAME 'javaContainer'
  DESC 'Container for a Java object'
  SUP top
  STRUCTURAL
  MUST cn
  X-ORIGIN 'RFC 2713' )
```

### Description

Represents a container for a Java object.

### Origin

This object class is defined by RFC 2713  
(<http://www.ietf.org/rfc/rfc2713.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class have no optional attribute types other than those inherited from the superior(s).

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2713 ( <a href="http://www.ietf.org/rfc/rfc2713.txt">http://www.ietf.org/rfc/rfc2713.txt</a> )

## javaMarshaledObject

Java marshalled object

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.4.2.8
  NAME 'javaMarshaledObject'
  DESC 'Java marshalled object'
  SUP javaObject
  AUXILIARY
  MUST javaSerializedData
  X-ORIGIN 'RFC 2713' )
```

### Description

Auxiliary object class that represents a Java marshalled object. It must be mixed with a structural object class.

### Origin

This object class is defined by RFC 2713  
(<http://www.ietf.org/rfc/rfc2713.txt>).

### Type

Auxiliary object class

### Superior

[javaObject\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[javaSerializedData\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class have no optional attribute types other than those inherited from the superior(s).

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2713 ( <a href="http://www.ietf.org/rfc/rfc2713.txt">http://www.ietf.org/rfc/rfc2713.txt</a> )

---

## javaNamingReference

JNDI reference

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.4.2.7
  NAME 'javaNamingReference'
  DESC 'JNDI reference'
  SUP javaObject
  AUXILIARY
  MAY ( javaReferenceAddress $
        javaFactory )
  X-ORIGIN 'RFC 2713' )
```

### Description

Auxiliary object class that represents a JNDI reference. It must be mixed in with a structural object class.

### Origin

This object class is defined by RFC 2713  
(<http://www.ietf.org/rfc/rfc2713.txt>).

### Type

Auxiliary object class

### Superior

[javaObject\(5DSOC\)](#)

### Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[javaFactory\(5DSAT\)](#), [javaReferenceAddress\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2713 ( <a href="http://www.ietf.org/rfc/rfc2713.txt">http://www.ietf.org/rfc/rfc2713.txt</a> )

## javaObject

Java object representation

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.4.2.4
  NAME 'javaObject'
  DESC 'Java object representation'
  SUP top
  ABSTRACT
  MUST javaClassName
  MAY ( javaClassNames $
        javaCodebase $
        javaDoc $
        description )
  X-ORIGIN 'RFC 2713' )
```

### Description

Abstract object class that represents a Java object.

### Origin

This object class is defined by RFC 2713  
(<http://www.ietf.org/rfc/rfc2713.txt>).

### Type

Abstract object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[javaClassName\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[description\\_5dsat\(5DSAT\)](#), [javaClassNames\(5DSAT\)](#), [javaCodebase\(5DSAT\)](#),  
[javaDoc\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7

---

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Stability Level	Standard: IETF, RFC 2713 ( <a href="http://www.ietf.org/rfc/rfc2713.txt">http://www.ietf.org/rfc/rfc2713.txt</a> )

---

## javaSerializedObject

Java serialized object

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.4.2.5
  NAME 'javaSerializedObject'
  DESC 'Java serialized object'
  SUP javaObject
  AUXILIARY
  MUST javaSerializedData
  X-ORIGIN 'RFC 2713' )
```

### Description

Auxiliary object class that represents a Java serialized object. It must be mixed in with a structural object class.

### Origin

This object class is defined by RFC 2713 (<http://www.ietf.org/rfc/rfc2713.txt>).

### Type

Auxiliary object class

### Superior

[javaObject\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[javaSerializedData\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class have no optional attribute types other than those inherited from the superior(s).

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2713 ( <a href="http://www.ietf.org/rfc/rfc2713.txt">http://www.ietf.org/rfc/rfc2713.txt</a> )

---

## labeledURIObject

object that contains the URI attribute type

### Synopsis

```
( 1.3.6.1.4.1.250.3.15
  NAME 'labeledURIObject'
  DESC 'object that contains the URI attribute type'
  SUP top
  AUXILIARY
  MAY labeledUri
  X-ORIGIN 'RFC 2079' )
```

### Description

Auxiliary object class that can be added to existing directory objects to allow for inclusion of URI values. This approach does not preclude including the `labeledURI` attribute type directly in other object classes as appropriate.

### Origin

This object class is defined by RFC 2079  
(<http://www.ietf.org/rfc/rfc2079.txt>).

### Type

Auxiliary object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[labeledUri\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2079 ( <a href="http://www.ietf.org/rfc/rfc2079.txt">http://www.ietf.org/rfc/rfc2079.txt</a> )

## ldapSubEntry

LDAP Subentry class, version 1

### Synopsis

```
( 2.16.840.1.113719.2.142.6.1.1
  NAME 'ldapSubEntry'
  DESC 'LDAP Subentry class, version 1'
  SUP top
  STRUCTURAL
  MAY cn
  X-DS-USE 'internal'
  X-ORIGIN 'LDAP Subentry Internet Draft' )
```

### Description

This structural object class may be used to indicate operations and management related entries in the directory, called LDAP Subentries.

### Origin

This object class is defined by LDAP Subentry Internet Draft.

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#)

### Usage

Configuration object specific to this Directory Server instance, not replicated.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, LDAP Subentry Internet Draft

## locality\_5dsoc

Standard LDAP attribute type

### Synopsis

