Oracle® Communications Unified Communications Suite

Installation and Configuration Guide

Release 7 Update 4

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Oracle Communications Unified Communications Suite Installation and Configuration Guide, Release 7 Update 4

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Chapter 1. Get the Software

Get the Software to Install Oracle Communications Unified Communications Suite Version 7 Update 4

Topics:

- Communications Suite Software
- Dependent Component Product Software
- Notes and Caveats
- Licensing Information

Communications Suite Software

To install Communications Suite 7 Update 4, download the necessary software from Oracle Software Delivery Cloud .

1. Log in.
2. Click the check box to indicate that you have read the Trial License and Export Restrictions.
3. Click the check box to accept the Export Restrictions.
4. Click Continue.
   The Oracle Communications Unified Communications Suite 7 Update 4 Media Pack page is displayed.
5. Click Download for the component you need.
   Mobile Synchronization Server and Connector for Microsoft Outlook are separate downloads.

> **Note**
> To get older versions of Unified Communications Suite, contact your Oracle account representative or support representative.

Dependent Component Product Software

In addition to Communications Suite 7 Update 4, you might need some or all of the following dependent component products, which you obtain separately.

- Java
  - See Installing Java For Communications Suite to determine which versions you need.
  - http://www.oracle.com/technetwork/java/javase/downloads/index.html
    Obtain and install the JDK:
    1. From the preceding link, locate the Java Platform, Standard Edition section of the page.
    2. Locate the section for the release you require.
    3. Under JDK, click Download.
    4. Locate the section for the JDK release, for example, Java SE Development Kit 6 Update 41.
    5. Click Accept License Agreement.
    6. Under Product / File Description, locate the JDK package you need.
    7. Under Download, click the link for each software package to download it.

- Sun GlassFish Enterprise Server 2.1.1 with HADB
  - If you have an existing support ID, log in to My Oracle Support to obtain the platform-specific version of Sun GlassFish Enterprise Server 2.1.1 with HADB. Search for the following patch IDs. If these patches are superseded by another patch, use the more recent patch.
    - Solaris SPARC: 128643-34
    - Solaris x86: 128644-34
    - Red Hat Linux and Oracle Linux: 128645-34
  - If you do not have an existing support ID, log in to Oracle Software Delivery Cloud and perform the following steps:
    1. Click the check box to indicate that you have read the Trial License and Export Restrictions.
    2. Click the check box to accept the Export Restrictions.
    3. Click Continue.
    4. From the drop-down menu, select Sun Products and your platform (for example, Oracle Solaris on x86-64 64 bit) then click Go.
    5. Choose Sun Products Media Pack and click Continue.
    6. Choose Sun Glassfish Server 2.1.1 with HADB to download.
- Directory Server Enterprise Edition 6.3 or greater
  If you do not have Directory Server deployed, download and install the following version: Oracle Directory Server Enterprise Edition 11gR1
  1. Select Oracle Fusion Middleware product pack.
  2. Select the Oracle Fusion Middleware Identity Management 11g R2 Media Pack.
  3. Select Oracle Directory Server Enterprise Edition 11gR1 for download.
- Database software for Calendar Server 7 Update 3 back end (calendar store)
  - Oracle Database 11g Release 2 or
  - At least MySQL 5.5.8 (For new installations, download the most recent 5.5.x version. MySQL 5.5.31 was the latest as of this writing. Also, do not use version 5.5.29.)
    Starting with the release of Communications Suite 7 Update 3, MySQL is no longer bundled with the Communications Suite Media Pack. Use the following steps to download it separately.
    1. Log in to https://support.oracle.com.
    2. Click the Patches & Updates navigation tab.
    3. In the Patch Search section, click the Product or Family (Advanced Search) link.
    4. Type **`MySQL Server`** into the Product field, which displays an auto-completed list of the various MySQL products.
    5. Select options from the two drop-down menus, for example:
       - MySQL Server 5.5
       - Oracle Solaris on SPARC (64-bit)
    6. Check the box marked "Include all products in a family."
    7. Click Search.
    8. Select the 5.5.31 release from the resulting list then click Download.
       Both PKG and TAR versions are available. This documentation uses the PKG version to show installation and configuration, so in most cases, choosing the PKG version makes sense.
    9. From the pop-up dialog, click the file name to start the download.
- Oracle Communications Converged Application Server 5.0 for Instant Messaging Server 9 SIP/SIMPLE deployments

> **Note**
> Oracle Communications Converged Application Server Version 5.0 is an optional component and is not available through the Oracle Software Delivery Cloud. Contact your sales representative to obtain this version of the software.

For more information about Communications Suite 7 Update 4 component product dependencies, see Requirements for Communications Suite 7 Update 4.

Notes and Caveats

If you order a Communications Suite DVD, it only contains Communications Suite software. The DVD does not contain Directory Server or GlassFish Server.

Licensing Information

For more information regarding entitlements (RTU and support) and licensing, see Communications Suite Licensing Information.

Chapter 2. Communications Suite Initial Configuration

Oracle Communications Unified Communications Suite Initial Configuration
Version 7 Update 4

This page automatically lists the initial configuration information you need when installing Communications Suite components. Use the following information to perform the initial configuration after installing the Communications Suite software.

Page: Calendar Server Initial Configuration

Page: Convergence Initial Configuration

Page: Delegated Administrator Initial Configuration

Page: Indexing and Search Service Initial Configuration

Page: Instant Messaging Initial Configuration

Page: Messaging Server Initial Configuration

Chapter 3. Communications Suite Installation Guide

Oracle Communications Unified Communications Suite Installation Guide
Version 7 Update 4

The following information is intended for any evaluator, system administrator, or software technician who wants to install any portion of the Communications Suite software.

Topics:

- Oracle Communications Unified Communications Suite Installation Overview
- Installing Communications Suite
- Uninstalling Communications Suite
- Getting Information About Which Products Are Installed

See also:

- Connector for Microsoft Outlook Installation Guide

Oracle Communications Unified Communications Suite Installation Overview

This information describes how to install specific Communications Suite products on a specific machine (a machine can mean either a computer or a Solaris Zone). It describes the product installation tasks required for new deployments and upgrades. The following table shows the product versions that are available in Communications Suite 7 Update 4.

Oracle Communications Unified Communications Suite Products and Components Version 7 Update 4

Product	Version
Oracle Communications Messaging Server	7 Update 5 (Patch 28)
Oracle Communications Instant Messaging Server	9 (Patch 3)
Convergence	2 (Patch 6)
Oracle Communications Calendar Server	7 Update 3 (Patch 10)
Delegated Administrator for Oracle Communications Unified Communications Suite	7 (Patch 7)
Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite	8
Indexing and Search Service for Oracle Communications Unified Communications Suite	1 Update 4 (Patch 16)
Messaging Server HA Agent (MS_SCHA)	7
Instant Messaging HA Agent (IM_SCHA)	7.3
Dssetup for Oracle Communications Unified Communications Suite (`comm_dssetup`)	6.4 Patch 24

Check Communications Suite Component Patches for current patches that have shipped since the initial

Communications Suite 7 Update 4 release.

The Communications Suite installer does *not* install Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite, although the product is included with the distribution.

For installation instructions for Connector for Microsoft Outlook, see Installing Connector for Microsoft Outlook.

This information assumes that you have already made your architectural and design decisions and that you know which products you want to install, the number of machines in your deployment, and the number of front-end and back-end servers. If you are still in the planning or evaluating process, or if you do not have an existing architecture or design, refer to Communications Suite Deployment Planning Guide.

To upgrade your current Communications Suite deployment, refer to Communications Suite Upgrade Guide.

Evaluating Communications Suite

To help you install and evaluate the product, see the following information:

- Deployment Example: Communications Suite 7 Update 4 on a Single Host (Solaris)
- Deployment Example: Communications Suite 7 Update 4 on a Single Host (Linux)

Communications Suite Installation Scenarios

Use the Communications Suite Installation Scenarios to select a product-based or component-based set of high-level instructions.

Installing Communications Suite

The information in this section describes the steps to install Communications Suite products. These steps provide a high-level process flow for installing any or all of the Communications Suite products.

1. Check that your platform and operating system support Communications Suite.

Recommended platforms for Oracle Communications Unified Communications Suite are:

Solaris OS 10	SPARC, x64	We recommend that you run the latest Solaris 10 update with the latest recommended patch set. See the Solaris 10 Release and Installation documentation for more information.
Red Hat Linux 5 64-bit	x64	We recommend that you run the latest Red Hat Linux 5 update. See the Red Hat Enterprise Linux documentation for more information.
Oracle Linux 5	x64	We recommend that you run the latest Oracle Linux 5 update. See Oracle Linux Documentation for more information.

For details, see this list of operating system and platform requirements.

In addition, certain Communications Suite products have minimum disk and memory requirements. For more information, refer to Memory and Disk Space Requirements for Communications Suite.

> **Note**
> The following products require that you have Java 1.6 installed: Sun GlassFish Enterprise Server 2.1.1, Calendar Server 7 Update 3, Indexing and Search Service 1 Update 4, and Instant Messaging 9.

2. Install the Non-Communications Suite Products required to run Communications Suite.

Which products are required to support the Communications Suite products?

The Product Version Compatibility Requirements for Communications Suite 7 Update 4 table lists the products and versions that are compatible with the Communications Suite 7 Update 4 products.

For products needed to deploy Convergence, see the Product Version Compatibility Requirements for Convergence.

> **Note**
> GlassFish Message Queue 4.4 Update 1 is a shared component to the Communications Suite installer and is only installed when you install a dependent product, such as Messaging Server or Indexing and Search Service. It does not explicitly appear in the list of items to install, upgrade, or uninstall in the Communications Suite installer. The Communications Suite installer also installs Network Security Services (NSS) and other shared components.

How Do You Install the Non-Communications Suite Products?

The Communications Suite installer does *not* install software products that are not included with the Communications Suite software. To install these additional products, perform the following steps:

1. Download the software.
   For links to download sites, go to Get the Software.
2. Install Java by using the instructions in Installing Java For Communications Suite.
3. Install GlassFish Server 2.1.1 with High-Availability Database (HADB) software by using the instructions in Installation Scenario - GlassFish Server.
4. Install Directory Server 7 by using the instructions in Installation Scenario - Directory Server.
5. If you are using Oracle Database as the back-end data store for Calendar Server, see Oracle Database Online Documentation for Oracle Database installation instructions.
6. If you are using MySQL as the back-end data store for Calendar Server, see To Install and Create a MySQL Database Instance for Calendar Server for installation instructions.
   Starting with Communications Suite 7 Update 3, MySQL is no longer bundled in the Communications Suite distribution. You need to download it separately.
7. Install the following optional products by running the Java ES 5 Update 1 installer:
   - Access Manager 7.1: Delegated Administrator 7 no longer requires Access Manager. See: Access Manager Deprecation of Support.
   - Web Server 7.0: In general, you should use GlassFish instead of Web Server.

To install Access Manager or Web Server, follow the instructions in the Sun Java Enterprise System 5 Update 1 Installation Guide for UNIX.

Here are other information sources and methods for installing these products:

- Oracle iPlanet Web Server 7.0 Update 1 – See the Installation and Migration Guide.
- Access Manager Server – Either run the JES 5 Update 1 Installer or deploy a single WAR file. For

details, see the Access Manager Postinstallation Guide. You can also find installation instructions in this Access Manager deployment example.

> **Note**
> If you are installing Access Manager 7.1 on a Red Hat Linux system, verify that a compatible version of the Java Development Kit (JDK) is installed. For details, see Verifying the Correct JDK Version to Support Access Manager.

3. Define and set up additional requirements for individual Communications Suite products.

In addition to the generic suite requirements, some products have specific requirements. For details about individual product requirements, see the Release Notes.

Messaging Server 7 Update 5

- You must ensure that Domain Name System (DNS) is running and configured properly. For details, see DNS configuration.
- Recommended file systems for the message store are listed in Message Store File Systems.
- Make sure that you do not configure conflicting port numbers when various components are running on a single machine. For a list of port numbers used by Messaging Server, see Default Port Numbers.

Calendar Server 7 Update 3

Install the Oracle Communications Calendar Server back-end database first. Then, install and configure the Oracle Communications Calendar Server front end.

> Starting with **Calendar Server 7 Update 2**, you can use either Oracle Database or MySQL Server as the calendar back-end database.

4. Install Communications Suite products.

After you have complied with the previous platform and software requirements, complete these steps:

1. Download the software.
   To download Communications Suite, including the installer, go to Get the Software.
2. Run the installer.
   The installer is a single unified utility called `commpkg`. It installs (but does not configure) the Communications Suite products. The `commpkg` utility does all the necessary preparation work before installing the product software on the system. As `root`, run the following command:
   `./commpkg install`
3. The Communications Suite installer installs product components under a single umbrella installation directory *INSTALLROOT*. The default value for *INSTALLROOT* is `/opt/sun/comms`.

For details about other "power user" features of the `commpkg` installer, see the following information:

- `commpkg install` Usage
- Installing Communications Suite in Silent Mode
- Using the ALTROOT Command-Line Argument
- Installing Communications Suite on Solaris Zones

- commpkg - General Syntax and Commands

Sample Sessions: Running commpkg

The following examples document output from running `commpkg`:

- Sample Session - Communications Suite Simple Install and Uninstall.
- Sample Session - Communications Suite Install Using altroot
- commpkg upgrade Sample Session

5. Prepare Directory Server for Communications Suite (run comm_dssetup.pl).

All Communications Suite components require that you run the `comm_dssetup.pl` script against Directory Server. For example:

```
cd <INSTALLROOT>/dssetup/sbin
./comm_dssetup.pl
```

For details, see Communications Suite Directory Server Setup Script (comm_dssetup.pl).

> **Note**
> If you install or upgrade Directory Server *before* you run the Communications Suite installer, the Directory Server installation process might place a previous version of `comm_dssetup.pl` on your system. You must use the current version of `comm_dssetup.pl` provided by the Communications Suite installer. However, if a previous version of `comm_dssetup.pl` is installed then the Communications Suite installer cannot install a new version with the `commpkg install` command. Instead, run the `commpkg upgrade` command to upgrade to the latest version of `comm_dssetup.pl`.

6. Gather information needed to configure Communications Suite products.

Before you run a configuration program, you need to gather specific configuration information for each product. Use the following worksheets:

- Configuration Worksheets - Convergence
- Configuration Worksheets - Messaging Server
- Configuration Worksheets - Calendar Server
- Configuration Worksheets - Instant Messaging
- Configuration Worksheets - Delegated Administrator
- Configuration Worksheets - Indexing and Search Service

7. Create initial configurations for the individual Communications Suite products.

For each Communications Suite product, you must run a separate configuration program. Each configuration program creates an initial runtime configuration to make the product operational. The program provides a generic, functional server configuration, which you can refine by customizing the configuration.

You should usually configure the back-end servers before configuring clients. Client configurations require that certain server attributes be defined.

Delegated Administrator 7

Run the initial configuration program:

INSTALLROOT`/da/sbin/config-commda`

For detailed instructions, see Delegated Administrator Initial Configuration.

Messaging Server 7 Update 5

Run the initial configuration program:

- For a legacy configuration: *INSTALLROOT*`/messaging64/bin/configure`
- For a Unified Configuration: *INSTALLROOT*`/messaging64/bin/configure --xml`

For detailed instructions, see Messaging Server Initial Configuration.

Calendar Server 7 Update 3

Run the initial configuration program:

INSTALLROOT`/davserver/sbin/init-config`

For detailed instructions, see Calendar Server Initial Configuration.

Indexing and Search Service 1 Update 4

Run the initial configuration program:

INSTALLROOT`/jiss/bin/setup`

For detailed instructions, see Indexing and Search Service Initial Configuration. As of Indexing and Search Service 1 Update 2, the `setup.sh` configuration program was renamed to simply `setup`.

Instant Messaging 9

Run the initial configuration program:

INSTALLROOT`/im/sbin/configure`

For detailed instructions, see Instant Messaging Initial Configuration.

Convergence 2

Run the initial configuration program:

INSTALLROOT`/iwc/sbin/init-config`

For detailed instructions, see Convergence Initial Configuration.

Messaging Server Sun Cluster HA Agent 7.0

Run the initial configuration program:

msg-scha-base`/bin/init-config`

This command registers the HA agent with the Sun Cluster HA software. You must have the Sun Cluster HA software installed prior to issuing this command.

For more information about configuring the Messaging Server Sun Cluster HA agent, see Configuring Messaging Server for High Availability.

Instant Messaging Sun Cluster HA Agent

Run the initial configuration program:

im-scha-base`/bin/init-config`

This command registers the high availability (HA) agent with the Sun Cluster HA software. You must have the Sun Cluster HA software installed before you issue this command.

For more information about configuring the Instant Messaging Sun Cluster HA agent, see Configuring Instant Messaging for High Availability.

Uninstalling Communications Suite

To uninstall the Communications Suite products that are installed on the local machine, run the following commands:

```
cd <INSTALLROOT>/CommsInstaller/bin
./commpkg uninstall
```

For detailed instructions, see the following information:

- commpkg uninstall Usage
- Uninstalling Communications Suite in Silent Mode
- commpkg - General Syntax and Commands

Getting Information About Which Products Are Installed

- To determine the Communications Suite software components installed on the machine, run the following command:

  ```
  ./commpkg info --verbose
  ```

- To determine which version of GlassFish Server you have installed, see Verifying the GlassFish Server Version.

commpkg - General Syntax and Commands

Communications Suite Installer: General Syntax and Commands Version 7 Update 4

The Communications Suite installer, `commpkg`, comprises several commands (verbs) that enable you to install, uninstall, and upgrade Communications Suite products and shared components.