```
( 2.5.6.3
  NAME 'locality'
  DESC 'Standard LDAP attribute type'
  SUP top
  STRUCTURAL
  MAY ( description $
        1 $
        searchGuide $
        seeAlso $
        st $
        street )
  X-ORIGIN 'RFC 2256' )
```

### Description

Used to define entries that represent localities or geographic areas.

### Origin

This object class is defined by RFC 2256  
(<http://www.ietf.org/rfc/rfc2256.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[description\\_5dsat\(5DSAT\)](#), [1\(5DSAT\)](#), [searchGuide\(5DSAT\)](#),  
[seeAlso\(5DSAT\)](#), [st\(5DSAT\)](#), [street\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## newPilotPerson

Pilot objectclass

### Synopsis

```
( 0.9.2342.19200300.100.4.4
  NAME 'newPilotPerson'
  DESC 'Pilot objectclass'
  SUP person
  STRUCTURAL
  MAY ( businessCategory $
        drink $
        homePhone $
        homePostalAddress $
        janetMailbox $
        mail $
        mailPreferenceOption $
        mobile $
        organizationalStatus $
        otherMailbox $
        pager $
        personalSignature $
        personalTitle $
        preferredDeliveryMethod $
        roomNumber $
        secretary $
        textEncodedORAddress $
        uid $
        userClass )
  X-ORIGIN 'Internet White Pages Pilot' )
```

### Description

Used as a subclass of person, to allow the use of a number of additional attributes to be assigned to entries of the person object class. Inherits `cn` and `sn` from the `person` object class.

### Origin

This object class is defined by Internet White Pages Pilot.

### Type

Structural object class

### Superior

[person\(5DSOC\)](#)

### Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

## Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

`businessCategory(5DSAT)`, `drink(5DSAT)`, `homePhone(5DSAT)`,  
`homePostalAddress(5DSAT)`, `janetMailbox(5DSAT)`, `mail(5DSAT)`,  
`mailPreferenceOption(5DSAT)`, `mobile(5DSAT)`,  
`organizationalStatus(5DSAT)`, `otherMailbox(5DSAT)`, `pager(5DSAT)`,  
`personalSignature(5DSAT)`, `personalTitle(5DSAT)`,  
`preferredDeliveryMethod(5DSAT)`, `roomNumber(5DSAT)`, `secretary(5DSAT)`,  
`textEncodedORAddress(5DSAT)`, `uid(5DSAT)`, `userClass(5DSAT)`

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	External: IETF, Internet White Pages Pilot

---

## nisMap

Standard LDAP objectclass

### Synopsis

```
( 1.3.6.1.1.1.2.9
  NAME 'nisMap'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST nisMapName
  MAY description
  X-ORIGIN 'RFC 2307' )
```

### Description

A generic abstraction of a NIS map.

### Origin

This object class is defined by RFC 2307  
(<http://www.ietf.org/rfc/rfc2307.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[nisMapName\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[description\\_5dsat\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

## nisNetgroup

Standard LDAP objectclass

### Synopsis

```
( 1.3.6.1.1.1.2.8
  NAME 'nisNetgroup'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST cn
  MAY ( nisNetgroupTriple $
        memberNisNetgroup $
        description )
  X-ORIGIN 'RFC 2307' )
```

### Description

An abstraction of a netgroup. May refer to other netgroups.

### Origin

This object class is defined by RFC 2307 (<http://www.ietf.org/rfc/rfc2307.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[description\\_5dsat\(5DSAT\)](#), [memberNisNetgroup\(5DSAT\)](#),  
[nisNetgroupTriple\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

## nisObject

Standard LDAP objectclass

### Synopsis

```
( 1.3.6.1.1.1.2.10
  NAME 'nisObject'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST ( cn $
        nisMapEntry $
        nisMapName )
  MAY description
  X-ORIGIN 'RFC 2307' )
```

### Description

Defines an entry in a NIS map.

### Origin

This object class is defined by RFC 2307 (<http://www.ietf.org/rfc/rfc2307.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#), [nisMapEntry\(5DSAT\)](#), [nisMapName\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[description\\_5dsat\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7

---

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

---

## nsComplexRoleDefinition

Sun ONE defined objectclass

### Synopsis

```
( 2.16.840.1.113730.3.2.95
  NAME 'nsComplexRoleDefinition'
  DESC 'Sun ONE defined objectclass'
  SUP nsRoleDefinition
  STRUCTURAL
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Any role that is not a simple role is, by definition, a complex role.

### Origin

This object class is defined by Directory Server.

### Type

Structural object class

### Superior

[nsRoleDefinition\(5DSOC\)](#)

### Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

### Allowed Attributes

Entries of this object class have no optional attribute types other than those inherited from the superior(s).

### Usage

Configuration object specific to this Directory Server instance, not replicated.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

---

## nsFilteredRoleDefinition

Sun ONE defined objectclass

### Synopsis

```
( 2.16.840.1.113730.3.2.97
  NAME 'nsFilteredRoleDefinition'
  DESC 'Sun ONE defined objectclass'
  SUP nsComplexRoleDefinition
  STRUCTURAL
  MUST nsRoleFilter
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Specifies assignment of entries to the role, depending upon the attributes contained by each entry.

### Origin

This object class is defined by Directory Server.

### Type

Structural object class

### Superior

[nsComplexRoleDefinition\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[nsRoleFilter\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class have no optional attribute types other than those inherited from the superior(s).

### Usage

Configuration object specific to this Directory Server instance, not replicated.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## nsLicenseUser

Sun ONE defined objectclass

### Synopsis

```
( 2.16.840.1.113730.3.2.7
  NAME 'nsLicenseUser'
  DESC 'Sun ONE defined objectclass'
  SUP top
  STRUCTURAL
  MAY ( nsLicensedFor $
        nsLicenseStartTime $
        nsLicenseEndTime )
  X-ORIGIN 'Sun ONE Administration Services' )
```

### Description

Used to track licenses for servers that are licensed on a per-client basis. `nsLicenseUser` is intended to be used with the `inetOrgPerson` object class. You can manage the contents of this object class through the Users and Groups area of the Administration Server.

### Origin

This object class is defined by Administration Services.

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[nsLicenseEndTime\(5DSAT\)](#), [nsLicenseStartTime\(5DSAT\)](#),  
[nsLicensedFor\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Stability Level	Evolving

## nsManagedRoleDefinition

Sun ONE defined objectclass

### Synopsis

```
( 2.16.840.1.113730.3.2.96
  NAME 'nsManagedRoleDefinition'
  DESC 'Sun ONE defined objectclass'
  SUP nsSimpleRoleDefinition
  STRUCTURAL
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Specifies assignment of a role to an explicit, enumerated list of members.

### Origin

This object class is defined by Directory Server.

### Type

Structural object class

### Superior

[nsSimpleRoleDefinition\(5DSOC\)](#)

### Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

### Allowed Attributes

Entries of this object class have no optional attribute types other than those inherited from the superior(s).

### Usage

Configuration object specific to this Directory Server instance, not replicated.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

---

## nsNestedRoleDefinition

Sun ONE defined objectclass

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.2.9
  NAME 'nsNestedRoleDefinition'
  DESC 'Sun ONE defined objectclass'
  SUP nsComplexRoleDefinition
  STRUCTURAL
  MUST nsRoleDN
  MAY nsRoleScopeDn
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Specifies containment of one or more roles of any type within the role.

### Origin

This object class is defined by Directory Server.

### Type

Structural object class

### Superior

[nsComplexRoleDefinition\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[nsRoleDN\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[nsRoleScopeDn\(5DSAT\)](#)

### Usage

Configuration object specific to this Directory Server instance, not replicated.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Stability Level	Evolving

---

## nsRoleDefinition

Sun ONE defined objectclass

### Synopsis

```
( 2.16.840.1.113730.3.2.93
  NAME 'nsRoleDefinition'
  DESC 'Sun ONE defined objectclass'
  SUP ldapSubEntry
  STRUCTURAL
  MAY description
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

All role definition object classes inherit from the nsRoleDefinition object class.

### Origin

This object class is defined by Directory Server.

### Type

Structural object class

### Superior

[ldapSubEntry\(5DSOC\)](#)

### Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[description\\_5dsat\(5DSAT\)](#)

### Usage

Configuration object specific to this Directory Server instance, not replicated.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Evolving

## nsSimpleRoleDefinition

Sun ONE defined objectclass

### Synopsis

```
( 2.16.840.1.113730.3.2.94
  NAME 'nsSimpleRoleDefinition'
  DESC 'Sun ONE defined objectclass'
  SUP nsRoleDefinition
  STRUCTURAL
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Roles containing this object class are called simple roles because they have a deliberately limited flexibility, which makes it easy to:

- Enumerate the members of a role.
- Determine whether a given entry possesses a particular role.
- Enumerate all the roles possessed by a given entry.
- Assign a particular role to a given entry.
- Remove a particular role from a given entry.

### Origin

This object class is defined by Directory Server.

### Type

Structural object class

### Superior

[nsRoleDefinition\(5DSOC\)](#)

### Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

### Allowed Attributes

Entries of this object class have no optional attribute types other than those inherited from the superior(s).

### Usage

Configuration object specific to this Directory Server instance, not replicated.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## oncRpc

Standard LDAP objectclass

### Synopsis

```
( 1.3.6.1.1.1.2.5
  NAME 'oncRpc'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST ( cn $
         oncRpcNumber )
  MAY description
  X-ORIGIN 'RFC 2307' )
```

### Description

An abstraction of an Open Network Computing (ONC) Remote Procedure Call (RPC) binding. This class maps an ONC RPC number to a name. The distinguished value of the cn attribute denotes the RPC service's canonical name.

### Origin

This object class is defined by RFC 2307 (<http://www.ietf.org/rfc/rfc2307.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#), [oncRpcNumber\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[description\\_5dsat\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7

---

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

---

## organization

Standard LDAP objectclass

### Synopsis

```
( 2.5.6.4
  NAME 'organization'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST o
  MAY ( businessCategory $
        description $
        destinationIndicator $
        facsimileTelephoneNumber $
        internationaliSDNNumber $
        l $
        physicalDeliveryOfficeName $
        postOfficeBox $
        postalAddress $
        postalCode $
        preferredDeliveryMethod $
        registeredAddress $
        searchGuide $
        seeAlso $
        st $
        street $
        telephoneNumber $
        teletexTerminalIdentifier $
        telexNumber $
        userPassword $
        x121Address )
  X-ORIGIN 'RFC 2256' )
```

### Description

Used to define entries that represent organizations. An organization is generally assumed to be a large, relatively static grouping within a larger corporation or enterprise.