Topics:

- Communications Suite Installer Syntax
- Communications Suite Installer Commands

Communications Suite Installer Syntax

The following syntax applies to the Communications Suite installer in general:

```
commpkg [general options] verb [verb-specific options]
```

Communications Suite Installer General Options

The *general options* for the installer are:

Option	Description
`-? or --help`	Displays Help.
`-V or --version`	Displays the Communications Suite Installer version.
`--OSversionOverride`	Overrides the operating-system version check.
`--fixEntsys [y|n]`	Fixes an invalid Sun Java Enterprise System (Java ES) `entsys symlink`, making the link point to the latest Java version upgraded by `commpkg`. The Java ES symlink is located in `/usr/jdk/entsys-j2se`. Choose `--fixEntsys y` to fix the Java ES symlink to the Java files. If you do not specify this switch, `commpkg` prompts you if the symlink is invalid. However, in silent mode, the default is *not* to fix the symlink (the equivalent of using a value of n). To fix the symlink in silent mode, type `commpkg install --fixEntsys y --silent` *`INPUTFILE`* on the command-line.

You need to be logged in as superuser (`root`) to run the installer.

Communications Suite Installer Verbs

The *verb* is one of the following:

Verb	Description
`install`	Performs Communications Suite installation
`uninstall`	Performs Communications Suite uninstallation
`info`	Displays Communications Suite information
`upgrade`	Performs Communications Suite upgrade
`verify`	Verifies installed products

Communications Suite Installer Commands

See the following documentation for moe information about the `commpkg` commands (verbs) and their options:

- `commpkg install` Usage
- `commpkg upgrade` Usage
- `commpkg uninstall` Usage
- `commpkg info` Usage
- `commpkg verify` Usage

commpkg info Usage

commpkg info Usage
Version 7 Update 4

The `commpkg info` command obtains information about the following items:

- The paths (also known as `installroots`) where Communication Suite products are installed
- The products that are installed in those paths

To use the command, as `root`, invoke `commpkg info`. You can also use the command to repair the software list by adding known `installroots` and deleting incorrect `installroots` in the software list.

Topics:

- Communications Suite Installer Verbs
- commpkg info Syntax
- commpkg info Options
- commpkg info Sample Sessions

Communications Suite Installer Verbs

For information about the `commpkg` general syntax, other commands and options, see commpkg - General Syntax and Commands.

commpkg info Syntax

`commpkg info` [*options*] [*installroot* | *name*]

The *`installroot`* | *`name`* specifies an `installroot` or name from the software list. The name is a friendly, shorthand name in the software list that indicates the `installroot` to use. If you enter a name that does not exist in the software list, an error results. If no `installroot` or name is specified, the `commpkg info` command prints information on all the `installroots` listed in the software list.

If `installroot` is specified and does not exist in the software list, and is a valid alternate root, the `commpkg info` command adds the `installroot` to the software list.

To specify the default root, use `"/"` or `""`. The friendly name for the default root is `""`.

commpkg info Options

The following options are used by the `commpkg info` command:

commpkg info Options

commpkg install options	Description
`-? or --help`	Displays help.
`-V or --version`	Displays version of Communications Suite components.
`--clean`	Removes entries in the software list. If *installroot* | *name* is specified, the option removes the entry from the software list. If no *installroot* | *name* is specified, the option removes all entries from the software list.
`--listPackages`	Lists the packages that make up each Communications Suite product, shared component, and OS auxiliary product. This option also displays the mnemonic for each Communications Suite product or component such as `comm_dssetup.pl`.
`--verbose`	Prints product information installed in the `installroots`. To print information for a specific `installroot`, run this command as follows: `commpkg info --verbose` *installroot*

commpkg info Sample Sessions

- Sample `commpkg info` session
  Sample `commpkg info` session using an alternate root

commpkg info altroot Sample Session

commpkg info altroot Sample Session

This sample session shows the output of `commpkg info` with an alternate root (altroot) installation for Communications Suite 7 Update 4 products.

Topics:

- Comments
- Summary of Commands Run
- Session

Comments

```
- This shows the output of "commpkg info" for an altroot installation
```

Summary of Commands Run

```
937  uname -a
938  ./commpkg info
```

Session

```
[965 Tue May 07 18:24:57 root@host1% /home/user/wspace/releases/ci74# ]
# uname -a
SunOS host1 5.10 Generic_147440-12 sun4v sparc sun4v
[966 Tue May 07 18:25:05 root@host1% /home/user/wspace/releases/ci74# ]
# ./commpkg info
-- LOGFILE: /tmp/CommsInstaller_20130507182507.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: It is highly recommended that you apply the
          latest OS Recommended Patch Cluster. commpkg will
          not do this automatically.
ALTROOT: /
  NAME: ""

=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
```

```
          147147-26
  NOTICE: It is highly recommended that you apply the
          latest OS Recommended Patch Cluster. commpkg will
          not do this automatically.
ALTROOT: /opt/altroot
  NAME: <none>
  Product: Messaging Server (64bit) 7u5 64bit
           Oracle Version: Not Found
           Version: 7.5-28.21
           ALTROOT: /opt/altroot
           Basedir: /opt/altroot/messaging64
           Build Date: 20130408
  Product: Comms DSsetup 6.4
           Oracle Version: Not Found
           Version: 6.4-24.03
           ALTROOT: /opt/altroot
           Basedir: /opt/altroot/dssetup
           Build Date: 20120611
  Product: Calendar Server 7u3
           Oracle Version: 7.0.3.10.0
           Version: 7.3-10.10
           ALTROOT: /opt/altroot
           Basedir: /opt/altroot/davserver
           Build Date: 20130328
  Product: Instant Messaging 9
           Oracle Version: Not Found
           Version: 9.0-03.02
           ALTROOT: /opt/altroot
           Basedir: /opt/altroot/im
           Build Date: Not Found
  Product: Convergence 2
           Oracle Version: Not Found
           Version: 2.0-6.01
           ALTROOT: /opt/altroot
           Basedir: /opt/altroot/iwc
           Build Date: 20130402
  Product: Indexing and Search Service 1u4
           Oracle Version: 1.0.4.16.0
           Version: 1.4-16.9301
           ALTROOT: /opt/altroot
           Basedir: /opt/altroot/jiss
           Build Date: 20130320
  Product: Comms Delegated Administrator 7
           Oracle Version: Not Found
           Version: 7.0-7.00
           ALTROOT: /opt/altroot
           Basedir: /opt/altroot/da
           Build Date: Not Found
  Product: Messaging Server Sun Cluster HA agent 7.0
           Oracle Version: Not Found
           Version: 7.0-0.03
           ALTROOT: /opt/altroot
           Basedir: /opt/altroot/msg_scha
           Build Date: 20080519
  Product: Instant Messaging Sun Cluster HA agent 7.3
           Oracle Version: Not Found
```

```
Version: 7.3-01
ALTROOT: /opt/altroot
Basedir: /opt/altroot/im_scha
Build Date: Not Found
```

```
[967 Tue May 07 18:25:25 root@host1% /home/user/wspace/releases/ci74# ]
```

commpkg info Sample Session

commpkg info Sample Session

This sample session shows the output of `commpkg info` in Communications Suite 7 Update 4.

Topics:

- Comments
- Summary of Commands Run
- Session

Comments

```
- "commpkg info" will show what is installed.
```

Summary of Commands Run

```
937  uname -a
938  ./commpkg info
```

Session

```
[937 Tue May 07 18:01:03 root@host1% /home/user/wspace/releases/ci74# ]
# uname -a
SunOS host1 5.10 Generic_147440-12 sun4v sparc sun4v
[938 Tue May 07 18:01:26 root@host1% /home/user/wspace/releases/ci74# ]
# ./commpkg info
-- LOGFILE: /tmp/CommsInstaller_20130507180130.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: It is highly recommended that you apply the
          latest OS Recommended Patch Cluster. commpkg will
          not do this automatically.
ALTROOT: /
  NAME: ""
  Product: Messaging Server (64bit) 7u5 64bit
           Oracle Version: Not Found
           Version: 7.5-28.21
           ALTROOT: /
           Basedir: /opt/sun/comms/messaging64
           Build Date: 20130408
  Product: Comms DSsetup 6.4
           Oracle Version: Not Found
```

```
          Version: 6.4-24.03
          ALTROOT: /
          Basedir: /opt/sun/comms/dssetup
          Build Date: 20120611
Product: Calendar Server 7u3
          Oracle Version: 7.0.3.10.0
          Version: 7.3-10.10
          ALTROOT: /
          Basedir: /opt/sun/comms/davserver
          Build Date: 20130328
Product: Instant Messaging 9
          Oracle Version: Not Found
          Version: 9.0-03.02
          ALTROOT: /
          Basedir: /opt/sun/comms/im
          Build Date: Not Found
Product: Convergence 2
          Oracle Version: Not Found
          Version: 2.0-6.01
          ALTROOT: /
          Basedir: /opt/sun/comms/iwc
          Build Date: 20130402
Product: Indexing and Search Service 1u4
          Oracle Version: 1.0.4.16.0
          Version: 1.4-16.9301
          ALTROOT: /
          Basedir: /opt/sun/comms/jiss
          Build Date: 20130320
Product: Comms Delegated Administrator 7
          Oracle Version: Not Found
          Version: 7.0-7.00
          ALTROOT: /
          Basedir: /opt/sun/comms/da
          Build Date: Not Found
Product: Messaging Server Sun Cluster HA agent 7.0
          Oracle Version: Not Found
          Version: 7.0-0.03
          ALTROOT: /
          Basedir: /opt/sun/comms/msg_scha
          Build Date: 20080519
Product: Instant Messaging Sun Cluster HA agent 7.3
          Oracle Version: Not Found
          Version: 7.3-01
          ALTROOT: /
          Basedir: /opt/sun/comms/im_scha
          Build Date: Not Found
```

```
[941 Tue May 07 18:11:47 root@host1% /home/user/wspace/releases/ci74# ]
```

commpkg install Usage

commpkg install Usage
Version 7 Update 4

Topics:

- About the commpkg install Command
- commpkg install Command Syntax
- commpkg install Command Options

About the commpkg install Command

The `commpkg install` command enables you to install the Communications Suite products and shared components.

The `install` sub-command installs the Communications Suite component software on your machine but does not configure these components. After software installation, you run the product-specific configure command. For more information, see Communications Suite Initial Configuration.

To use the command, as superuser (`root`), run `commpkg install`. "Power user" options are available for more complicated installation scenarios.

> **Tip**
> Installing Only Shared Components: To install just the shared components for a component product, launch the Communications Suite installer then prefix your product selection with a tilde (~). For example, to install only the shared components for Messaging Server 64-bit, at the Product Selection prompt, you would type **~1**. You can type multiple selections by using a comma to separate your entries.

For a sample installation and uninstallation, see: Sample Session - Communications Suite Simple Install and Uninstall.

commpkg install Command Syntax

`commpkg` [*general options*] `install` [*install options*] [*ALTROOT* | *name*]

For information about the `commpkg` general syntax, other sub-commands and general options, see:

Communications Suite Installer: General Syntax and Commands

Using the ALTROOT | name Command-Line Argument

This argument is supported only on Solaris OS. Specify *ALTROOT* | *name* on the command line to install components in an alternate root.

For more information, see Using the ALTROOT Command-Line Argument.

Using the *name* Argument (Instead of *installroot*)

If you specify the *name* command-line argument and it exists in the software list, the corresponding *ALTROOT* is used.

If you also specify the `--installroot` option, it must correspond to the entry in the software list. If you specify *name* and it does not exist in the software list, it is added to the software list.

Specifying any *name* other than `""` implies an `ALTROOT`. A value for *name* of `""` is reserved for the default root.

commpkg install Command Options

The following options are used by the `commpkg install` command:

commpkg install options	**Description**
`--help` or `-?`	Prints help information.
`--version` or `-V`	Prints version information.
`--excludeOS`	Does not apply operating system patches during product installation.
`--excludeSC`	Does not install, upgrade, or patch any Shared Components.
`--altroot` [*name*]	This option has been deprecated. Use the *ALTROOT* | *name* command-line argument instead. This option is available on Solaris OS only. Specifies an alternate root directory during a multi-host installation. The `INSTALLROOT` (the top level installation directory for all products and shared components) is the alternate root. If you specify a *name*, it will be a friendly name associated with the `altroot` that is registered in the software list. You can use this option to install multiple instances of Communications Suite products on the same host or Solaris zone. You can also use this option to perform a side-by-side upgrade of Communications Suite products.
`--distro` *path*	Specifies the *path* to packages or patches for the products Default: Location of `commpkg` script
`--installroot` *path*	Specifies the *path* of `INSTALLROOT`, the top level installation directory for Communications Suite products and shared components. Default `INSTALLROOT` on Solaris OS and Red Hat Linux: `/opt/sun/comms` The subdirectories for individual Communications Suite products are installed under the `INSTALLROOT`.

`--silent` *INPUTFILE*	Runs silent installation, taking the inputs from the *INPUTFILE* and the command-line arguments. The command-line arguments override entries in the *INPUTFILE*. Installation proceeds without interactive prompts. Use `--dry-run` to test silent installation without actually installing the software. Specify `NONE` for *INPUTFILE* if you want to run in silent mode without using an input file. When you specify `NONE`, the installation uses default values. For more information about running a silent installation, see Installing Communications Suite in Silent Mode.
`--dry-run` or `-n`	Does not install Communications Suite components. Performs checks.
`--upgradeSC [y|n]`	Upgrades or does not upgrade shared components as required. If this option is not specified, you are prompted for each shared component that needs to be upgraded by using package removal and installation. Default: n **Caution** Upgrading shared components by using package removal and installation is irreversible. However, if you do not upgrade required shared components, products might not work as designed. The `--excludeSC` flag has precedence over this flag.
`--auditDistro`	Audits the installation distribution to verify that the required patches and packages are present and that the packages have the correct versions. Compares the installed distribution to the product files internal to `commpkg`.
`--pkgOverwrite`	Overwrites the existing installation package. You might use this option when you are installing a shared component in a global zone where either the shared component does not exist in a global zone, or the shared component exists in the whole root zone. The default is not to override the existing package. In general, shared components should be managed in the global zone.
`--components <comp1 comp2 ...>`	A space delimited set of component products. Each product has mnemonic associated with it. Use `commpkg info --listPackages` to see the mnemonic for a product. In most shells you need to escape the space between each mnemonic, that is, by adding double quotes around all the components.
`--skipOSLevelCheck`	(Solaris only) The installer always checks that the OS is at a certain minimum patch level. Using this option skips the check.

commpkg uninstall Usage

commpkg uninstall Usage
Version 7 Update 4

The `commpkg uninstall` command enables you to uninstall the Communications Suite products and shared components.

For information about the `commpkg` general syntax, other commands and options, see commpkg - General Syntax and Commands.

Topics:

- Uninstalling Communications Suite Components
- commpkg uninstall Command Syntax
- commpkg uninstall Command Options

Uninstalling Communications Suite Components

This command uninstalls Communication Suite products. However it does not remove OS patches or shared components installed by `commpkg install`.

To uninstall one or more Communications Suite component, change to the *INSTALLROOT* `/CommsInstaller/bin/` directory, and as `root`, run `commpkg uninstall`.

> **Note**
> A fast way to uninstall a Communications Suite component installed in an alternate root is to simply remove the entire alternate root directory.

For a sample installation and uninstallation, see: Sample Session - Communications Suite Simple Install and Uninstall.

commpkg uninstall Command Syntax

`commpkg uninstall` [*options*] [*ALTROOT* | *name*]

You must be logged in as superuser (`root`) to run this command.

Using the ALTROOT | name Command-Line Argument

This argument is supported only on Solaris OS. Specify *ALTROOT* | *name* on the command line to uninstall an alternate root directory for the uninstallation.

If you specify the `--rootdir` option in addition to the *ALTROOT* | *name* command-line argument, they must match.

For more information, see Using the ALTROOT Command-Line Argument.

commpkg uninstall Command Options

The following options are used by the `commpkg uninstall` command:

commpkg uninstall Command Options

Options	Description
`--silent` *INPUTFILE*	Runs the uninstaller silently, taking the inputs from the *INPUTFILE* and the command-line arguments. Any command-line arguments override entries in the *INPUTFILE*. Uninstallation proceeds without interactive prompts. Use `--dry-run` to test silent uninstallation.
`--dry-run` or `-n`	Does not actually uninstall the Communications Suite components, only performs checks. The silent uninstallation *INPUTFILE* is created in `/tmp`.
`--rootdir` *path*	This option is deprecated in favor of using the *ALTROOT* or *name* command-line argument. This option specifies the *path* of *ALTROOT*, the alternate root used for multi-installation. Supported on Solaris OS only. If you specify this option and the *ALTROOT* | *name* argument the values must be consistent.

commpkg verify Usage

commpkg verify Usage
Version 7 Update 4

The `commpkg verify` command enables you to verify the package installation of the Communications Suite products and shared components. To use the command, as `root`, invoke `commpkg verify`.

For information about the `commpkg` general syntax and options, see Communications Suite Installer: General Syntax and Commands.

> **Tip**
> When verifying the package installation in an alternate root, be aware that products do use the OS components installed in the default root. Some products might also use shared components in the default root. Thus, verify the package installation in the default root as well.

Commpkg verify Command: Syntax

`commpkg verify` [*options*] [*ALTROOT* | *name*]

Using the ALTROOT | name Command-Line Argument

This argument is supported only on Solaris OS. Specify *ALTROOT* | *name* on the command line to if you need to specify an alternate root directory on which to perform the package verification.

For more information, see Using the ALTROOT Command-Line Argument.

commpkg verify Command: Options

The following options are used by the `commpkg verify` command:

commpkg verify Options

Options	Description
`--help` or `-?`	Prints help information
`--version` or `-V`	Prints version information
`--excludeOS`	Do not verify operating system components
`--excludeSC`	Do not verify shared components

Communications Suite Directory Server Setup Script (comm_dssetup.pl)

Communications Suite Directory Server Setup Script (comm_dssetup.pl) Version 6.4 (6.4-24.03)

After you install the Communications Suite products and *before* you create initial configurations for these products, you must prepare Directory Server by using the Communications Suite Directory Setup Script, (`comm_dssetup.pl`).

Topics:

- Before You Run the `comm_dssetup.pl` Script
- Running the comm_dssetup.pl Script
- Manually Updating Schema Files
- Resolving Conflicting Calendar Server OID's in the LDAP Schema
- Sample Sessions
- DSsetup Patches by Release

Before You Run the `comm_dssetup.pl` Script

This section covers information you need to understand before running the `comm_dssetup.pl` script, and contains the following topics:

- What the `comm_dssetup.pl` Script Does
- Directory Server Considerations for the comm_dssetup.pl Script
- Information You Need to Gather Before you Run the comm_dssetup.pl Script
- About the comm_dssetup.pl choices for Directory Server root path name and instance
- About the comm_dssetup.pl Script Schema Choices
- Access Manager Considerations
- Attribute Indexes Created by the comm_dssetup.pl Script

What the `comm_dssetup.pl` Script Does

The `comm_dssetup.pl` script performs the following three steps:

1. Collects your choices for utility options.
   For a list of the specific information this step requests, see Information You Need to Gather Before you Run the comm_dssetup.pl Script.
2. Generates a shell script and LDIF file from your options choices that will be used to modify the LDAP directory.
   If you are not using a Sun product for your directory server, or have customized your Directory Server, stop the process here without running the shell script. For further information, see Directory Server Considerations for the comm_dssetup.pl Script.
3. Runs the shell script created from your options choices. Your directory is modified accordingly.

At the end of each step, the utility asks you if you want to continue. No changes are made to the LDAP directory until the third step.

Directory Server Considerations for the comm_dssetup.pl Script

The following is a list of the considerations for your LDAP directory:

`comm_dssetup.pl` is a configuration tool that is for local LDAP instances servers. Thus,

- You must install the `comm_dssetup.pl` script on every machine on which a Directory Server resides.
- You must run the `comm_dssetup.pl` script on the same machine as your Directory Server. The tool runs locally for a specific instance (specified by path of directory server or path of instance).
- `comm_dssetup.pl` is installed into the "DirPrepTool-base", but can be run against any Directory Server instance on the local system. If you have multiple DIT's on one system, you can maintain and update one install of `comm_dssetup.pl`, and apply it to every Directory Server on the system.

`comm_dssetup.pl` must configure every Directory Server instance for the same DIT.

- A Directory Server must be installed, configured, and running before you run the `comm_dssetup.pl` script.
- If you add an additional machine that has Directory Server installed on it (such as a replica), at a future date, run the `comm_dssetup.pl` script against it, too.

If you have customized your LDAP directory, the following considerations might apply:

- If you have indexed some attributes, you might have to reindex those attributes after the `comm_dssetup.pl` script runs.
- If you have added other `.ldif` files (schema definitions), they should not be affected, so no action should be necessary. However, back up your custom schema definition files before running the `comm_dssetup.pl` script. As of `comm_dssetup.pl` 6.4p5, the old schema files are backed up to the `/var/tmp/dssetup_`*`timestamp`*`/save` directory.
- For all customizations, including the first two just listed, stop the `comm_dssetup.pl` script after it generates the script and before it actually updates the LDAP directory. Then inspect the script to evaluate how its proposed actions will affect your LDAP directory. Take whatever actions you think necessary to protect your customizations before running the script against your directory.

Information You Need to Gather Before you Run the comm_dssetup.pl Script

The `comm_dssetup.pl` script runs by first requesting information about your Directory Server. Prepare for this by gathering the information shown in the following table. (To help you keep track of this information, use Configuration Worksheets - comm_dssetup.pl Script.)

Information Item Needed	Default Value
Directory Server root path name	The default depends on the Directory Server version detected. The `comm_dssetup.pl` script does attempt to heuristically determine the value.
Which instance of Directory Server to use? (If more than one.)	The default depends on the Directory Server version detected. The `comm_dssetup.pl` script does attempt to heuristically determine the value.
Directory Manager Distinguished Name (DN)	`"cn=Directory Manager"`
Directory Manager's Password	N/A
Directory Server being used for user/group data? (yes), or configuration data only? (no) Note that a configuration data only Directory Server is used only for Messaging Server 6.2 or earlier.	`yes`
User and group root suffix (if yes to previous question)	The default depends on what is detected. The `comm_dssetup.pl` script does attempt to heuristically determine the value.
Schema version? (pick one of the following) `1` - Schema 1 `1.5` - Schema 2 Compatibility Mode `2` - Schema 2 Native Mode For more information on how to choose a schema, see About the `comm_dssetup.pl` script Schema Choices. If you have one version of the schema installed and want to upgrade to a higher level, refer to the *Sun Java System Communications Services 6 2005Q4 Schema Migration Guide* before running this utility.	2. However, if you run `comm_dssetup` again, it defaults to the value that you chose the previous time.
If you choose Schema 1 or 1.5, you will need a DC tree. If the DC tree does not yet exist, the `comm_dssetup.pl` script creates only the root suffix node, its does not create the rest of the DC tree. You must create the rest of your DC tree yourself.	`o=internet`. However, if you run `comm_dssetup` again, it defaults to the value that you chose the previous time.

About the comm_dssetup.pl choices for Directory Server root path name and instance

The combination of the Directory Server root path and the instance is used to create an absolute pathname to the Directory Server instance. For example, if your Directory Server instance resides under `/var/opt/sun/directory/slapd-varrius` then you should use `/var/opt/sun/directory` then you should specify `/var/opt/sun/directory` for the Directory Server root path and `slapd-varrius` for the Directory Server instance. The reason for having two prompts to specify one absolute path is historical. Prior to Directory Server (DS) 6.x, DS had the concept of a "server root" under which all DS instances (as well as the DS binaries) reside. Starting with DS 6.x and later, the concept of the "server root" was removed. DS instances (as well as the DS binaries) do not all have to reside under a single umbrella "server root" directory.

About the comm_dssetup.pl Script Schema Choices

Communications Suite servers support the following schema choices:

- Sun LDAP Schema 2 native mode
  Corresponds to `comm_dssetup.pl` script schema version choice 2. This is the default for a fresh installation.
- Sun LDAP Schema 1
  Corresponds to the `comm_dssetup.pl` script schema version choice 1.
- Sun LDAP Schema 2 compatibility mode
  Corresponds to `comm_dssetup.pl` script schema version choice 1.5.

If you are still trying to decide which schema to use, for further explanation, see Understanding Schema Choices, and the *Sun Java System Communications Services 6 2005Q4 Schema Migration Guide*.

Access Manager Considerations

Starting with **Delegated Administrator 7**, Access Manager is no longer required for Schema 2.

Note
Do not use the Access Manager console to administer users. Use Delegated Administrator for administering Messaging and Calendar users.

Attribute Indexes Created by the comm_dssetup.pl Script

Attribute indexes improve the performance of search algorithms. The tool offers to index attributes. If you choose to do so, it will add indexes for the all the Communications Suite products.

The following table lists all the attributes the `comm_dssetup.pl` script indexes, grouped by suffix category. It also lists the type of indexes created for each attribute. For more information about Directory Server indexing, see the Directory Server documentation.

Suffix	Attributes Indexed	Type of Indexes Added
User/Group	`mail`	`pres`, `eq`, `approx`, `sub`
	`mailAlternateAddress`	`pres`, `eq`, `approx`, `sub`
	`mailEquivalentAddress`	`pres`, `eq`, `approx`, `sub`
	`mailUserStatus`	`pres`, `eq`
	`member`	`eq`
	`ou`	`pres`
	`cosspecifier`	`pres`
	`groupid`	`pres`, `eq`, `sub`
	`icsCalendar`	`pres`, `eq`, `approx`, `sub`
	`icsCalendarOwned`	`pres`, `eq`, `approx`, `sub`
	`uniqueMember`	`eq`
	`memberOf`	`eq`, `sub`
	`cn`	`eq`

	mgrpUniqueId	eq
	deleted	pres, eq
	inetCos	eq
User/Group (additional for Schema 2)	inetDomainBaseDN	pres, eq
	sunPreferredDomain	pres, eq
	associatedDomain	pres, eq
	o	pres, eq
	mailDomainStatus	pres, eq
	sunOrganizationAlias	pres, eq
DC Tree (for Schema 1)	inetDomainBaseDN	pres, eq
	mailDomainStatus	pres, eq
	inetCanonicalDomainName	pres, eq
Personal Address Book (PAB) (o=pab) **Note: For old Address Book**	memberOfManagedGroup	pres, eq
	memberOfPAB	pres, eq
	memberOfPABGroup	pres,eq
	un	eq
New PAB (o=PiServerDb)	displayname	pres, eq, sub
	MemberOfPiBook	eq
	MemberofPiGroup	eq
o=mlusers for future mailserv feature	mail	eq
	mlsubListIdentifier	eq
	mlsubMail	eq

Should you decide to add further indexes on your own, instructions for adding indexes can be found in the Directory Server documentation.

Running the comm_dssetup.pl Script

This section covers the following topics:

- To Run the comm_dssetup.pl Script
- To Run the comm_dssetup.pl Script in Interactive Mode
- To Run the comm_dssetup.pl Script in Silent Mode
- Explanation of Options for Running comm_dssetup.pl Script in Silent Mode

To Run the comm_dssetup.pl Script

1. On the server where Directory Server is installed, log in as or become superuser `root`.
2. Start Directory Server, if necessary.
3. Change to the directory where you installed or copied the `comm_dssetup.pl` script.

4. Run the `sbin/comm_dssetup.pl` script in either silent mode or in interactive mode.

For further steps, see To Run the comm_dssetup.pl Script in Interactive Mode or To Run the comm_dssetup.pl Script in Silent Mode.

To Run the comm_dssetup.pl Script in Interactive Mode

To run the `comm_dssetup.pl` script in interactive mode, run the script without any arguments and then enter your choices for the questions asked.

```
/usr/bin/perl comm_dssetup.pl
```

To Run the comm_dssetup.pl Script in Silent Mode

- `comm_dssetup.pl` Script Silent Mode Instructions
- `comm_dssetup.pl` Script Silent Mode Syntax

comm_dssetup.pl Script Silent Mode Instructions

To run the `comm_dssetup.pl` script in silent mode, issue the Perl command followed by a string of options using the syntax shown in comm_dssetup.pl Script Silent Mode Syntax. All of the option arguments are required.

The utility creates the following LDIF file and shell script to update the LDAP directory indexes and schema:

`/var/tmp/dssetup_`*`timestamp`*`/dssetup.ldif`

`/var/tmp/dssetup_`*`timestamp`*`/dssetup.sh`

Depending on the option values you pass in, the utility will either proceed to update the Directory Server by executing the new script, or not. If you have chosen not to proceed with the update, you can check the script and make any desired modifications before running the actual update at a later time.

comm_dssetup.pl Script Silent Mode Syntax

The following are all the options for running in the silent mode:

```
perl comm_dssetup.pl -i <yes|no> -R <yes|no> -c <DirectoryServerRoot> -d
<DirectoryInstance> -r <DCTreeSuffix> -u <UserGroupSuffix> -s <yes|no>
-D <DirectoryManagerDN> -j <DirectoryManagerPasswordFile> -b <yes|no> -t
<1|1.5|2> -m <yes|no> [-S <PathtoSchemaFiles>
```

Explanation of Options for Running comm_dssetup.pl Script in Silent Mode

Option and Argument	Description
-i `yes|no`	Answers the question: "Do you want to configure new indexes?" `yes` - Add new Directory Server indexes. `no` - Do not add indexes.
-R `yes | no`	Answers the question: "Do you want to reindex now?" The -m option must be `yes` also for this to take effect.
-c *`DirectoryServerRoot`*	Directory Server root path. For example: `/var/opt/sun/directory`
-d *`DirectoryInstance`*	Directory Server instance subdirectory under the Directory Server root path. For example: `slapd-varrius`
-r *`DCTreeSuffix`*	DC tree root suffix. (for Schema 1 and Schema 2 compatibility modes only) For example: `o=internet`
-u *`UserGroupSuffix`*	User and group root suffix. For example: `o=usergroup`
-s `yes | no`	Answers the question: "Do you want to update the schema?" `yes` - Update the schema. `no` - Do not update schema.
-D *`DirectoryManagerDN`*	Directory Manager Distinguished Name (DN). The value must be enclosed by double quotation marks (`" "`) to allow the `comm_dssetup.pl` script to interpret a value with a space correctly. For example: `"cn=Directory Manager"`
-j *`DirectoryManagerPasswordFile`*	File containing the Directory Manager DN password.
-b `yes | no`	Answers the question: "Will this directory server be used for users and groups?" `yes` - Use this directory to store both configuration and user group data. `no` - Use this directory to store only configuration data. This is only used for Messaging Server 6.2 or earlier
-t `1|1.5|2`	Specifies the schema version.
-m `yes | no`	Answers the question: "Do you want to modify the directory server?" `yes` Modify the Directory Server without prompting the user. `no` Do not modify the Directory Server without prompting the user.
-S *`PathtoSchemaFiles`*	Path to the directory where the schema files are located. For example: `./schema`

Manually Updating Schema Files

If for any reason, you have decided not to run the `comm_dssetup.pl` script generated script, the following directions allow you to manually update your schema files for Directory Server.

> **Note**
> If you update your LDAP directory schema manually and then later upgrade Calendar Server, you must manually update the LDAP server schema again. Calendar Server cannot automatically update the schema after it has previously been updated manually.

To Update Your LDAP Directory Manually

1. Install Calendar Server 7.
2. Stop Calendar Server, if it is running.
3. Stop Directory Server, if it is running.
4. Copy the `60iplanet-calendar.ldif` file to the following directory on the machine where your Directory Server is running:
   dir-svr-base`/slapd-`*hostname*`/config/schema` where *dir-svr-base* is the Directory Server installation directory and *hostname* identifies the machine.
5. If you want to index attributes, as the configuration program does, do it at this point.
   For a list of the attributes the configuration program indexes, see Attribute Indexes Created by the comm_dssetup.pl Script.
6. Restart the Directory Server.

If you receive object identifier (OID) errors, see Resolving Conflicting Calendar Server OID's in the LDAP Schema.

Resolving Conflicting Calendar Server OID's in the LDAP Schema

If your LDAP schema contains conflicting OID's, the Directory Server does not know which OID to use and returns an error message. For example, the following message indicates a conflicting OID for the `icsCalendarUser` object class:

```
[24/Apr/2004:23:45:28 -0700] dse -
The entry cn=schema in file 99user.ldif is invalid,
error code 20 (Type or value exists) - object class icscalendaruser:
   The name does not match the OID.
   Another object class is already using the name or OID.
[24/Apr/2004:23:45:28 -0700] dse -
Please edit the file to correct the reported problems
and then restart the server.
```

This problem can occur when you install Calendar Server and you also had an older Calendar Server release that dynamically updated your Directory Server `99user.ldif` file.
To resolve the conflicting OID's, perform the following two steps:

1. Edit the `99user.ldif` file and remove the older OID's. The following table lists the specific OID's that might cause problems.

Object Class	Old OID	New OID
`icsCalendarUser`	1.3.6.1.4.1.42.2.27.9.2.44	1.3.6.1.4.1.42.2.27.9.2.140
`icsCalendarResource`	1.3.6.1.4.1.42.2.27.9.2.45}}	1.3.6.1.4.1.42.2.27.9.2.141
`icsCalendarDomain`	1.3.6.1.4.1.42.2.27.9.2.4	1.3.6.1.4.1.42.2.27.9.2.149

2. After you edit the `99user.ldif` file, restart the Directory Server.

Sample Sessions

- DSsetup 6.4-24 Sample Session - Fresh Directory Server 7.0 Instance for Schema 1
- DSsetup 6.4-24 Sample Session - Existing Directory Server 7.0 Instance for Schema 1
- DSsetup 6.4-24 Sample Session - Fresh Directory Server 7.0 Instance for Schema 2
- DSsetup 6.4-24 Sample Session - Existing Directory Server 7.0 Instance for Schema 2

DSsetup Patches by Release

- DSsetup Patches By Release

DSsetup 6.4-24 Sample Session - Existing Directory Server 7.0 Instance for Schema 1

DSsetup 6.4-24 Sample Session - Existing Directory Server 7.0 Instance for Schema 1

This section outlines the commands to run and lists a sample session.