### Origin

This object class is defined by RFC 2256 (<http://www.ietf.org/rfc/rfc2256.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

## Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

o(5DSAT)

## Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

businessCategory(5DSAT), description\_5dsat(5DSAT), destinationIndicator(5DSAT), facsimileTelephoneNumber(5DSAT), internationaliSDNNumber(5DSAT), l(5DSAT), physicalDeliveryOfficeName(5DSAT), postOfficeBox(5DSAT), postalAddress(5DSAT), postalCode(5DSAT), preferredDeliveryMethod(5DSAT), registeredAddress(5DSAT), searchGuide(5DSAT), seeAlso(5DSAT), st(5DSAT), street(5DSAT), telephoneNumber(5DSAT), teletexTerminalIdentifier(5DSAT), telexNumber(5DSAT), userPassword(5DSAT), x121Address(5DSAT)

## Attributes

See attributes(5) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## organizationalPerson

Standard LDAP objectclass

### Synopsis

```
( 2.5.6.7
  NAME 'organizationalPerson'
  DESC 'Standard LDAP objectclass'
  SUP person
  STRUCTURAL
  MAY ( destinationIndicator $
        facsimileTelephoneNumber $
        internationaliSDNNumber $
        l $
        ou $
        physicalDeliveryOfficeName $
        postOfficeBox $
        postalAddress $
        postalCode $
        preferredDeliveryMethod $
        registeredAddress $
        st $
        street $
        teletexTerminalIdentifier $
        telexNumber $
        title $
        x121Address )
  X-ORIGIN 'RFC 2256' )
```

### Description

Used to define entries for people employed by or associated with an organization.

### Origin

This object class is defined by RFC 2256 (<http://www.ietf.org/rfc/rfc2256.txt>).

### Type

Structural object class

### Superior

[person\(5DSOC\)](#)

### Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[destinationIndicator\(5DSAT\)](#), [facsimileTelephoneNumber\(5DSAT\)](#),  
[internationaliSDNNumber\(5DSAT\)](#), [l\(5DSAT\)](#), [ou\(5DSAT\)](#),  
[physicalDeliveryOfficeName\(5DSAT\)](#), [postOfficeBox\(5DSAT\)](#),  
[postalAddress\(5DSAT\)](#), [postalCode\(5DSAT\)](#),  
[preferredDeliveryMethod\(5DSAT\)](#), [registeredAddress\(5DSAT\)](#), [st\(5DSAT\)](#),  
[street\(5DSAT\)](#), [teletexTerminalIdentifier\(5DSAT\)](#), [telexNumber\(5DSAT\)](#),  
[title\(5DSAT\)](#), [x121Address\(5DSAT\)](#)

## Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## organizationalRole

Standard LDAP objectclass

### Synopsis

```
( 2.5.6.8
  NAME 'organizationalRole'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST cn
  MAY ( description $
        destinationIndicator $
        facsimileTelephoneNumber $
        internationaliSDNNumber $
        l $
        ou $
        physicalDeliveryOfficeName $
        postOfficeBox $
        postalAddress $
        postalCode $
        preferredDeliveryMethod $
        registeredAddress $
        roleOccupant $
        seeAlso $
        st $
        street $
        telephoneNumber $
        teletexTerminalIdentifier $
        telexNumber $
        x121Address )
  X-ORIGIN 'RFC 2256' )
```

### Description

Used to define entries that represent roles held by people within an organization.

### Origin

This object class is defined by RFC 2256  
(<http://www.ietf.org/rfc/rfc2256.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#)

## Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

`description_5dsat(5DSAT)`, `destinationIndicator(5DSAT)`,  
`facsimileTelephoneNumber(5DSAT)`, `internationaliSDNNNumber(5DSAT)`,  
`l(5DSAT)`, `ou(5DSAT)`, `physicalDeliveryOfficeName(5DSAT)`,  
`postOfficeBox(5DSAT)`, `postalAddress(5DSAT)`, `postalCode(5DSAT)`,  
`preferredDeliveryMethod(5DSAT)`, `registeredAddress(5DSAT)`,  
`roleOccupant(5DSAT)`, `seeAlso(5DSAT)`, `st(5DSAT)`, `street(5DSAT)`,  
`telephoneNumber(5DSAT)`, `teletexTerminalIdentifier(5DSAT)`,  
`telexNumber(5DSAT)`, `x121Address(5DSAT)`

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## organizationalUnit

Standard LDAP objectclass

### Synopsis

```
( 2.5.6.5
  NAME 'organizationalUnit'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST ou
  MAY ( businessCategory $
        description $
        destinationIndicator $
        facsimileTelephoneNumber $
        internationaliSDNNumber $
        l $
        physicalDeliveryOfficeName $
        postOfficeBox $
        postalAddress $
        postalCode $
        preferredDeliveryMethod $
        registeredAddress $
        searchGuide $
        seeAlso $
        st $
        street $
        telephoneNumber $
        teletexTerminalIdentifier $
        telexNumber $
        userPassword $
        x121Address )
  X-ORIGIN 'RFC 2256' )
```

### Description

Used to define entries that represent organizational units. An organizational unit is generally assumed to be a relatively static grouping within a larger organization.

### Origin

This object class is defined by RFC 2256 (<http://www.ietf.org/rfc/rfc2256.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

## Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

`ou(5DSAT)`

## Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

`businessCategory(5DSAT)`, `description_5dsat(5DSAT)`,  
`destinationIndicator(5DSAT)`, `facsimileTelephoneNumber(5DSAT)`,  
`internationaliSDNNNumber(5DSAT)`, `l(5DSAT)`,  
`physicalDeliveryOfficeName(5DSAT)`, `postOfficeBox(5DSAT)`,  
`postalAddress(5DSAT)`, `postalCode(5DSAT)`,  
`preferredDeliveryMethod(5DSAT)`, `registeredAddress(5DSAT)`,  
`searchGuide(5DSAT)`, `seeAlso(5DSAT)`, `st(5DSAT)`, `street(5DSAT)`,  
`telephoneNumber(5DSAT)`, `teletexTerminalIdentifier(5DSAT)`,  
`telexNumber(5DSAT)`, `userPassword(5DSAT)`, `x121Address(5DSAT)`