Topics:

- Summary of Commands Run
- Comments
- Session

Summary of Commands Run

```
113 sbin/comm_dssetup.pl
114 stty -echo
115 ls /var/tmp/dssetup_20120906233644
116 ls /var/tmp/dssetup_20120906233644/save
117 cat /var/tmp/dssetup_20120906233644/99user_new.ldif
118 cat /var/tmp/dssetup_20120906233644/dssetup.ldif
119 cat /var/tmp/dssetup_20120906233644/dssetup.ldif.rej
120 cat /var/tmp/dssetup_20120906233644/dssetup.sh
121 cat /var/tmp/dssetup_20120906233644/dssetup.log
```

Comments

This sample session shows the output of `comm_dssetup.pl` on an existing Directory Server 7.0 instance for Schema 1.

Session

```
[113 Thu Sep 06 23:36:36 root@host1% /opt/sun/comms/dssetup# ]
# sbin/comm_dssetup.pl

Welcome to the Directory Server preparation tool (Comms DSsetup)
6.4.0.24.0 for
Oracle Communications Unified Communications Suite
dssetup Version 6.4-24.03 (built Mon Jun 11 14:36:51 PDT 2012)

This tool prepares your directory server for use by the
communications services which include Messaging, Calendar and their
components.

The logfile is /var/tmp/dssetup_20120906233644/dssetup.log

Do you want to continue [y]:

Please enter the full path to the directory where the
Directory Server instance(s) reside ("server-root"), or
```

```
an explicit Directory Server instance directory

Directory server root [/var/opt/sun/directory] :


Please select a directory server instance from the following list:

[1]   ds7


Which instance do you want [1]:

Please enter the directory manager DN [cn=Directory Manager]:

Password:

Configuration from DS config file:
- DS Install location: /opt/dsee7
- DS hostname: host1
- DS port: 389

ldapsearch location: /opt/SUNWdsee/dsee6/bin

Detected DS version 11.1.1.3.0 on host1 port 389

Warning: This version of comm_dssetup.pl (6.4 24.03) has been run
previously (6.4 24.03), you do not need to run it again unless you wish
to specify different parameters to this program
Do you want to continue [y]:


Will this directory server be used for users/groups [yes]:

A list of suffixes are as follows:
  o=mlusers
  o=PiServerDb
  o=pab
  o=internet
  o=usergroup
  o=comms-config

Please enter the Users/Groups base suffix [o=usergroup] :

There are 3 possible schema types:
  1   - schema 1
  1.5 - schema 2 compatibility mode for schema 1 systems
        that has been converted with commdirmig
  2   - schema 2

Please enter the Schema Type (1, 1.5, 2) [1]:


Please enter the DC Tree base suffix [o=internet]:


Do you want to update the schema files [yes]:
```

```
Do you want to configure new indexes [yes]:


Do you want to Reindex the new indexes now [yes]:


Here is a summary of the settings that you chose:

  Server Root                        : /var/opt/sun/directory
  Server Instance                    : ds7
  Users/Groups Directory             : yes
  Update Schema                      : yes
  Schema Type                        : 1
  DC Root                            : o=internet
  User/Group Root                    : o=usergroup
  Add New Indexes                    : yes
  ReIndex New Indexes Now            : yes
  Directory Manager DN               : cn=Directory Manager


Now ready to generate a shell script and ldif file to modify the
Directory.
No changes to the Directory Server will be made this time.
Do you want to continue [y]:

Generating files...

Checking to see if Suffixes need to be added

Checking to see that uid uniqueness plugins are turned off
  Plugin is already disabled

Adding indexes
  Adding Indexes for User/group Tree (backend:usergroupdb2)
    Checking indexes for cn
      No new indexes required
    Checking indexes for cosspecifier
      No new indexes required
    Checking indexes for inetCos
      No new indexes required
    Checking indexes for memberOf
      No new indexes required
    Checking indexes for groupid
      No new indexes required
    Checking indexes for mail
      New indexes and Reindexing required
      ReIndex will happen for index type mail
    Checking indexes for icsCalendar
      No new indexes required
    Checking indexes for mailAlternateAddress
      New indexes and Reindexing required
      ReIndex will happen for index type mailAlternateAddress
    Checking indexes for ou
      No new indexes required
```

```
    Checking indexes for uniqueMember
      No new indexes required
    Checking indexes for member
      No new indexes required
    Checking indexes for mailEquivalentAddress
      No new indexes required
    Checking indexes for deleted
      No new indexes required
    Checking indexes for mgrpUniqueId
      No new indexes required
    Checking indexes for mailUserStatus
      No new indexes required
    Checking indexes for icsCalendarOwned
      No new indexes required
  Adding Indexes for DC Tree (backend:internetdb2)
    Checking indexes for inetDomainBaseDN
      No new indexes required
    Checking indexes for inetCanonicalDomainName
      No new indexes required
    Checking indexes for mailDomainStatus
      No new indexes required
  Adding Indexes for PAB Tree (backend:pabdb2)
    Checking indexes for memberOfManagedGroup
      No new indexes required
    Checking indexes for memberOfPABGroup
      No new indexes required
    Checking indexes for memberOfPAB
      No new indexes required
    Checking indexes for un
      No new indexes required
  Adding Indexes for New PAB Tree (backend:PiServerDbdb2)
    Checking indexes for MemberOfPiBook
      No new indexes required
    Checking indexes for MemberofPiGroup
      No new indexes required
    Checking indexes for displayname
      No new indexes required
  Adding Indexes for Mailing List Tree (backend:mlusersdb2)
    Checking indexes for mail
      No new indexes required
    Checking indexes for mlsubMail
      No new indexes required
    Checking indexes for mlsubListIdentifier
      No new indexes required

Checking to see if DN needs to be created for suffixes

Generating ldif for installer metadata
  Generating ldif for Adding schema for installer metadata
  Generating ldif for updating DN for cn=CommServers,o=comms-config
The following files have been created:
   /var/tmp/dssetup_20120906233644/dssetup.sh
   /var/tmp/dssetup_20120906233644/dssetup.ldif

Running /var/tmp/dssetup_20120906233644/dssetup.sh will make changes to
the Directory
```

```
  You can run this file now or at a later time
Ready to execute the script now.

Do you want to continue [y]:

Running /var/tmp/dssetup_20120906233644/dssetup.sh -D "cn=Directory
Manager" -j /var/tmp/dssetup_20120906233644/dssetup.pw
-- Updating Schema files...
-- Copying 20subscriber.ldif
-- Copying 50ns-delegated-admin.ldif
-- Copying 50ns-mail.ldif
-- Copying 50ns-mlm.ldif
-- Copying 50ns-msg.ldif
-- Copying 50ns-value.ldif
-- Copying 55ims-ical.ldif
-- Copying 56ims-schema.ldif
-- Copying 65im.ldif
-- Copying 70sun-schema2.ldif
-- Copying 71sun-am.ldif
-- Copying 60iplanet-calendar.ldif
-- Copying 50ns-iabs.ldif
-- Copying 98ns-dummy-uwc.ldif
-- Copying 70delgated-admin.ldif
-- Stopping Directory Server
Directory Server instance '/var/opt/sun/directory/ds7' stopped
-- Starting Directory Server
Directory Server instance '/var/opt/sun/directory/ds7' started:
pid=10349
-- Applying ldif file /var/tmp/dssetup_20120906233644/dssetup.ldif
ldap_modify: Type or value exists
modifying entry cn=schema

modifying entry cn=schema

modifying entry cn=CommServers,o=comms-config

modifying entry cn=CommServers,o=comms-config

-- rejects to /var/tmp/dssetup_20120906233644/dssetup.ldif.rej status =
20
-- WARNING: ldapmodify returned 20
-- Done Applying ldif file /var/tmp/dssetup_20120906233644/dssetup.ldif

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mail
approx-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mail o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup mail
approx-enabled:on

-- /opt/dsee7/bin/dsconf -t mail reindex o=usergroup
## usergroupdb2: Indexing attribute: mail
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
```

```
-- Done /opt/dsee7/bin/dsconf reindex -t mail o=usergroup

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailAlternateAddress
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailAlternateAddress o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailAlternateAddress pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailAlternateAddress
approx-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailAlternateAddress o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailAlternateAddress approx-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailAlternateAddress
sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailAlternateAddress o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailAlternateAddress sub-enabled:on

-- /opt/dsee7/bin/dsconf -t mailAlternateAddress reindex o=usergroup
## usergroupdb2: Indexing attribute: mailAlternateAddress
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mailAlternateAddress
o=usergroup

Successful Completion. Consult
/var/tmp/dssetup_20120906233644/dssetup.log for details
[114 Thu Sep 06 23:43:51 root@host1% /opt/sun/comms/dssetup# ]
# stty -echo
stty -echo
[115 Thu Sep 06 23:44:50 root@host1% /opt/sun/comms/dssetup# ]
# ls /var/tmp/dssetup_20120906233644
total 61
   5 99user_new.ldif      29 dssetup.log
   6 dssetup.ldif         14 dssetup.sh*
   2 dssetup.ldif.rej      5 save/
[116 Thu Sep 06 23:49:00 root@host1% /opt/sun/comms/dssetup# ]
# ls /var/tmp/dssetup_20120906233644/save
total 936
 154 00core.ldif                    7 50ns-mcd-li.ldif
  16 00ds6pwp.ldif                 42 50ns-mcd-mail.ldif
   5 05rfc2247.ldif                3 50ns-media.ldif
   3 05rfc2927.ldif               17 50ns-mlm.ldif
  16 11rfc2307.ldif              107 50ns-msg.ldif
  10 20subscriber.ldif              7 50ns-netshare.ldif
   7 25java-object.ldif             5 50ns-news.ldif
  19 28pilot.ldif                   3 50ns-proxy.ldif
  25 30ns-common.ldif               7 50ns-value.ldif
   7 50iplanet-servicemgt.ldif      8 50ns-wcal.ldif
```

```
  14 50ns-admin.ldif                4 50ns-web.ldif
  15 50ns-calendar.ldif            21 55ims-ical.ldif
   4 50ns-certificate.ldif         55 56ims-schema.ldif
  24 50ns-compass.ldif             39 60iplanet-calendar.ldif
  13 50ns-delegated-admin.ldif     14 65im.ldif
  33 50ns-directory.ldif           17 70delgated-admin.ldif
  67 50ns-iabs.ldif                 8 70sun-schema2.ldif
   4 50ns-legacy.ldif              57 71sun-am.ldif
  18 50ns-mail.ldif                10 98ns-dummy-uwc.ldif
  35 50ns-mcd-browser.ldif          5 99user.ldif
  11 50ns-mcd-config.ldif
[117 Thu Sep 06 23:49:05 root@host1% /opt/sun/comms/dssetup# ]
# cat /var/tmp/dssetup_20120906233644/99user_new.ldif
dn: cn=schema
objectClass: top
objectClass: ldapSubentry
objectClass: subschema
cn: schema
aci: (target="ldap:///cn=schema")(targetattr !="aci")(version 3.0;acl
"anonymo
 us, no acis"; allow (read, search, compare) userdn = "ldap:///anyone";)
modifiersName: cn=directory manager
modifyTimestamp: 20120907062648Z
attributeTypes: ( sunExcludeServices-oid NAME 'sunExcludeServices' DESC
'servi
 ces to be excluded specifically from the services available in the root
suff
 ix ' EQUALITY caseIgnoreMatch SYNTAX 1.3.6.1.4.1.1466.115.121.1.26
X-ORIGIN
 'user defined' )
attributeTypes: ( 1.3.6.1.4.1.42.2.27.9.1.83 NAME 'sunkeyvalue' DESC
'Attribut
 e to store the encoded key values of the services' SYNTAX
1.3.6.1.4.1.1466.1
 15.121.1.26 X-ORIGIN ( 'Sun ONE Identity Management' 'user defined' ) )
objectClasses: ( 1.3.6.1.4.1.42.2.27.9.2.107 NAME 'sunIMConference' DESC
'Conf
 erence Object' SUP top AUXILIARY MAY ( sunIMConferenceAffiliations $
sunIMCo
 nferenceConfiguration $ cn $ uid ) X-ORIGIN 'user defined' )
objectClasses: ( 1.3.6.1.4.1.42.2.27.9.2.108 NAME 'sunIMNews' DESC
'Pubsub Cha
 nnel Object' SUP top AUXILIARY MAY ( sunIMNewsAffiliations $
sunIMNewsConfig
 uration $ sunIMNewsMetaData $ cn $ uid ) X-ORIGIN 'user defined' )
objectClasses: ( 1.3.6.1.4.1.42.2.27.9.2.109 NAME 'sunIMStoredMessage'
DESC 'S
 tored Message Object' SUP top AUXILIARY MAY ( sunIMMessageID $
sunIMMessageC
 ontent ) X-ORIGIN 'user defined' )
objectClasses: ( 1.3.6.1.4.1.42.2.27.9.2.27 NAME 'sunservicecomponent'
DESC 'S
 ub-components of the service' SUP top STRUCTURAL MUST ou MAY (
labeledUri $
 sunserviceid $ sunsmspriority $ sunkeyvalue $ sunxmlkeyvalue $
description )
```

```
  X-ORIGIN 'Sun Java System Identity Management' )
objectClasses: ( 1.3.6.1.4.1.42.2.27.2.1.39 NAME 'sunCommsMetaData' DESC
'Obje
 ctclass for storing meta data for Sun Communication' SUP top STRUCTURAL
MUST
  cn MAY sunkeyvalue X-ORIGIN 'user defined' )
nsSchemaCSN: 504993a8000000000000

[118 Thu Sep 06 23:49:21 root@host1% /opt/sun/comms/dssetup# ]
# cat /var/tmp/dssetup_20120906233644/dssetup.ldif
# This Ldif file contains the changes to be made to the Directory
# Run it like this:
#   cd /opt/SUNWdsee/dsee6/bin
#   ./ldapmodify -p 389 -h host1 -D binddn -j passwdfile -c -f
/var/tmp/dssetup_20120906233644/dssetup.ldif

#--------------------------------------------------
# This section creates the installer metadata
#--------------------------------------------------

##########################################
# dn: cn=schema
# Add the schema for sunkeyvalue. Required by sunCommsMetaData
objectclass
# Note that sunkeyvalue may have already been added by Access Manager
##########################################
dn: cn=schema
changetype: modify
add: attributeTypes
attributeTypes: ( 1.3.6.1.4.1.42.2.27.9.1.83 NAME ( 'sunkeyvalue' ) DESC
'Attribute to store the encoded key values of the services' SYNTAX
1.3.6.1.4.1.1466.115.121.1.26 X-ORIGIN 'Sun ONE Identity Management' )

##########################################
# dn: cn=schema
# Add the schema for the Comm Servers installer metadata information
##########################################
dn: cn=schema
changetype: modify
add: objectClasses
objectClasses: ( 1.3.6.1.4.1.42.2.27.2.1.39 NAME 'sunCommsMetaData' DESC
'Objectclass for storing meta data for Sun Communication' SUP top
STRUCTURAL MUST ( cn ) MAY ( sunkeyvalue ) )

##########################################
# dn: cn=CommServers,o=comms-config
# Update the installer metadata for Comm Servers
##########################################
dn: cn=CommServers,o=comms-config
changetype: modify
replace: sunkeyvalue
sunkeyvalue: dssetup_ver=6.4
sunkeyvalue: dssetup_rev=24.03
sunkeyvalue: dcsuffix=o=internet
sunkeyvalue: ugsuffix=o=usergroup
sunkeyvalue: mlsuffix=o=mlusers
```

```
sunkeyvalue: schematype=1

########################################
# dn: cn=CommServers,o=comms-config
# aci for anonymous read access
########################################
dn: cn=CommServers,o=comms-config
changetype: modify
add: aci
aci:
(target="ldap:///cn=CommServers,o=comms-config")(targetattr!="aci")(version
3.0; acl "Anonymous access to dssetup config"; allow
(read,search,compare) userdn="ldap:///anyone";)
[119 Thu Sep 06 23:49:27 root@host1% /opt/sun/comms/dssetup# ]
# cat /var/tmp/dssetup_20120906233644/dssetup.ldif.rej
# Error: Type or value exists
dn: cn=CommServers,o=comms-config
changetype: modify
add: aci
aci:
(target="ldap:///cn=CommServers,o=comms-config")(targetattr!="aci")(version
3.0; acl "Anonymous access to dssetup config"; allow
(read,search,compare) userdn="ldap:///anyone";)
[120 Thu Sep 06 23:49:46 root@host1% /opt/sun/comms/dssetup# ]
# cat /var/tmp/dssetup_20120906233644/dssetup.sh
#! /bin/sh
# This shell script contains the commands to run against the Directory
#set -x

#
# Usage
#
usage()
{
  echo "Usage: $0 -D <binddn> -j <passwdfile>"
  echo "  -D binddn        bind dn"
  echo "  -j <passwdfile>  read bind passwd from 'file' for simple
authentication"
  exit 1
}

if [ $# -lt 1 ]
then
  echo "You must specify either -j"
  usage
fi

jflag=0
Dflag=0
while getopts D:j: c; do
  case $c in
  D)
    Dflag=1
    BINDDN=$OPTARG;;
  j)
    jflag=1
```

```
    pflag=-j
    parg=$OPTARG;;
  \?)
    usage;;
  esac
done
shift `expr $OPTIND - 1`

if [ $Dflag -eq 0 ]
then
  echo "You must specify the -D switch"
  usage
fi

if [ $jflag -eq 0 ]
then
  echo "You must specify -j"
  usage
fi

if [ $# -ge 1 ]
then
  echo "Unrecognized argument $*"
  usage
fi

if [ `/usr/bin/id | cut -d= -f2 | cut -d\( -f1` != 0 ]
then
  echo
  echo "To run this utility you need to be the system's root user. \n"
  echo
  exit 1
fi

echo -- Updating Schema files...
echo -- Copying 20subscriber.ldif
cp /opt/sun/comms/dssetup/sbin/schema/20subscriber.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-delegated-admin.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-delegated-admin.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-mail.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-mail.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-mlm.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-mlm.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-msg.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-msg.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-value.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-value.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 55ims-ical.ldif
cp /opt/sun/comms/dssetup/sbin/schema/55ims-ical.ldif
/var/opt/sun/directory/ds7/config/schema
```

```
echo -- Copying 56ims-schema.ldif
cp /opt/sun/comms/dssetup/sbin/schema/56ims-schema.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 65im.ldif
cp /opt/sun/comms/dssetup/sbin/schema/65im.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 70sun-schema2.ldif
cp /opt/sun/comms/dssetup/sbin/schema/70sun-schema2.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 71sun-am.ldif
cp /opt/sun/comms/dssetup/sbin/schema/71sun-am.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 60iplanet-calendar.ldif
cp /opt/sun/comms/dssetup/sbin/schema/60iplanet-calendar.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-iabs.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-iabs.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 98ns-dummy-uwc.ldif
cp /opt/sun/comms/dssetup/sbin/schema/98ns-dummy-uwc.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 70delgated-admin.ldif
cp /opt/sun/comms/dssetup/sbin/schema/70delgated-admin.ldif
/var/opt/sun/directory/ds7/config/schema

echo -- Stopping Directory Server
/opt/dsee7/bin/dsadm stop /var/opt/sun/directory/ds7
if [ $? != 0 ]; then
  echo "Stopping the Directory server failed"
  exit 1
fi
sleep 5

echo -- Starting Directory Server
/opt/dsee7/bin/dsadm start /var/opt/sun/directory/ds7
if [ $? != 0 ]; then
  echo "The server may not have restarted properly"
  echo "Please restart it manually"
fi
sleep 5

echo -- Applying ldif file /var/tmp/dssetup_20120906233644/dssetup.ldif
cd /opt/SUNWdsee/dsee6/bin
./ldapmodify -p 389 -h host1 -D "$BINDDN" $pflag "$parg" -c -e
/var/tmp/dssetup_20120906233644/dssetup.ldif.rej -f
/var/tmp/dssetup_20120906233644/dssetup.ldif
stat=$?
echo -- rejects to /var/tmp/dssetup_20120906233644/dssetup.ldif.rej
status = $stat
if [ $stat -eq 0 ]; then
  echo "-- ldapmodify returned $stat"
elif [ $stat -eq 20 ]; then
  echo "-- WARNING: ldapmodify returned $stat"
else
  echo "-- ERROR: ldapmodify returned $stat"
  exit $stat;
```

```
fi
echo -- Done Applying ldif file
/var/tmp/dssetup_20120906233644/dssetup.ldif
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mail
approx-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "mail"
"approx-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop "o=usergroup" "mail"
"approx-enabled:on"
echo

echo -- /opt/dsee7/bin/dsconf -t mail reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "mail" "o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "mail" "o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailAlternateAddress pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailAlternateAddress" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop "o=usergroup"
"mailAlternateAddress" "pres-enabled:on"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailAlternateAddress approx-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailAlternateAddress" "approx-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop "o=usergroup"
"mailAlternateAddress" "approx-enabled:on"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailAlternateAddress sub-enabled:on
```

```
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailAlternateAddress" "sub-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop "o=usergroup"
"mailAlternateAddress" "sub-enabled:on"
echo

echo -- /opt/dsee7/bin/dsconf -t mailAlternateAddress reindex
o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "mailAlternateAddress"
"o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "mailAlternateAddress"
"o=usergroup"
echo
[121 Thu Sep 06 23:49:51 root@host1% /opt/sun/comms/dssetup# ]
# cat /var/tmp/dssetup_20120906233644/dssetup.log
-=-=-=-=-=-=-=-=-=-=-=-=-=-=

Running /usr/bin/perl sbin/comm_dssetup.pl

Welcome to the Directory Server preparation tool (Comms DSsetup)
6.4.0.24.0 for
Oracle Communications Unified Communications Suite
dssetup Version 6.4-24.03 (built Mon Jun 11 14:36:51 PDT 2012)

This tool prepares your directory server for use by the
communications services which include Messaging, Calendar and their
components.

The logfile is /var/tmp/dssetup_20120906233644/dssetup.log

Do you want to continue [y]:

Please enter the full path to the directory where the
Directory Server instance(s) reside ("server-root"), or
an explicit Directory Server instance directory

Directory server root [/var/opt/sun/directory] :

Please select a directory server instance from the following list:

[1]   ds7


Which instance do you want [1]:
Please enter the directory manager DN [cn=Directory Manager]:
stty -echo
```

```
Password:
stty echoConfiguration from DS config file:
- DS Install location: /opt/dsee7
- DS hostname: host1
- DS port: 389

ldapsearch location: /opt/SUNWdsee/dsee6/bin

./ldapsearch -D "cn=Directory Manager" -j
"/var/tmp/dssetup_20120906233644/dssetup.pw" -p 389 -h host1 -b
"cn=monitor" -s base objectclass=top version 2>&1
./ldapsearch output: version: 1
./ldapsearch output: dn: cn=monitor
./ldapsearch output: version: Sun-Directory-Server/11.1.1.3.0
B2010.0630.2203
-- Detected DS versions:
   full: 11.1.1.3.0
   major: 11
   minor: 1
   micro: 1
   patch: NONE

Detected DS version 11.1.1.3.0 on host1 port 389
-- Stored Dssetup data ver=6.4 rev=24.03, dctree=o=internet
   ug=o=usergroup, schematype=1

Warning: This version of comm_dssetup.pl (6.4 24.03) has been run
previously (6.4 24.03), you do not need to run it again unless you wish
to specify different parameters to this program
Do you want to continue [y]:

Will this directory server be used for users/groups [yes]: A list of
suffixes are as follows:
  o=mlusers
  o=PiServerDb
  o=pab
  o=internet
  o=usergroup
  o=comms-config

Please enter the Users/Groups base suffix [o=usergroup] :
-=-=-=-=-=-=-=-=-=-=
has_naming_context_ds6 get-suffix-prop result:
db-name  :  usergroupdb2

-=-=-=-=-=-=-=-=-=-=
There are 3 possible schema types:
  1   - schema 1
  1.5 - schema 2 compatibility mode for schema 1 systems
        that has been converted with commdirmig
  2   - schema 2

Please enter the Schema Type (1, 1.5, 2) [1]:
Please enter the DC Tree base suffix [o=internet]:
Do you want to update the schema files [yes]:
Do you want to configure new indexes [yes]:
```

```
Do you want to Reindex the new indexes now [yes]:
Here is a summary of the settings that you chose:

  Server Root                        : /var/opt/sun/directory
  Server Instance                    : ds7
  Users/Groups Directory             : yes
  Update Schema                      : yes
  Schema Type                        : 1
  DC Root                            : o=internet
  User/Group Root                    : o=usergroup
  Add New Indexes                    : yes
  ReIndex New Indexes Now            : yes
  Directory Manager DN               : cn=Directory Manager


Now ready to generate a shell script and ldif file to modify the
Directory.
No changes to the Directory Server will be made this time.
Do you want to continue [y]:
Generating files...

Checking to see if Suffixes need to be added

-=-=-=-=-=-=-=-=-=-=
has_naming_context_ds6 get-suffix-prop result:
db-name  :  comms-configdb2

-=-=-=-=-=-=-=-=-=-=

-=-=-=-=-=-=-=-=-=-=
has_naming_context_ds6 get-suffix-prop result:
db-name  :  usergroupdb2

-=-=-=-=-=-=-=-=-=-=

-=-=-=-=-=-=-=-=-=-=
has_naming_context_ds6 get-suffix-prop result:
db-name  :  internetdb2

-=-=-=-=-=-=-=-=-=-=

-=-=-=-=-=-=-=-=-=-=
has_naming_context_ds6 get-suffix-prop result:
db-name  :  pabdb2

-=-=-=-=-=-=-=-=-=-=

-=-=-=-=-=-=-=-=-=-=
has_naming_context_ds6 get-suffix-prop result:
db-name  :  PiServerDbdb2

-=-=-=-=-=-=-=-=-=-=

-=-=-=-=-=-=-=-=-=-=
has_naming_context_ds6 get-suffix-prop result:
db-name  :  mlusersdb2
```

```
-=-=-=-=-=-=-=-=-=-=

Checking to see that uid uniqueness plugins are turned off
  Plugin is already disabled

Adding indexes
  Adding Indexes for User/group Tree (backend:usergroupdb2)
    Checking indexes for cn
      Index exists
      Index eq found
      Index pres found
      Index sub found
        Index eq exists
      Default index pres found
      Default index eq found
      Default index sub found
      No new indexes required
    Checking indexes for cosspecifier
      Index exists
      Index eq found
      Index pres found
        Index pres exists
      No new indexes required
    Checking indexes for inetCos
      Index exists
      Index eq found
      Index pres found
        Index eq exists
      No new indexes required
    Checking indexes for memberOf
      Index exists
      Index eq found
      Index pres found
      Index sub found
        Index eq exists
        Index sub exists
      No new indexes required
    Checking indexes for groupid
      Index exists
      Index eq found
      Index pres found
      Index sub found
        Index pres exists
        Index eq exists
        Index sub exists
      No new indexes required
    Checking indexes for mail
      Index exists
      Index eq found
      Index pres found
      Index sub found
        Index pres exists
        Index eq exists
        Index approx does not exist
        Index sub exists
```

```
    Default index pres found
    Default index eq found
    Default index sub found
    New indexes and Reindexing required
    ReIndex will happen for index type mail
  Checking indexes for icsCalendar
    Index exists
    Index eq found
    Index pres found
    Index sub found
    Index approx found
      Index pres exists
      Index eq exists
      Index approx exists
      Index sub exists
    No new indexes required
  Checking indexes for mailAlternateAddress
    Index exists
    Index eq found
      Index pres does not exist
      Index eq exists
      Index approx does not exist
      Index sub does not exist
    Default index eq found
    New indexes and Reindexing required
    ReIndex will happen for index type mailAlternateAddress
  Checking indexes for ou
    Index exists
    Index eq found
    Index pres found
      Index pres exists
    No new indexes required
  Checking indexes for uniqueMember
    Index exists
    Index eq found
      Index eq exists
    Default index eq found
    No new indexes required
  Checking indexes for member
    Index exists
    Index eq found
      Index eq exists
    Default index eq found
    No new indexes required
  Checking indexes for mailEquivalentAddress
    Index exists
    Index eq found
    Index pres found
    Index sub found
    Index approx found
      Index pres exists
      Index eq exists
      Index approx exists
      Index sub exists
    No new indexes required
  Checking indexes for deleted
```

```
      Index exists
      Index eq found
      Index pres found
        Index pres exists
        Index eq exists
      No new indexes required
    Checking indexes for mgrpUniqueId
      Index exists
      Index eq found
      Index pres found
        Index eq exists
      No new indexes required
    Checking indexes for mailUserStatus
      Index exists
      Index eq found
      Index pres found
        Index pres exists
        Index eq exists
      No new indexes required
    Checking indexes for icsCalendarOwned
      Index exists
      Index eq found
      Index pres found
      Index sub found
      Index approx found
        Index pres exists
        Index eq exists
        Index approx exists
        Index sub exists
      No new indexes required
  Adding Indexes for DC Tree (backend:internetdb2)
    Checking indexes for inetDomainBaseDN
      Index exists
      Index eq found
      Index pres found
        Index pres exists
        Index eq exists
      No new indexes required
    Checking indexes for inetCanonicalDomainName
      Index exists
      Index eq found
      Index pres found
        Index pres exists
        Index eq exists
      No new indexes required
    Checking indexes for mailDomainStatus
      Index exists
      Index eq found
      Index pres found
        Index pres exists
        Index eq exists
      No new indexes required
  Adding Indexes for PAB Tree (backend:pabdb2)
    Checking indexes for memberOfManagedGroup
      Index exists
      Index eq found
```

```
      Index pres found
        Index pres exists
        Index eq exists
      No new indexes required
    Checking indexes for memberOfPABGroup
      Index exists
      Index eq found
      Index pres found
        Index pres exists
        Index eq exists
      No new indexes required
    Checking indexes for memberOfPAB
      Index exists
      Index eq found
      Index pres found
        Index pres exists
        Index eq exists
      No new indexes required
    Checking indexes for un
      Index exists
      Index eq found
      Index pres found
        Index eq exists
      No new indexes required
  Adding Indexes for New PAB Tree (backend:PiServerDbdb2)
    Checking indexes for MemberOfPiBook
      Index exists
      Index eq found
      Index pres found
        Index eq exists
      No new indexes required
    Checking indexes for MemberofPiGroup
      Index exists
      Index eq found
      Index pres found
        Index eq exists
      No new indexes required
    Checking indexes for displayname
      Index exists
      Index eq found
      Index pres found
      Index sub found
        Index pres exists
        Index eq exists
        Index sub exists
      No new indexes required
  Adding Indexes for Mailing List Tree (backend:mlusersdb2)
    Checking indexes for mail
      Index exists
      Index eq found
      Index pres found
      Index sub found
        Index eq exists
      Default index pres found
      Default index eq found
      Default index sub found
```

```
      No new indexes required
    Checking indexes for mlsubMail
      Index exists
      Index eq found
      Index pres found
        Index eq exists
      No new indexes required
    Checking indexes for mlsubListIdentifier
      Index exists
      Index eq found
      Index pres found
        Index eq exists
      No new indexes required

Checking to see if DN needs to be created for suffixes

Generating ldif for installer metadata
  Generating ldif for Adding schema for installer metadata
  Generating ldif for updating DN for cn=CommServers,o=comms-config
The following files have been created:
   /var/tmp/dssetup_20120906233644/dssetup.sh
   /var/tmp/dssetup_20120906233644/dssetup.ldif

Running /var/tmp/dssetup_20120906233644/dssetup.sh will make changes to
the Directory
  You can run this file now or at a later time
Ready to execute the script now.

Do you want to continue [y]:
Running /var/tmp/dssetup_20120906233644/dssetup.sh -D "cn=Directory
Manager" -j /var/tmp/dssetup_20120906233644/dssetup.pw
-- Updating Schema files...
-- Copying 20subscriber.ldif
-- Copying 50ns-delegated-admin.ldif
-- Copying 50ns-mail.ldif
-- Copying 50ns-mlm.ldif
-- Copying 50ns-msg.ldif
-- Copying 50ns-value.ldif
-- Copying 55ims-ical.ldif
-- Copying 56ims-schema.ldif
-- Copying 65im.ldif
-- Copying 70sun-schema2.ldif
-- Copying 71sun-am.ldif
-- Copying 60iplanet-calendar.ldif
-- Copying 50ns-iabs.ldif
-- Copying 98ns-dummy-uwc.ldif
-- Copying 70delgated-admin.ldif
-- Stopping Directory Server
Directory Server instance '/var/opt/sun/directory/ds7' stopped
-- Starting Directory Server
Directory Server instance '/var/opt/sun/directory/ds7' started:
pid=10349
-- Applying ldif file /var/tmp/dssetup_20120906233644/dssetup.ldif
ldap_modify: Type or value exists
modifying entry cn=schema
```

```
modifying entry cn=schema

modifying entry cn=CommServers,o=comms-config

modifying entry cn=CommServers,o=comms-config

-- rejects to /var/tmp/dssetup_20120906233644/dssetup.ldif.rej status =
20
-- WARNING: ldapmodify returned 20
-- Done Applying ldif file /var/tmp/dssetup_20120906233644/dssetup.ldif

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mail
approx-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mail o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup mail
approx-enabled:on

-- /opt/dsee7/bin/dsconf -t mail reindex o=usergroup
## usergroupdb2: Indexing attribute: mail
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mail o=usergroup

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailAlternateAddress
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailAlternateAddress o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailAlternateAddress pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailAlternateAddress
approx-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailAlternateAddress o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailAlternateAddress approx-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailAlternateAddress
sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailAlternateAddress o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailAlternateAddress sub-enabled:on

-- /opt/dsee7/bin/dsconf -t mailAlternateAddress reindex o=usergroup
## usergroupdb2: Indexing attribute: mailAlternateAddress
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mailAlternateAddress
o=usergroup
```

```
Successful Completion. Consult
/var/tmp/dssetup_20120906233644/dssetup.log for details
```

DSsetup 6.4-24 Sample Session - Existing Directory Server 7.0 Instance for Schema 2

DSsetup 6.4-24 Sample Session - Existing Directory Server 7.0 Instance for Schema 2

This section outlines the commands to run and lists a sample session.