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## passwordPolicy

Sun ONE defined password policy objectclass

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.2.6
  NAME 'passwordPolicy'
  DESC 'Sun ONE defined password policy objectclass'
  SUP top
  STRUCTURAL
  MUST cn
  MAY ( description $
        passwordMaxAge $
        passwordExp $
        passwordMinLength $
        passwordInHistory $
        passwordChange $
        passwordWarning $
        passwordLockout $
        passwordMaxFailure $
        passwordResetDuration $
        passwordUnlock $
        passwordLockoutDuration $
        passwordCheckSyntax $
        passwordMustChange $
        passwordStorageScheme $
        passwordMinAge $
        passwordResetFailureCount $
        passwordExpireWithoutWarning $
        passwordRootdnMayBypassModsChecks $
        passwordNonRootMayResetUserpwd )
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Entries of this object class defines a 5.x password policy entry that holds configurable password policy attributes.

The 5.x password policy configuration object classes and attribute types are deprecated. Use `pwdPolicy` and `sunPwdPolicy` objects instead.

### Origin

This object class is defined by Directory Server.

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

## Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

`cn(5DSAT)`

## Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

`description_5dsat(5DSAT), passwordChange(5DSAT), passwordCheckSyntax(5DSAT), passwordExp(5DSAT), passwordExpireWithoutWarning(5DSAT), passwordInHistory(5DSAT), passwordLockout(5DSAT), passwordLockoutDuration(5DSAT), passwordMaxAge(5DSAT), passwordMaxFailure(5DSAT), passwordMinAge(5DSAT), passwordMinLength(5DSAT), passwordMustChange(5DSAT), passwordNonRootMayResetUserpwd(5DSAT), passwordResetDuration(5DSAT), passwordResetFailureCount(5DSAT), passwordRootdnMayBypassModsChecks(5DSAT), passwordStorageScheme(5DSAT), passwordUnlock(5DSAT), passwordWarning(5DSAT)`

## Usage

Configuration object specific to this Directory Server instance, not replicated.

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Obsolete: Scheduled for removal after this release

## person

Standard LDAP objectclass

### Synopsis

```
( 2.5.6.6
  NAME 'person'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST ( sn $
        cn )
  MAY ( description $
        seeAlso $
        telephoneNumber $
        userPassword )
  X-ORIGIN 'RFC 2256' )
```

### Description

Used to define entries that generically represent people. This object class is the base class for the organizationalPerson object class.

### Origin

This object class is defined by RFC 2256 (<http://www.ietf.org/rfc/rfc2256.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#), [sn\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[description\\_5dsat\(5DSAT\)](#), [seeAlso\(5DSAT\)](#), [telephoneNumber\(5DSAT\)](#), [userPassword\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

---

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## pilotObject

Standard LDAP objectclass

### Synopsis

```
( 0.9.2342.19200300.100.4.3
  NAME 'pilotObject'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MAY ( audio $
        ditRedirect $
        info $
        jpegPhoto $
        lastModifiedBy $
        lastModifiedTime $
        manager $
        photo $
        uniqueIdentifier )
  X-ORIGIN 'RFC 1274' )
```

### Description

Used as a subclass to allow additional attributes to be assigned to entries of all other object classes.

### Origin

This object class is defined by RFC 1274  
(<http://www.ietf.org/rfc/rfc1274.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[audio\(5DSAT\)](#), [ditRedirect\(5DSAT\)](#), [info\(5DSAT\)](#), [jpegPhoto\(5DSAT\)](#),  
[lastModifiedBy\(5DSAT\)](#), [lastModifiedTime\(5DSAT\)](#), [manager\(5DSAT\)](#),  
[photo\(5DSAT\)](#), [uniqueIdentifier\(5DSAT\)](#)

---

## Attributes

See attributes(5) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

## pilotOrganization

Standard LDAP objectclass

### Synopsis

```
( 0.9.2342.19200300.100.4.20
  NAME 'pilotOrganization'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST ( ou $
        o )
  MAY ( buildingName $
        businessCategory $
        description $
        destinationIndicator $
        facsimileTelephoneNumber $
        internationaliSDNNumber $
        l $
        physicalDeliveryOfficeName $
        postOfficeBox $
        postalAddress $
        postalCode $
        preferredDeliveryMethod $
        registeredAddress $
        searchGuide $
        seeAlso $
        st $
        street $
        telephoneNumber $
        teletexTerminalIdentifier $
        telexNumber $
        userPassword $
        x121Address )
  X-ORIGIN 'RFC 1274' )
```

### Description

Used as a subclass to allow additional attributes to be assigned to organization and organizationalUnit object class entries.

### Origin

This object class is defined by RFC 1274  
(<http://www.ietf.org/rfc/rfc1274.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

## Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

`o(5DSAT)`, `ou(5DSAT)`

## Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

`buildingName(5DSAT)`, `businessCategory(5DSAT)`, `description_5dsat(5DSAT)`, `destinationIndicator(5DSAT)`, `facsimileTelephoneNumber(5DSAT)`, `internationaliSDNNumber(5DSAT)`, `l(5DSAT)`, `physicalDeliveryOfficeName(5DSAT)`, `postOfficeBox(5DSAT)`, `postalAddress(5DSAT)`, `postalCode(5DSAT)`, `preferredDeliveryMethod(5DSAT)`, `registeredAddress(5DSAT)`, `searchGuide(5DSAT)`, `seeAlso(5DSAT)`, `st(5DSAT)`, `street(5DSAT)`, `telephoneNumber(5DSAT)`, `teletexTerminalIdentifier(5DSAT)`, `telexNumber(5DSAT)`, `userPassword(5DSAT)`, `x121Address(5DSAT)`

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

## posixAccount

Standard LDAP objectclass

### Synopsis

```
( 1.3.6.1.1.1.2.0
  NAME 'posixAccount'
  DESC 'Standard LDAP objectclass'
  SUP top
  AUXILIARY
  MUST ( cn $
        uid $
        uidNumber $
        gidNumber $
        homeDirectory )
  MAY ( userPassword $
        loginShell $
        gecos $
        description )
  X-ORIGIN 'RFC 2307' )
```

### Description

Auxiliary object class.