Topics:

- Comments
- Summary of Commands Run
- Session

Comments

This sample session shows the output of `comm_dssetup.pl` on an existing Directory Server 7.0 instance for Schema 2.

Summary of Commands Run

```
137 sbin/comm_dssetup.pl
138 stty -echo
139 ls /var/tmp/dssetup_20120907001444
140 ls /var/tmp/dssetup_20120907001444/save
141 cat /var/tmp/dssetup_20120907001444/99user_new.ldif
142 cat /var/tmp/dssetup_20120907001444/dssetup.ldif
143 cat /var/tmp/dssetup_20120907001444/dssetup.ldif.rej
144 cat /var/tmp/dssetup_20120907001444/dssetup.sh
145 cat /var/tmp/dssetup_20120907001444/dssetup.log
```

Session

```
# sbin/comm_dssetup.pl

Welcome to the Directory Server preparation tool (Comms DSsetup)
6.4.0.24.0 for
Oracle Communications Unified Communications Suite
dssetup Version 6.4-24.03 (built Mon Jun 11 14:36:51 PDT 2012)

This tool prepares your directory server for use by the
communications services which include Messaging, Calendar and their
components.

The logfile is /var/tmp/dssetup_20120907001444/dssetup.log

Do you want to continue [y]:

Please enter the full path to the directory where the
Directory Server instance(s) reside ("server-root"), or
an explicit Directory Server instance directory
```

```
Directory server root [/var/opt/sun/directory] :


Please select a directory server instance from the following list:

[1]   ds7


Which instance do you want [1]:

Please enter the directory manager DN [cn=Directory Manager]:

Password:

Configuration from DS config file:
- DS Install location: /opt/dsee7
- DS hostname: host1
- DS port: 389

ldapsearch location: /opt/SUNWdsee/dsee6/bin

Detected DS version 11.1.1.3.0 on host1 port 389

Warning: This version of comm_dssetup.pl (6.4 24.03) has been run
previously (6.4 24.03), you do not need to run it again unless you wish
to specify different parameters to this program
Do you want to continue [y]:


Will this directory server be used for users/groups [yes]:

A list of suffixes are as follows:
  o=mlusers
  o=PiServerDb
  o=pab
  o=usergroup
  o=comms-config

Please enter the Users/Groups base suffix [o=usergroup] :

There are 3 possible schema types:
  1   - schema 1
  1.5 - schema 2 compatibility mode for schema 1 systems
        that has been converted with commdirmig
  2   - schema 2

Please enter the Schema Type (1, 1.5, 2) [2]:


Do you want to update the schema files [yes]:


Do you want to configure new indexes [yes]:
```

```
Do you want to Reindex the new indexes now [yes]:


Here is a summary of the settings that you chose:

  Server Root                        : /var/opt/sun/directory
  Server Instance                    : ds7
  Users/Groups Directory             : yes
  Update Schema                      : yes
  Schema Type                        : 2
  DC Root                            : o=usergroup
  User/Group Root                    : o=usergroup
  Add New Indexes                    : yes
  ReIndex New Indexes Now            : yes
  Directory Manager DN               : cn=Directory Manager


Now ready to generate a shell script and ldif file to modify the
Directory.
No changes to the Directory Server will be made this time.
Do you want to continue [y]:

Generating files...

Checking to see if Suffixes need to be added

Checking to see that uid uniqueness plugins are turned off
  Plugin is already disabled

Adding indexes
  Adding Indexes for User/group Tree (backend:usergroupdb2)
    Checking indexes for cn
      No new indexes required
    Checking indexes for cosspecifier
      No new indexes required
    Checking indexes for inetCos
      No new indexes required
    Checking indexes for memberOf
      No new indexes required
    Checking indexes for groupid
      No new indexes required
    Checking indexes for mail
      New indexes and Reindexing required
      ReIndex will happen for index type mail
    Checking indexes for icsCalendar
      No new indexes required
    Checking indexes for mailAlternateAddress
      New indexes and Reindexing required
      ReIndex will happen for index type mailAlternateAddress
    Checking indexes for ou
      No new indexes required
    Checking indexes for uniqueMember
      No new indexes required
    Checking indexes for member
      No new indexes required
    Checking indexes for mailEquivalentAddress
```

```
      No new indexes required
    Checking indexes for deleted
      No new indexes required
    Checking indexes for mgrpUniqueId
      No new indexes required
    Checking indexes for mailUserStatus
      No new indexes required
    Checking indexes for icsCalendarOwned
      No new indexes required
  Adding Schema2 specific Indexes for User/Group Tree
(backend:usergroupdb2)
    Checking indexes for inetDomainBaseDN
      No new indexes required
    Checking indexes for sunOrganizationAlias
      No new indexes required
    Checking indexes for sunPreferredDomain
      No new indexes required
    Checking indexes for mailDomainStatus
      No new indexes required
    Checking indexes for o
      No new indexes required
    Checking indexes for associatedDomain
      No new indexes required
  Adding Indexes for PAB Tree (backend:pabdb2)
    Checking indexes for memberOfManagedGroup
      No new indexes required
    Checking indexes for memberOfPABGroup
      No new indexes required
    Checking indexes for memberOfPAB
      No new indexes required
    Checking indexes for un
      No new indexes required
  Adding Indexes for New PAB Tree (backend:PiServerDbdb2)
    Checking indexes for MemberOfPiBook
      No new indexes required
    Checking indexes for MemberofPiGroup
      No new indexes required
    Checking indexes for displayname
      No new indexes required
  Adding Indexes for Mailing List Tree (backend:mlusersdb2)
    Checking indexes for mail
      No new indexes required
    Checking indexes for mlsubMail
      No new indexes required
    Checking indexes for mlsubListIdentifier
      No new indexes required

Checking to see if DN needs to be created for suffixes

Generating ldif for installer metadata
  Generating ldif for Adding schema for installer metadata
  Generating ldif for updating DN for cn=CommServers,o=comms-config
The following files have been created:
   /var/tmp/dssetup_20120907001444/dssetup.sh
   /var/tmp/dssetup_20120907001444/dssetup.ldif
```

```
Running /var/tmp/dssetup_20120907001444/dssetup.sh will make changes to
the Directory
  You can run this file now or at a later time
Ready to execute the script now.

Do you want to continue [y]:

Running /var/tmp/dssetup_20120907001444/dssetup.sh -D "cn=Directory
Manager" -j /var/tmp/dssetup_20120907001444/dssetup.pw
-- Updating Schema files...
-- Copying 20subscriber.ldif
-- Copying 50ns-delegated-admin.ldif
-- Copying 50ns-mail.ldif
-- Copying 50ns-mlm.ldif
-- Copying 50ns-msg.ldif
-- Copying 50ns-value.ldif
-- Copying 55ims-ical.ldif
-- Copying 56ims-schema.ldif
-- Copying 65im.ldif
-- Copying 70sun-schema2.ldif
-- Copying 71sun-am.ldif
-- Copying 60iplanet-calendar.ldif
-- Copying 50ns-iabs.ldif
-- Copying 98ns-dummy-uwc.ldif
-- Copying 70delgated-admin.ldif
-- Stopping Directory Server
Directory Server instance '/var/opt/sun/directory/ds7' stopped
-- Starting Directory Server
Directory Server instance '/var/opt/sun/directory/ds7' started:
pid=11411
-- Applying ldif file /var/tmp/dssetup_20120907001444/dssetup.ldif
ldap_modify: Type or value exists
modifying entry cn=schema

modifying entry cn=schema

modifying entry cn=CommServers,o=comms-config

modifying entry cn=CommServers,o=comms-config

-- rejects to /var/tmp/dssetup_20120907001444/dssetup.ldif.rej status =
20
-- WARNING: ldapmodify returned 20
-- Done Applying ldif file /var/tmp/dssetup_20120907001444/dssetup.ldif

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mail
approx-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mail o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup mail
approx-enabled:on

-- /opt/dsee7/bin/dsconf -t mail reindex o=usergroup
## usergroupdb2: Indexing attribute: mail
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.
```

```
Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mail o=usergroup

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailAlternateAddress
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailAlternateAddress o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailAlternateAddress pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailAlternateAddress
approx-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailAlternateAddress o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailAlternateAddress approx-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailAlternateAddress
sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailAlternateAddress o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailAlternateAddress sub-enabled:on

-- /opt/dsee7/bin/dsconf -t mailAlternateAddress reindex o=usergroup
## usergroupdb2: Indexing attribute: mailAlternateAddress
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mailAlternateAddress
o=usergroup

Successful Completion. Consult
/var/tmp/dssetup_20120907001444/dssetup.log for details
[138 Fri Sep 07 00:18:00 root@host1% /opt/sun/comms/dssetup# ]
# stty -echo
stty -echo
[139 Fri Sep 07 00:19:09 root@host1% /opt/sun/comms/dssetup# ]
# ls /var/tmp/dssetup_20120907001444
total 62
   5 99user_new.ldif      30 dssetup.log
   6 dssetup.ldif         14 dssetup.sh*
   2 dssetup.ldif.rej      5 save/
[140 Fri Sep 07 00:19:22 root@host1% /opt/sun/comms/dssetup# ]
# ls /var/tmp/dssetup_20120907001444/save
total 936
 154 00core.ldif                    7 50ns-mcd-li.ldif
  16 00ds6pwp.ldif                 42 50ns-mcd-mail.ldif
   5 05rfc2247.ldif                 3 50ns-media.ldif
   3 05rfc2927.ldif                17 50ns-mlm.ldif
  16 11rfc2307.ldif               107 50ns-msg.ldif
  10 20subscriber.ldif              7 50ns-netshare.ldif
   7 25java-object.ldif             5 50ns-news.ldif
  19 28pilot.ldif                   3 50ns-proxy.ldif
```

```
  25 30ns-common.ldif                7 50ns-value.ldif
   7 50iplanet-servicemgt.ldif       8 50ns-wcal.ldif
  14 50ns-admin.ldif                 4 50ns-web.ldif
  15 50ns-calendar.ldif             21 55ims-ical.ldif
   4 50ns-certificate.ldif          55 56ims-schema.ldif
  24 50ns-compass.ldif              39 60iplanet-calendar.ldif
  13 50ns-delegated-admin.ldif      14 65im.ldif
  33 50ns-directory.ldif            17 70delgated-admin.ldif
  67 50ns-iabs.ldif                  8 70sun-schema2.ldif
   4 50ns-legacy.ldif               57 71sun-am.ldif
  18 50ns-mail.ldif                 10 98ns-dummy-uwc.ldif
  35 50ns-mcd-browser.ldif           5 99user.ldif
  11 50ns-mcd-config.ldif
[141 Fri Sep 07 00:19:26 root@host1% /opt/sun/comms/dssetup# ]
# cat /var/tmp/dssetup_20120907001444/99user_new.ldif
dn: cn=schema
objectClass: top
objectClass: ldapSubentry
objectClass: subschema
cn: schema
aci: (target="ldap:///cn=schema")(targetattr !="aci")(version 3.0;acl
"anonymo
 us, no acis"; allow (read, search, compare) userdn = "ldap:///anyone";)
modifiersName: cn=directory manager
modifyTimestamp: 20120907071017Z
attributeTypes: ( sunExcludeServices-oid NAME 'sunExcludeServices' DESC
'servi
 ces to be excluded specifically from the services available in the root
suff
 ix ' EQUALITY caseIgnoreMatch SYNTAX 1.3.6.1.4.1.1466.115.121.1.26
X-ORIGIN
 'user defined' )
attributeTypes: ( 1.3.6.1.4.1.42.2.27.9.1.83 NAME 'sunkeyvalue' DESC
'Attribut
 e to store the encoded key values of the services' SYNTAX
1.3.6.1.4.1.1466.1
 15.121.1.26 X-ORIGIN ( 'Sun ONE Identity Management' 'user defined' ) )
objectClasses: ( 1.3.6.1.4.1.42.2.27.9.2.107 NAME 'sunIMConference' DESC
'Conf
 erence Object' SUP top AUXILIARY MAY ( sunIMConferenceAffiliations $
sunIMCo
 nferenceConfiguration $ cn $ uid ) X-ORIGIN 'user defined' )
objectClasses: ( 1.3.6.1.4.1.42.2.27.9.2.108 NAME 'sunIMNews' DESC
'Pubsub Cha
 nnel Object' SUP top AUXILIARY MAY ( sunIMNewsAffiliations $
sunIMNewsConfig
 uration $ sunIMNewsMetaData $ cn $ uid ) X-ORIGIN 'user defined' )
objectClasses: ( 1.3.6.1.4.1.42.2.27.9.2.109 NAME 'sunIMStoredMessage'
DESC 'S
 tored Message Object' SUP top AUXILIARY MAY ( sunIMMessageID $
sunIMMessageC
 ontent ) X-ORIGIN 'user defined' )
objectClasses: ( 1.3.6.1.4.1.42.2.27.9.2.27 NAME 'sunservicecomponent'
DESC 'S
 ub-components of the service' SUP top STRUCTURAL MUST ou MAY (
labeledUri $
```

```
 sunserviceid $ sunsmspriority $ sunkeyvalue $ sunxmlkeyvalue $
description )
  X-ORIGIN 'Sun Java System Identity Management' )
objectClasses: ( 1.3.6.1.4.1.42.2.27.2.1.39 NAME 'sunCommsMetaData' DESC
'Obje
 ctclass for storing meta data for Sun Communication' SUP top STRUCTURAL
MUST
  cn MAY sunkeyvalue X-ORIGIN 'user defined' )
nsSchemaCSN: 50499dd9000000000000

[142 Fri Sep 07 00:19:34 root@host1% /opt/sun/comms/dssetup# ]
# cat /var/tmp/dssetup_20120907001444/dssetup.ldif
# This Ldif file contains the changes to be made to the Directory
# Run it like this:
#   cd /opt/SUNWdsee/dsee6/bin
#   ./ldapmodify -p 389 -h host1 -D binddn -j passwdfile -c -f
/var/tmp/dssetup_20120907001444/dssetup.ldif

#--------------------------------------------------
# This section creates the installer metadata
#--------------------------------------------------

##########################################
# dn: cn=schema
# Add the schema for sunkeyvalue. Required by sunCommsMetaData
objectclass
# Note that sunkeyvalue may have already been added by Access Manager
##########################################
dn: cn=schema
changetype: modify
add: attributeTypes
attributeTypes: ( 1.3.6.1.4.1.42.2.27.9.1.83 NAME ( 'sunkeyvalue' ) DESC
'Attribute to store the encoded key values of the services' SYNTAX
1.3.6.1.4.1.1466.115.121.1.26 X-ORIGIN 'Sun ONE Identity Management' )

##########################################
# dn: cn=schema
# Add the schema for the Comm Servers installer metadata information
##########################################
dn: cn=schema
changetype: modify
add: objectClasses
objectClasses: ( 1.3.6.1.4.1.42.2.27.2.1.39 NAME 'sunCommsMetaData' DESC
'Objectclass for storing meta data for Sun Communication' SUP top
STRUCTURAL MUST ( cn ) MAY ( sunkeyvalue ) )

##########################################
# dn: cn=CommServers,o=comms-config
# Update the installer metadata for Comm Servers
##########################################
dn: cn=CommServers,o=comms-config
changetype: modify
replace: sunkeyvalue
sunkeyvalue: dssetup_ver=6.4
sunkeyvalue: dssetup_rev=24.03
sunkeyvalue: dcsuffix=o=usergroup
```

```
sunkeyvalue: ugsuffix=o=usergroup
sunkeyvalue: mlsuffix=o=mlusers
sunkeyvalue: schematype=2

########################################
# dn: cn=CommServers,o=comms-config
# aci for anonymous read access
########################################
dn: cn=CommServers,o=comms-config
changetype: modify
add: aci
aci:
(target="ldap:///cn=CommServers,o=comms-config")(targetattr!="aci")(version
3.0; acl "Anonymous access to dssetup config"; allow
(read,search,compare) userdn="ldap:///anyone";)
[143 Fri Sep 07 00:19:39 root@host1% /opt/sun/comms/dssetup# ]
# cat /var/tmp/dssetup_20120907001444/dssetup.ldif.rej
# Error: Type or value exists
dn: cn=CommServers,o=comms-config
changetype: modify
add: aci
aci:
(target="ldap:///cn=CommServers,o=comms-config")(targetattr!="aci")(version
3.0; acl "Anonymous access to dssetup config"; allow
(read,search,compare) userdn="ldap:///anyone";)
[144 Fri Sep 07 00:19:40 root@host1% /opt/sun/comms/dssetup# ]
# cat /var/tmp/dssetup_20120907001444/dssetup.sh
#! /bin/sh
# This shell script contains the commands to run against the Directory
#set -x

#
# Usage
#
usage()
{
  echo "Usage: $0 -D <binddn> -j <passwdfile>"
  echo "  -D binddn        bind dn"
  echo "  -j <passwdfile>  read bind passwd from 'file' for simple
authentication"
  exit 1
}

if [ $# -lt 1 ]
then
  echo "You must specify either -j"
  usage
fi

jflag=0
Dflag=0
while getopts D:j: c; do
  case $c in
  D)
    Dflag=1
    BINDDN=$OPTARG;;
```

```
  j)
    jflag=1
    pflag=-j
    parg=$OPTARG;;
  \?)
    usage;;
  esac
done
shift `expr $OPTIND - 1`

if [ $Dflag -eq 0 ]
then
  echo "You must specify the -D switch"
  usage
fi

if [ $jflag -eq 0 ]
then
  echo "You must specify -j"
  usage
fi

if [ $# -ge 1 ]
then
  echo "Unrecognized argument $*"
  usage
fi

if [ `/usr/bin/id | cut -d= -f2 | cut -d\( -f1` != 0 ]
then
  echo
  echo "To run this utility you need to be the system's root user. \n"
  echo
  exit 1
fi

echo -- Updating Schema files...
echo -- Copying 20subscriber.ldif
cp /opt/sun/comms/dssetup/sbin/schema/20subscriber.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-delegated-admin.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-delegated-admin.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-mail.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-mail.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-mlm.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-mlm.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-msg.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-msg.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-value.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-value.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 55ims-ical.ldif
```

```
cp /opt/sun/comms/dssetup/sbin/schema/55ims-ical.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 56ims-schema.ldif
cp /opt/sun/comms/dssetup/sbin/schema/56ims-schema.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 65im.ldif