### Origin

This object class is defined by RFC 2307  
(<http://www.ietf.org/rfc/rfc2307.txt>).

### Type

Auxiliary object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#), [gidNumber\(5DSAT\)](#), [homeDirectory\(5DSAT\)](#), [uid\(5DSAT\)](#),  
[uidNumber\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[description\\_5dsat\(5DSAT\)](#), [gecos\(5DSAT\)](#), [loginShell\(5DSAT\)](#),  
[userPassword\(5DSAT\)](#)

---

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

## posixGroup

Standard LDAP objectclass

### Synopsis

```
( 1.3.6.1.1.1.2.2
  NAME 'posixGroup'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST ( cn $
        gidNumber )
  MAY ( userPassword $
        memberUid $
        description )
  X-ORIGIN 'RFC 2307' )
```

### Description

Structural object class.

### Origin

This object class is defined by RFC 2307 (<http://www.ietf.org/rfc/rfc2307.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#), [gidNumber\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[description\\_5dsat\(5DSAT\)](#), [memberUid\(5DSAT\)](#), [userPassword\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7

---

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

---

## pwdPolicy

Password Policy objectclass

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.8.2.1
  NAME 'pwdPolicy'
  DESC 'Password Policy objectclass'
  SUP top
  AUXILIARY
  MUST ( pwdAttribute )
  MAY ( pwdMinAge $
        pwdMaxAge $
        pwdInHistory $
        pwdCheckQuality $
        pwdMinLength $
        pwdExpireWarning $
        pwdGraceAuthNLimit $
        pwdLockout $
        pwdLockoutDuration $
        pwdMaxFailure $
        pwdFailureCountInterval $
        pwdMustChange $
        pwdAllowUserChange $
        pwdSafeModify)
  X-DS-USE 'internal'
  X-ORIGIN 'Password Policy for LDAP Directories Internet Draft' )
```

### Description

Contains the attributes defining a password policy in effect for a set of users. A password policy is defined for a particular subtree of the DIT by adding to an LDAP subentry whose immediate superior is the root of the subtree, the pwdPolicy auxiliary object class. The scope of the password policy is defined by the SubtreeSpecification attribute of the LDAP subentry as specified in RFC 3672 (<http://www.ietf.org/rfc/rfc3672.txt>).

Each object that is controlled by password policy advertises the subentry that is being used to control its policy in its pwdPolicySubentry attribute. Clients wishing to examine or manage password policy for an object may interrogate the pwdPolicySubentry for that object in order to arrive at the proper pwdPolicy subentry.

### Origin

This object class is defined by Password Policy Internet-Draft.

### Type

Auxiliary object class

### Superior

[top\(5DSOC\)](#)

## Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[pwdAttribute\(5DSAT\)](#)

## Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[pwdAllowUserChange\(5DSAT\)](#), [pwdCheckQuality\(5DSAT\)](#),  
[pwdExpireWarning\(5DSAT\)](#), [pwdFailureCountInterval\(5DSAT\)](#),  
[pwdGraceAuthNLimit\(5DSAT\)](#), [pwdInHistory\(5DSAT\)](#), [pwdLockout\(5DSAT\)](#),  
[pwdLockoutDuration\(5DSAT\)](#), [pwdMaxAge\(5DSAT\)](#), [pwdMaxFailure\(5DSAT\)](#),  
[pwdMinAge\(5DSAT\)](#), [pwdMinLength\(5DSAT\)](#), [pwdMustChange\(5DSAT\)](#),  
[pwdSafeModify\(5DSAT\)](#)

## Usage

Configuration object specific to this Directory Server instance, not replicated.

## Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Password Policy Internet-Draft

## referral

Standard LDAP referral objectclass

### Synopsis

```
( 2.16.840.1.113730.3.2.6
  NAME 'referral'
  DESC 'Standard LDAP referral objectclass'
  SUP top
  STRUCTURAL
  MUST ref
  X-ORIGIN 'RFC 3296' )
```

### Description

Used to represent a subordinate reference information in the directory. These referral objects hold one or more URIs contained in values of the `ref` attribute type and are used to generate protocol referrals and continuations.

---

---

**Note:** To use this object class, you must either make it a subclass, or use it with the `extensibleObject` object class. This ensures that you have an attribute for naming the entry.

---

---

### Origin

This object class is defined by RFC 3296 (<http://www.ietf.org/rfc/rfc3296.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[ref\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class have no optional attribute types other than those inherited from the superior(s).

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

---

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 3296 ( <a href="http://www.ietf.org/rfc/rfc3296.txt">http://www.ietf.org/rfc/rfc3296.txt</a> )

---

## residentialPerson

Standard LDAP objectclass

### Synopsis