cp /opt/sun/comms/dssetup/sbin/schema/65im.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 70sun-schema2.ldif
cp /opt/sun/comms/dssetup/sbin/schema/70sun-schema2.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 71sun-am.ldif
cp /opt/sun/comms/dssetup/sbin/schema/71sun-am.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 60iplanet-calendar.ldif
cp /opt/sun/comms/dssetup/sbin/schema/60iplanet-calendar.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-iabs.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-iabs.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 98ns-dummy-uwc.ldif
cp /opt/sun/comms/dssetup/sbin/schema/98ns-dummy-uwc.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 70delgated-admin.ldif
cp /opt/sun/comms/dssetup/sbin/schema/70delgated-admin.ldif
/var/opt/sun/directory/ds7/config/schema

echo -- Stopping Directory Server
/opt/dsee7/bin/dsadm stop /var/opt/sun/directory/ds7
if [ $? != 0 ]; then
  echo "Stopping the Directory server failed"
  exit 1
fi
sleep 5

echo -- Starting Directory Server
/opt/dsee7/bin/dsadm start /var/opt/sun/directory/ds7
if [ $? != 0 ]; then
  echo "The server may not have restarted properly"
  echo "Please restart it manually"
fi
sleep 5

echo -- Applying ldif file /var/tmp/dssetup_20120907001444/dssetup.ldif
cd /opt/SUNWdsee/dsee6/bin
./ldapmodify -p 389 -h host1 -D "$BINDDN" $pflag "$parg" -c -e
/var/tmp/dssetup_20120907001444/dssetup.ldif.rej -f
/var/tmp/dssetup_20120907001444/dssetup.ldif
stat=$?
echo -- rejects to /var/tmp/dssetup_20120907001444/dssetup.ldif.rej
status = $stat
if [ $stat -eq 0 ]; then
  echo "-- ldapmodify returned $stat"
elif [ $stat -eq 20 ]; then
  echo "-- WARNING: ldapmodify returned $stat"
else
```

```
  echo "-- ERROR: ldapmodify returned $stat"
  exit $stat;
fi
echo -- Done Applying ldif file
/var/tmp/dssetup_20120907001444/dssetup.ldif
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mail
approx-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "mail"
"approx-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop "o=usergroup" "mail"
"approx-enabled:on"
echo

echo -- /opt/dsee7/bin/dsconf -t mail reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "mail" "o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "mail" "o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailAlternateAddress pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailAlternateAddress" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop "o=usergroup"
"mailAlternateAddress" "pres-enabled:on"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailAlternateAddress approx-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailAlternateAddress" "approx-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop "o=usergroup"
"mailAlternateAddress" "approx-enabled:on"
echo
```

```
echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailAlternateAddress sub-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailAlternateAddress" "sub-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop "o=usergroup"
"mailAlternateAddress" "sub-enabled:on"
echo

echo -- /opt/dsee7/bin/dsconf -t mailAlternateAddress reindex
o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "mailAlternateAddress"
"o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "mailAlternateAddress"
"o=usergroup"
echo
[145 Fri Sep 07 00:19:46 root@host1% /opt/sun/comms/dssetup# ]
# cat /var/tmp/dssetup_20120907001444/dssetup.log
-=-=-=-=-=-=-=-=-=-=-=-=-=

Running /usr/bin/perl sbin/comm_dssetup.pl

Welcome to the Directory Server preparation tool (Comms DSsetup)
6.4.0.24.0 for
Oracle Communications Unified Communications Suite
dssetup Version 6.4-24.03 (built Mon Jun 11 14:36:51 PDT 2012)

This tool prepares your directory server for use by the
communications services which include Messaging, Calendar and their
components.

The logfile is /var/tmp/dssetup_20120907001444/dssetup.log

Do you want to continue [y]:

Please enter the full path to the directory where the
Directory Server instance(s) reside ("server-root"), or
an explicit Directory Server instance directory

Directory server root [/var/opt/sun/directory] :

Please select a directory server instance from the following list:

[1]   ds7


Which instance do you want [1]:
```

```
Please enter the directory manager DN [cn=Directory Manager]:
stty -echo
Password:
stty echoConfiguration from DS config file:
- DS Install location: /opt/dsee7
- DS hostname: host1
- DS port: 389

ldapsearch location: /opt/SUNWdsee/dsee6/bin

./ldapsearch -D "cn=Directory Manager" -j
"/var/tmp/dssetup_20120907001444/dssetup.pw" -p 389 -h host1 -b
"cn=monitor" -s base objectclass=top version 2>&1
./ldapsearch output: version: 1
./ldapsearch output: dn: cn=monitor
./ldapsearch output: version: Sun-Directory-Server/11.1.1.3.0
B2010.0630.2203
-- Detected DS versions:
   full: 11.1.1.3.0
   major: 11
   minor: 1
   micro: 1
   patch: NONE

Detected DS version 11.1.1.3.0 on host1 port 389
-- Stored Dssetup data ver=6.4 rev=24.03, dctree=o=usergroup
   ug=o=usergroup, schematype=2

Warning: This version of comm_dssetup.pl (6.4 24.03) has been run
previously (6.4 24.03), you do not need to run it again unless you wish
to specify different parameters to this program
Do you want to continue [y]:

Will this directory server be used for users/groups [yes]: A list of
suffixes are as follows:
  o=mlusers
  o=PiServerDb
  o=pab
  o=usergroup
  o=comms-config

Please enter the Users/Groups base suffix [o=usergroup] :
-=-=-=-=-=-=-=-=-=-=-=
has_naming_context_ds6 get-suffix-prop result:
db-name  :  usergroupdb2

-=-=-=-=-=-=-=-=-=-=-=
There are 3 possible schema types:
  1   - schema 1
  1.5 - schema 2 compatibility mode for schema 1 systems
        that has been converted with commdirmig
  2   - schema 2

Please enter the Schema Type (1, 1.5, 2) [2]:
Do you want to update the schema files [yes]:
Do you want to configure new indexes [yes]:
```

```
Do you want to Reindex the new indexes now [yes]:
Here is a summary of the settings that you chose:

  Server Root                        : /var/opt/sun/directory
  Server Instance                    : ds7
  Users/Groups Directory             : yes
  Update Schema                      : yes
  Schema Type                        : 2
  DC Root                            : o=usergroup
  User/Group Root                    : o=usergroup
  Add New Indexes                    : yes
  ReIndex New Indexes Now            : yes
  Directory Manager DN               : cn=Directory Manager


Now ready to generate a shell script and ldif file to modify the
Directory.
No changes to the Directory Server will be made this time.
Do you want to continue [y]:
Generating files...

Checking to see if Suffixes need to be added

-=-=-=-=-=-=-=-=-=-=
has_naming_context_ds6 get-suffix-prop result:
db-name  :  comms-configdb2

-=-=-=-=-=-=-=-=-=-=

-=-=-=-=-=-=-=-=-=-=
has_naming_context_ds6 get-suffix-prop result:
db-name  :  usergroupdb2

-=-=-=-=-=-=-=-=-=-=

-=-=-=-=-=-=-=-=-=-=
has_naming_context_ds6 get-suffix-prop result:
db-name  :  pabdb2

-=-=-=-=-=-=-=-=-=-=

-=-=-=-=-=-=-=-=-=-=
has_naming_context_ds6 get-suffix-prop result:
db-name  :  PiServerDbdb2

-=-=-=-=-=-=-=-=-=-=

-=-=-=-=-=-=-=-=-=-=
has_naming_context_ds6 get-suffix-prop result:
db-name  :  mlusersdb2

-=-=-=-=-=-=-=-=-=-=

Checking to see that uid uniqueness plugins are turned off
  Plugin is already disabled
```

```
Adding indexes
  Adding Indexes for User/group Tree (backend:usergroupdb2)
    Checking indexes for cn
      Index exists
      Index eq found
      Index pres found
      Index sub found
        Index eq exists
      Default index pres found
      Default index eq found
      Default index sub found
      No new indexes required
    Checking indexes for cosspecifier
      Index exists
      Index eq found
      Index pres found
        Index pres exists
      No new indexes required
    Checking indexes for inetCos
      Index exists
      Index eq found
      Index pres found
        Index eq exists
      No new indexes required
    Checking indexes for memberOf
      Index exists
      Index eq found
      Index pres found
      Index sub found
        Index eq exists
        Index sub exists
      No new indexes required
    Checking indexes for groupid
      Index exists
      Index eq found
      Index pres found
      Index sub found
        Index pres exists
        Index eq exists
        Index sub exists
      No new indexes required
    Checking indexes for mail
      Index exists
      Index eq found
      Index pres found
      Index sub found
        Index pres exists
        Index eq exists
        Index approx does not exist
        Index sub exists
      Default index pres found
      Default index eq found
      Default index sub found
      New indexes and Reindexing required
      ReIndex will happen for index type mail
    Checking indexes for icsCalendar
```

```
      Index exists
      Index eq found
      Index pres found
      Index sub found
      Index approx found
        Index pres exists
        Index eq exists
        Index approx exists
        Index sub exists
      No new indexes required
    Checking indexes for mailAlternateAddress
      Index exists
      Index eq found
        Index pres does not exist
        Index eq exists
        Index approx does not exist
        Index sub does not exist
      Default index eq found
      New indexes and Reindexing required
      ReIndex will happen for index type mailAlternateAddress
    Checking indexes for ou
      Index exists
      Index eq found
      Index pres found
        Index pres exists
      No new indexes required
    Checking indexes for uniqueMember
      Index exists
      Index eq found
        Index eq exists
      Default index eq found
      No new indexes required
    Checking indexes for member
      Index exists
      Index eq found
        Index eq exists
      Default index eq found
      No new indexes required
    Checking indexes for mailEquivalentAddress
      Index exists
      Index eq found
      Index pres found
      Index sub found
      Index approx found
        Index pres exists
        Index eq exists
        Index approx exists
        Index sub exists
      No new indexes required
    Checking indexes for deleted
      Index exists
      Index eq found
      Index pres found
        Index pres exists
        Index eq exists
      No new indexes required
```

```
    Checking indexes for mgrpUniqueId
      Index exists
      Index eq found
      Index pres found
        Index eq exists
      No new indexes required
    Checking indexes for mailUserStatus
      Index exists
      Index eq found
      Index pres found
        Index pres exists
        Index eq exists
      No new indexes required
    Checking indexes for icsCalendarOwned
      Index exists
      Index eq found
      Index pres found
      Index sub found
      Index approx found
        Index pres exists
        Index eq exists
        Index approx exists
        Index sub exists
      No new indexes required
  Adding Schema2 specific Indexes for User/Group Tree
(backend:usergroupdb2)
    Checking indexes for inetDomainBaseDN
      Index exists
      Index eq found
      Index pres found
        Index pres exists
        Index eq exists
      No new indexes required
    Checking indexes for sunOrganizationAlias
      Index exists
      Index eq found
      Index pres found
        Index pres exists
        Index eq exists
      No new indexes required
    Checking indexes for sunPreferredDomain
      Index exists
      Index eq found
      Index pres found
        Index pres exists
        Index eq exists
      No new indexes required
    Checking indexes for mailDomainStatus
      Index exists
      Index eq found
      Index pres found
        Index pres exists
        Index eq exists
      No new indexes required
    Checking indexes for o
      Index exists
```

```
      Index eq found
      Index pres found
        Index pres exists
        Index eq exists
      No new indexes required
    Checking indexes for associatedDomain
      Index exists
      Index eq found
      Index pres found
        Index pres exists
        Index eq exists
      No new indexes required
  Adding Indexes for PAB Tree (backend:pabdb2)
    Checking indexes for memberOfManagedGroup
      Index exists
      Index eq found
      Index pres found
        Index pres exists
        Index eq exists
      No new indexes required
    Checking indexes for memberOfPABGroup
      Index exists
      Index eq found
      Index pres found
        Index pres exists
        Index eq exists
      No new indexes required
    Checking indexes for memberOfPAB
      Index exists
      Index eq found
      Index pres found
        Index pres exists
        Index eq exists
      No new indexes required
    Checking indexes for un
      Index exists
      Index eq found
      Index pres found
        Index eq exists
      No new indexes required
  Adding Indexes for New PAB Tree (backend:PiServerDbdb2)
    Checking indexes for MemberOfPiBook
      Index exists
      Index eq found
      Index pres found
        Index eq exists
      No new indexes required
    Checking indexes for MemberofPiGroup
      Index exists
      Index eq found
      Index pres found
        Index eq exists
      No new indexes required
    Checking indexes for displayname
      Index exists
      Index eq found
```

```
      Index pres found
      Index sub found
        Index pres exists
        Index eq exists
        Index sub exists
      No new indexes required
  Adding Indexes for Mailing List Tree (backend:mlusersdb2)
    Checking indexes for mail
      Index exists
      Index eq found
      Index pres found
      Index sub found
        Index eq exists
      Default index pres found
      Default index eq found
      Default index sub found
      No new indexes required
    Checking indexes for mlsubMail
      Index exists
      Index eq found
      Index pres found
        Index eq exists
      No new indexes required
    Checking indexes for mlsubListIdentifier
      Index exists
      Index eq found
      Index pres found
        Index eq exists
      No new indexes required

Checking to see if DN needs to be created for suffixes

Generating ldif for installer metadata
  Generating ldif for Adding schema for installer metadata
  Generating ldif for updating DN for cn=CommServers,o=comms-config
The following files have been created:
   /var/tmp/dssetup_20120907001444/dssetup.sh
   /var/tmp/dssetup_20120907001444/dssetup.ldif

Running /var/tmp/dssetup_20120907001444/dssetup.sh will make changes to
the Directory
  You can run this file now or at a later time
Ready to execute the script now.

Do you want to continue [y]:
Running /var/tmp/dssetup_20120907001444/dssetup.sh -D "cn=Directory
Manager" -j /var/tmp/dssetup_20120907001444/dssetup.pw
-- Updating Schema files...
-- Copying 20subscriber.ldif
-- Copying 50ns-delegated-admin.ldif
-- Copying 50ns-mail.ldif
-- Copying 50ns-mlm.ldif
-- Copying 50ns-msg.ldif
-- Copying 50ns-value.ldif
-- Copying 55ims-ical.ldif
-- Copying 56ims-schema.ldif
```

```
-- Copying 65im.ldif
-- Copying 70sun-schema2.ldif
-- Copying 71sun-am.ldif
-- Copying 60iplanet-calendar.ldif
-- Copying 50ns-iabs.ldif
-- Copying 98ns-dummy-uwc.ldif
-- Copying 70delgated-admin.ldif
-- Stopping Directory Server
Directory Server instance '/var/opt/sun/directory/ds7' stopped
-- Starting Directory Server
Directory Server instance '/var/opt/sun/directory/ds7' started:
pid=11411
-- Applying ldif file /var/tmp/dssetup_20120907001444/dssetup.ldif
ldap_modify: Type or value exists
modifying entry cn=schema

modifying entry cn=schema

modifying entry cn=CommServers,o=comms-config

modifying entry cn=CommServers,o=comms-config

-- rejects to /var/tmp/dssetup_20120907001444/dssetup.ldif.rej status =
20
-- WARNING: ldapmodify returned 20
-- Done Applying ldif file /var/tmp/dssetup_20120907001444/dssetup.ldif

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mail
approx-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mail o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup mail
approx-enabled:on

-- /opt/dsee7/bin/dsconf -t mail reindex o=usergroup
## usergroupdb2: Indexing attribute: mail
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mail o=usergroup

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailAlternateAddress
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailAlternateAddress o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailAlternateAddress pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailAlternateAddress
approx-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailAlternateAddress o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailAlternateAddress approx-enabled:on
```

```
-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailAlternateAddress
sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailAlternateAddress o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailAlternateAddress sub-enabled:on

-- /opt/dsee7/bin/dsconf -t mailAlternateAddress reindex o=usergroup
## usergroupdb2: Indexing attribute: mailAlternateAddress
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mailAlternateAddress
o=usergroup
```

```
Successful Completion. Consult
/var/tmp/dssetup_20120907001444/dssetup.log for details
```

DSsetup 6.4-24 Sample Session - Fresh Directory Server 7.0 Instance for Schema 1

DSsetup 6.4-24 Sample Session - Fresh Directory Server 7.0 Instance for Schema 1

This section outlines the commands to run and lists a sample session.