```
( 2.5.6.10
  NAME 'residentialPerson'
  DESC 'Standard LDAP objectclass'
  SUP person
  STRUCTURAL
  MUST 1
  MAY ( businessCategory $
        destinationIndicator $
        facsimileTelephoneNumber $
        internationaliSDNNumber $
        physicalDeliveryOfficeName $
        postOfficeBox $
        postalAddress $
        postalCode $
        preferredDeliveryMethod $
        registeredAddress $
        st $
        street $
        teletexTerminalIdentifier $
        telexNumber $
        x121Address )
  X-ORIGIN 'RFC 2256' )
```

### Description

Used by Directory Server to contain a person's residential information.

### Origin

This object class is defined by RFC 2256  
(<http://www.ietf.org/rfc/rfc2256.txt>).

### Type

Structural object class

### Superior

[person\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[1\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

---

`businessCategory(5DSAT)`, `destinationIndicator(5DSAT)`,  
`facsimileTelephoneNumber(5DSAT)`, `internationaliSDNNNumber(5DSAT)`,  
`physicalDeliveryOfficeName(5DSAT)`, `postOfficeBox(5DSAT)`,  
`postalAddress(5DSAT)`, `postalCode(5DSAT)`,  
`preferredDeliveryMethod(5DSAT)`, `registeredAddress(5DSAT)`, `st(5DSAT)`,  
`street(5DSAT)`, `teletexTerminalIdentifier(5DSAT)`, `telexNumber(5DSAT)`,  
`x121Address(5DSAT)`

## Attributes

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## RFC822localPart

Pilot objectclass

### Synopsis

```
( 0.9.2342.19200300.100.4.14
  NAME 'RFC822localPart'
  DESC 'Pilot objectclass'
  SUP domain
  STRUCTURAL
  MAY ( cn $
        sn )
  X-ORIGIN 'Internet directory pilot' )
```

### Description

Used to define entries that represent the local part of RFC822 mail addresses. The directory treats this part of an RFC822 address as a domain.

### Origin

This object class is defined by Internet directory pilot.

### Type

Structural object class

### Superior

[domain\(5DSOC\)](#)

### Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#), [sn\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	External: IETF, Internet directory pilot

---

## room

Standard LDAP objectclass

### Synopsis

```
( 0.9.2342.19200300.100.4.7
  NAME 'room'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST cn
  MAY ( description $
        roomNumber $
        seeAlso $
        telephoneNumber )
  X-ORIGIN 'RFC 1274' )
```

### Description

Used to store information in the directory about a room.

### Origin

This object class is defined by RFC 1274  
(<http://www.ietf.org/rfc/rfc1274.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[description\\_5dsat\(5DSAT\)](#), [roomNumber\(5DSAT\)](#), [seeAlso\(5DSAT\)](#),  
[telephoneNumber\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

---

## shadowAccount

Standard LDAP objectclass

### Synopsis

```
( 1.3.6.1.1.1.2.1
  NAME 'shadowAccount'
  DESC 'Standard LDAP objectclass'
  SUP top
  AUXILIARY
  MUST uid
  MAY ( userPassword $
        shadowLastChange $
        shadowMin $
        shadowMax $
        shadowWarning $
        shadowInactive $
        shadowExpire $
        shadowFlag $
        description )
  X-ORIGIN 'RFC 2307' )
```

### Description

Auxiliary object class. Related to the `/etc/shadow` file.

### Origin

This object class is defined by RFC 2307 (<http://www.ietf.org/rfc/rfc2307.txt>).

### Type

Auxiliary object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[uid\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[description\\_5dsat\(5DSAT\)](#), [shadowExpire\(5DSAT\)](#), [shadowFlag\(5DSAT\)](#), [shadowInactive\(5DSAT\)](#), [shadowLastChange\(5DSAT\)](#), [shadowMax\(5DSAT\)](#), [shadowMin\(5DSAT\)](#), [shadowWarning\(5DSAT\)](#), [userPassword\(5DSAT\)](#)

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2307 ( <a href="http://www.ietf.org/rfc/rfc2307.txt">http://www.ietf.org/rfc/rfc2307.txt</a> )

---

## simpleSecurityObject

Standard LDAP objectclass

### Synopsis

```
( 0.9.2342.19200300.100.4.19
  NAME 'simpleSecurityObject'
  DESC 'Standard LDAP objectclass'
  SUP top
  STRUCTURAL
  MUST userPassword
  X-ORIGIN 'RFC 1274' )
```

### Description

Used to allow an entry to contain the `userPassword` attribute when an entry's principal object classes do not allow `userPassword` as an attribute type. Reserved for future use.

### Origin

This object class is defined by RFC 1274 (<http://www.ietf.org/rfc/rfc1274.txt>).

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[userPassword\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class have no optional attribute types other than those inherited from the superior(s).

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 1274 ( <a href="http://www.ietf.org/rfc/rfc1274.txt">http://www.ietf.org/rfc/rfc1274.txt</a> )

## strongAuthenticationUser

Standard LDAP objectclass

### Synopsis

```
( 2.5.6.15  
  NAME 'strongAuthenticationUser'  
  DESC 'Standard LDAP objectclass'  
  SUP top  
  AUXILIARY  
  MUST userCertificate  
  X-ORIGIN 'RFC 2256' )
```

### Description

Auxiliary object class, used to store a user's certificate entry in the directory. This object class is used with other object classes, such as the `person` and `organization` object classes.

### Origin

This object class is defined by RFC 2256 (<http://www.ietf.org/rfc/rfc2256.txt>).

### Type

Auxiliary object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[userCertificate\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class have no optional attribute types other than those inherited from the superior(s).

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

---

## subschema

Standard LDAP objectclass

### Synopsis

```
( 2.5.20.1
  NAME 'subschema'
  DESC 'Standard LDAP objectclass'
  SUP top
  AUXILIARY
  MAY ( dITStructureRules $
        nameForms $
        dITContentRules $
        objectClasses $
        attributeTypes $
        matchingRules $
        matchingRuleUse )
  X-ORIGIN 'RFC 2252' )
```

### Description

Internal object class. An auxiliary object class subentry used to administer the subschema for the subschema administrative area. It holds the operational attributes representing the policy parameters used to express the subschema.

### Origin

This object class is defined by RFC 2252  
(<http://www.ietf.org/rfc/rfc2252.txt>).

### Type

Auxiliary object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require no attribute types other than those inherited from the superior(s).

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[attributeTypes\(5DSAT\)](#), [dITContentRules\(5DSAT\)](#),  
[dITStructureRules\(5DSAT\)](#), [matchingRuleUse\(5DSAT\)](#),  
[matchingRules\(5DSAT\)](#), [nameForms\(5DSAT\)](#), [objectClasses\(5DSAT\)](#)

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2252 ( <a href="http://www.ietf.org/rfc/rfc2252.txt">http://www.ietf.org/rfc/rfc2252.txt</a> )

---

## sunPwdPolicy

Sun Directory Server Password Policy objectclass

### Synopsis

```
( 1.3.6.1.4.1.42.2.27.9.2.119
  NAME 'sunPwdPolicy'
  DESC 'Sun Directory Server Password Policy objectclass'
  SUP pwdPolicy
  AUXILIARY
  MUST ( cn )
  MAY ( description $
        passwordRootdnMayBypassModsChecks $
        passwordStorageScheme $
        passwordExpireWithoutWarning $
        pwdIsLockoutPrioritized $
        pwdKeepLastAuthTime )
  X-DS-USE 'internal'
  X-ORIGIN 'Sun Directory Server' )
```

### Description

Contains attributes used in conjunction with the `pwdPolicy` object attributes to define a password policy in effect for a set of users.

### Origin

This object class is defined by Directory Server.

### Type

Auxiliary object class

### Superior

[pwdPolicy\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[description\\_5dsat\(5DSAT\)](#), [passwordExpireWithoutWarning\(5DSAT\)](#),  
[passwordRootdnMayBypassModsChecks\(5DSAT\)](#),  
[passwordStorageScheme\(5DSAT\)](#), [pwdIsLockoutPrioritized\(5DSAT\)](#),  
[pwdKeepLastAuthTime\(5DSAT\)](#)

**Usage**

Configuration object specific to this Directory Server instance, not replicated.

**Attributes**

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

---

## top

Standard LDAP objectclass

### Synopsis

```
( 2.5.6.0
  NAME 'top'
  DESC 'Standard LDAP objectclass'
  ABSTRACT
  MUST objectClass
  X-ORIGIN 'RFC 2256' )
```

### Description

Abstract object class, that defines the root of the object class hierarchy.

### Origin

This object class is defined by RFC 2256  
(<http://www.ietf.org/rfc/rfc2256.txt>).

### Type

Abstract object class

### Superior

This object class has no superiors.

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[objectClass\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class have no optional attribute types other than those inherited from the superior(s).

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWdsee7
Stability Level	Standard: IETF, RFC 2256 ( <a href="http://www.ietf.org/rfc/rfc2256.txt">http://www.ietf.org/rfc/rfc2256.txt</a> )

## vlvIndex

Sun ONE defined objectclass

### Synopsis

```
( 2.16.840.1.113730.3.2.42
  NAME 'vlvIndex'
  DESC 'Sun ONE defined objectclass'
  SUP top
  STRUCTURAL
  MUST ( cn $
        vlvSort )
  MAY ( vlvEnabled $
        vlvUses )
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Used to define the sort criteria of a Virtual List View index. Each VLV index specification defines the sort order to be imposed on the result set defined in the VLV search entry. A set of VLV index entries may appear below the VLV search entry. The common name, CN, attribute is used as the naming component for the entry.

### Origin

This object class is defined by Directory Server.

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#), [vlvSort\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[vlvEnabled\(5DSAT\)](#), [vlvUses\(5DSAT\)](#)

### Usage

Configuration object specific to this Directory Server instance, not replicated.

---

## Attributes

See `attributes(5)` for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

## vlvSearch

Sun ONE defined objectclass

### Synopsis

```
( 2.16.840.1.113730.3.2.38
  NAME 'vlvSearch'
  DESC 'Sun ONE defined objectclass'
  SUP top
  STRUCTURAL
  MUST ( cn $
        vlvBase $
        vlvScope $
        vlvFilter )
  MAY multiLineDescription
  X-DS-USE 'internal'
  X-ORIGIN 'Sun ONE Directory Server' )
```

### Description

Used to define a VLV search. Specifies the entry result set to be VLV indexed.

### Origin

This object class is defined by Directory Server.

### Type

Structural object class

### Superior

[top\(5DSOC\)](#)

### Required Attributes

Entries of this object class require the following attribute types in addition to those inherited from the superior(s):

[cn\(5DSAT\)](#), [vlvBase\(5DSAT\)](#), [vlvFilter\(5DSAT\)](#), [vlvScope\(5DSAT\)](#)

### Allowed Attributes

Entries of this object class may have the following optional attribute types in addition to those inherited from the superior(s):

[multiLineDescription\(5DSAT\)](#)

### Usage

Configuration object specific to this Directory Server instance, not replicated.

### Attributes

See [attributes\(5\)](#) for descriptions of the following attributes:

<b>ATTRIBUTE TYPE</b>	<b>ATTRIBUTE VALUE</b>
Availability	SUNWdsee7
Stability Level	Evolving