Topics:

- Summary of Commands Run
- Comments
- Session

Summary of Commands Run

```
./sbin/comm_dssetup.pl
stty -echo
ls /var/tmp/dssetup_20120906232525/
ls /var/tmp/dssetup_20120906232525/save
cat /var/tmp/dssetup_20120906232525/99user_new.ldif
cat /var/tmp/dssetup_20120906232525/dssetup.ldif
cat /var/tmp/dssetup_20120906232525/dssetup.sh
cat /var/tmp/dssetup_20120906232525/dssetup.log
```

Comments

This sample session shows the output of `comm_dssetup.pl` on a fresh Directory Server 7.0 instance.

Session

```
# ./sbin/comm_dssetup.pl

Welcome to the Directory Server preparation tool (Comms DSsetup)
6.4.0.24.0 for
Oracle Communications Unified Communications Suite
dssetup Version 6.4-24.03 (built Mon Jun 11 14:36:51 PDT 2012)

This tool prepares your directory server for use by the
communications services which include Messaging, Calendar and their
components.

The logfile is /var/tmp/dssetup_20120906232525/dssetup.log

Do you want to continue [y]:

Please enter the full path to the directory where the
Directory Server instance(s) reside ("server-root"), or
an explicit Directory Server instance directory

Directory server root [/var/opt/sun/directory] :
```

```
Please select a directory server instance from the following list:

[1]   ds7


Which instance do you want [1]:

Please enter the directory manager DN [cn=Directory Manager]:

Password:

Configuration from DS config file:
- DS Install location: /opt/dsee7
- DS hostname: host1
- DS port: 389

ldapsearch location: /opt/SUNWdsee/dsee6/bin

Detected DS version 11.1.1.3.0 on host1 port 389

Will this directory server be used for users/groups [yes]:

WARNING: No default suffix found in the Directory
A list of suffixes are as follows:
  No Suffixes Found

Please enter the Users/Groups base suffix [o=usergroup] :

There are 3 possible schema types:
  1   - schema 1
  1.5 - schema 2 compatibility mode for schema 1 systems
        that has been converted with commdirmig
  2   - schema 2

Please enter the Schema Type (1, 1.5, 2) [2]: 1
1

Please enter the DC Tree base suffix [o=internet]:


Do you want to update the schema files [yes]:


Do you want to configure new indexes [yes]:


Do you want to Reindex the new indexes now [yes]:


Here is a summary of the settings that you chose:

  Server Root                        : /var/opt/sun/directory
  Server Instance                    : ds7
  Users/Groups Directory             : yes
```

```
  Update Schema                       : yes
  Schema Type                         : 1
  DC Root                             : o=internet
  User/Group Root                     : o=usergroup
  Add New Indexes                     : yes
  ReIndex New Indexes Now             : yes
  Directory Manager DN                : cn=Directory Manager


Now ready to generate a shell script and ldif file to modify the
Directory.
No changes to the Directory Server will be made this time.
Do you want to continue [y]:

Generating files...

Checking to see if Suffixes need to be added
  Will Create suffix o=comms-config
  Will Create suffix o=usergroup
  Will Create suffix o=internet
  Will Create suffix o=pab
  Will Create suffix o=PiServerDb
  Will Create suffix o=mlusers

Checking to see that uid uniqueness plugins are turned off
  Plugin is already disabled

Adding indexes
  Adding Indexes for User/group Tree (backend:usergroupdb2)
    Checking indexes for cn
      No new indexes required
    Checking indexes for cosspecifier
      New indexes and Reindexing required
      ReIndex will happen for index type cosspecifier
    Checking indexes for inetCos
      New indexes and Reindexing required
      ReIndex will happen for index type inetCos
    Checking indexes for memberOf
      New indexes and Reindexing required
      ReIndex will happen for index type memberOf
    Checking indexes for groupid
      New indexes and Reindexing required
      ReIndex will happen for index type groupid
    Checking indexes for mail
      No new indexes required
    Checking indexes for icsCalendar
      New indexes and Reindexing required
      ReIndex will happen for index type icsCalendar
    Checking indexes for mailAlternateAddress
      No new indexes required
    Checking indexes for ou
      New indexes and Reindexing required
      ReIndex will happen for index type ou
    Checking indexes for uniqueMember
      No new indexes required
    Checking indexes for member
```

```
      No new indexes required
    Checking indexes for mailEquivalentAddress
      New indexes and Reindexing required
      ReIndex will happen for index type mailEquivalentAddress
    Checking indexes for deleted
      New indexes and Reindexing required
      ReIndex will happen for index type deleted
    Checking indexes for mgrpUniqueId
      New indexes and Reindexing required
      ReIndex will happen for index type mgrpUniqueId
    Checking indexes for mailUserStatus
      New indexes and Reindexing required
      ReIndex will happen for index type mailUserStatus
    Checking indexes for icsCalendarOwned
      New indexes and Reindexing required
      ReIndex will happen for index type icsCalendarOwned
  Adding Indexes for DC Tree (backend:internetdb2)
    Checking indexes for inetDomainBaseDN
      New indexes and Reindexing required
      ReIndex will happen for index type inetDomainBaseDN
    Checking indexes for inetCanonicalDomainName
      New indexes and Reindexing required
      ReIndex will happen for index type inetCanonicalDomainName
    Checking indexes for mailDomainStatus
      New indexes and Reindexing required
      ReIndex will happen for index type mailDomainStatus
  Adding Indexes for PAB Tree (backend:pabdb2)
    Checking indexes for memberOfManagedGroup
      New indexes and Reindexing required
      ReIndex will happen for index type memberOfManagedGroup
    Checking indexes for memberOfPABGroup
      New indexes and Reindexing required
      ReIndex will happen for index type memberOfPABGroup
    Checking indexes for memberOfPAB
      New indexes and Reindexing required
      ReIndex will happen for index type memberOfPAB
    Checking indexes for un
      New indexes and Reindexing required
      ReIndex will happen for index type un
  Adding Indexes for New PAB Tree (backend:PiServerDbdb2)
    Checking indexes for MemberOfPiBook
      New indexes and Reindexing required
      ReIndex will happen for index type MemberOfPiBook
    Checking indexes for MemberofPiGroup
      New indexes and Reindexing required
      ReIndex will happen for index type MemberofPiGroup
    Checking indexes for displayname
      New indexes and Reindexing required
      ReIndex will happen for index type displayname
  Adding Indexes for Mailing List Tree (backend:mlusersdb2)
    Checking indexes for mail
      No new indexes required
    Checking indexes for mlsubMail
      New indexes and Reindexing required
      ReIndex will happen for index type mlsubMail
    Checking indexes for mlsubListIdentifier
```

```
      New indexes and Reindexing required
      ReIndex will happen for index type mlsubListIdentifier

Checking to see if DN needs to be created for suffixes

Generating ldif for installer metadata
  Generating ldif for Adding schema for installer metadata
  Generating ldif for Creating DN: cn=CommServers,o=comms-config
The following files have been created:
   /var/tmp/dssetup_20120906232525/dssetup.sh
   /var/tmp/dssetup_20120906232525/dssetup.ldif

Running /var/tmp/dssetup_20120906232525/dssetup.sh will make changes to
the Directory
  You can run this file now or at a later time
Ready to execute the script now.

Do you want to continue [y]:

Running /var/tmp/dssetup_20120906232525/dssetup.sh -D "cn=Directory
Manager" -j /var/tmp/dssetup_20120906232525/dssetup.pw
-- Updating Schema files...
-- Copying 20subscriber.ldif
-- Copying 50ns-delegated-admin.ldif
-- Copying 50ns-mail.ldif
-- Copying 50ns-mlm.ldif
-- Copying 50ns-msg.ldif
-- Copying 50ns-value.ldif
-- Copying 55ims-ical.ldif
-- Copying 56ims-schema.ldif
-- Copying 65im.ldif
-- Copying 70sun-schema2.ldif
-- Copying 71sun-am.ldif
-- Copying 60iplanet-calendar.ldif
-- Copying 50ns-iabs.ldif
-- Copying 98ns-dummy-uwc.ldif
-- Copying 70delgated-admin.ldif
-- Stopping Directory Server
Directory Server instance '/var/opt/sun/directory/ds7' stopped
-- Starting Directory Server
Directory Server instance '/var/opt/sun/directory/ds7' started: pid=9750
-- Creating Suffix o=comms-config
-- Done Creating o=comms-config

-- Creating Suffix o=usergroup
-- Done Creating o=usergroup

-- Creating Suffix o=internet
-- Done Creating o=internet

-- Creating Suffix o=pab
-- Done Creating o=pab

-- Creating Suffix o=PiServerDb
-- Done Creating o=PiServerDb
```

```
-- Creating Suffix o=mlusers
-- Done Creating o=mlusers

-- Applying ldif file /var/tmp/dssetup_20120906232525/dssetup.ldif
modifying entry cn=schema

modifying entry cn=schema

adding new entry cn=CommServers,o=comms-config

-- rejects to /var/tmp/dssetup_20120906232525/dssetup.ldif.rej status =
0
-- ldapmodify returned 0
-- Done Applying ldif file /var/tmp/dssetup_20120906232525/dssetup.ldif

-- /opt/dsee7/bin/dsconf create-index o=usergroup cosspecifier
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup cosspecifier

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup cosspecifier
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr cosspecifier o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup cosspecifier
pres-enabled:on

-- /opt/dsee7/bin/dsconf -t cosspecifier reindex o=usergroup
## usergroupdb2: Indexing attribute: cosspecifier
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t cosspecifier o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup inetCos
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup inetCos

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup inetCos
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr inetCos o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup inetCos
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t inetCos reindex o=usergroup
## usergroupdb2: Indexing attribute: inetCos
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t inetCos o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup memberOf
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup memberOf

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
eq-enabled:on
```

```
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOf o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOf o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
sub-enabled:on

-- /opt/dsee7/bin/dsconf -t memberOf reindex o=usergroup
## usergroupdb2: Indexing attribute: memberOf
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t memberOf o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup groupid
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup groupid

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr groupid o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr groupid o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr groupid o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
sub-enabled:on

-- /opt/dsee7/bin/dsconf -t groupid reindex o=usergroup
## usergroupdb2: Indexing attribute: groupid
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t groupid o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup icsCalendar
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup icsCalendar

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
```

```
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendar o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendar o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
approx-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendar o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
approx-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendar o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
sub-enabled:on

-- /opt/dsee7/bin/dsconf -t icsCalendar reindex o=usergroup
## usergroupdb2: Indexing attribute: icsCalendar
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t icsCalendar o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup ou
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup ou

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup ou pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr ou o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup ou
pres-enabled:on

-- /opt/dsee7/bin/dsconf -t ou reindex o=usergroup
## usergroupdb2: Indexing attribute: ou
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t ou o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup mailEquivalentAddress
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup
mailEquivalentAddress
```

```
-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailEquivalentAddress o=usergroup" to
reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailEquivalentAddress o=usergroup" to
reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress approx-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailEquivalentAddress o=usergroup" to
reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress approx-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailEquivalentAddress o=usergroup" to
reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress sub-enabled:on

-- /opt/dsee7/bin/dsconf -t mailEquivalentAddress reindex o=usergroup
## usergroupdb2: Indexing attribute: mailEquivalentAddress
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mailEquivalentAddress
o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup deleted
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup deleted

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr deleted o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr deleted o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
```

```
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t deleted reindex o=usergroup
## usergroupdb2: Indexing attribute: deleted
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t deleted o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup mgrpUniqueId
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup mgrpUniqueId

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mgrpUniqueId
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mgrpUniqueId o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup mgrpUniqueId
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t mgrpUniqueId reindex o=usergroup
## usergroupdb2: Indexing attribute: mgrpUniqueId
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mgrpUniqueId o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup mailUserStatus
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup mailUserStatus

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailUserStatus
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailUserStatus o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailUserStatus
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailUserStatus
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailUserStatus o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailUserStatus
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t mailUserStatus reindex o=usergroup
## usergroupdb2: Indexing attribute: mailUserStatus
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mailUserStatus o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup icsCalendarOwned
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup icsCalendarOwned
```

```
-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendarOwned
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendarOwned o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendarOwned
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendarOwned o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendarOwned
approx-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendarOwned o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned approx-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendarOwned
sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendarOwned o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned sub-enabled:on

-- /opt/dsee7/bin/dsconf -t icsCalendarOwned reindex o=usergroup
## usergroupdb2: Indexing attribute: icsCalendarOwned
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t icsCalendarOwned o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=internet inetDomainBaseDN
-- Done /opt/dsee7/bin/dsconf create-index o=internet inetDomainBaseDN

-- /opt/dsee7/bin/dsconf set-index-prop o=internet inetDomainBaseDN
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr inetDomainBaseDN o=internet" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=internet inetDomainBaseDN
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=internet inetDomainBaseDN
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr inetDomainBaseDN o=internet" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=internet inetDomainBaseDN
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t inetDomainBaseDN reindex o=internet
## internetdb2: Indexing attribute: inetDomainBaseDN
## internetdb2: Index buffer bucket size: 0
```

```
## internetdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t inetDomainBaseDN o=internet

-- /opt/dsee7/bin/dsconf create-index o=internet inetCanonicalDomainName
-- Done /opt/dsee7/bin/dsconf create-index o=internet
inetCanonicalDomainName

-- /opt/dsee7/bin/dsconf set-index-prop o=internet
inetCanonicalDomainName pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr inetCanonicalDomainName o=internet" to
reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=internet
inetCanonicalDomainName pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=internet
inetCanonicalDomainName eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr inetCanonicalDomainName o=internet" to
reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=internet
inetCanonicalDomainName eq-enabled:on

-- /opt/dsee7/bin/dsconf -t inetCanonicalDomainName reindex o=internet
## internetdb2: Indexing attribute: inetCanonicalDomainName
## internetdb2: Index buffer bucket size: 0
## internetdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t inetCanonicalDomainName
o=internet

-- /opt/dsee7/bin/dsconf create-index o=internet mailDomainStatus
-- Done /opt/dsee7/bin/dsconf create-index o=internet mailDomainStatus

-- /opt/dsee7/bin/dsconf set-index-prop o=internet mailDomainStatus
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailDomainStatus o=internet" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=internet mailDomainStatus
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=internet mailDomainStatus
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailDomainStatus o=internet" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=internet mailDomainStatus
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t mailDomainStatus reindex o=internet
## internetdb2: Indexing attribute: mailDomainStatus
## internetdb2: Index buffer bucket size: 0
## internetdb2: Finished indexing.
```

```
Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mailDomainStatus o=internet

-- /opt/dsee7/bin/dsconf create-index o=pab memberOfManagedGroup
-- Done /opt/dsee7/bin/dsconf create-index o=pab memberOfManagedGroup

-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfManagedGroup
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfManagedGroup o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfManagedGroup
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfManagedGroup
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfManagedGroup o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfManagedGroup
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t memberOfManagedGroup reindex o=pab
## pabdb2: Indexing attribute: memberOfManagedGroup
## pabdb2: Index buffer bucket size: 0
## pabdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t memberOfManagedGroup o=pab

-- /opt/dsee7/bin/dsconf create-index o=pab memberOfPABGroup
-- Done /opt/dsee7/bin/dsconf create-index o=pab memberOfPABGroup

-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfPABGroup o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfPABGroup o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t memberOfPABGroup reindex o=pab
## pabdb2: Indexing attribute: memberOfPABGroup
## pabdb2: Index buffer bucket size: 0
## pabdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t memberOfPABGroup o=pab

-- /opt/dsee7/bin/dsconf create-index o=pab memberOfPAB
-- Done /opt/dsee7/bin/dsconf create-index o=pab memberOfPAB
```

```
-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfPAB o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfPAB o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t memberOfPAB reindex o=pab
## pabdb2: Indexing attribute: memberOfPAB
## pabdb2: Index buffer bucket size: 0
## pabdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t memberOfPAB o=pab

-- /opt/dsee7/bin/dsconf create-index o=pab un
-- Done /opt/dsee7/bin/dsconf create-index o=pab un

-- /opt/dsee7/bin/dsconf set-index-prop o=pab un eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr un o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab un eq-enabled:on

-- /opt/dsee7/bin/dsconf -t un reindex o=pab
## pabdb2: Indexing attribute: un
## pabdb2: Index buffer bucket size: 0
## pabdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t un o=pab

-- /opt/dsee7/bin/dsconf create-index o=PiServerDb MemberOfPiBook
-- Done /opt/dsee7/bin/dsconf create-index o=PiServerDb MemberOfPiBook

-- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb MemberOfPiBook
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr MemberOfPiBook o=PiServerDb" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb MemberOfPiBook
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t MemberOfPiBook reindex o=PiServerDb
## PiServerDbdb2: Indexing attribute: MemberOfPiBook
## PiServerDbdb2: Index buffer bucket size: 0
## PiServerDbdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t MemberOfPiBook o=PiServerDb

-- /opt/dsee7/bin/dsconf create-index o=PiServerDb MemberofPiGroup
```

```
-- Done /opt/dsee7/bin/dsconf create-index o=PiServerDb MemberofPiGroup

-- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb MemberofPiGroup
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr MemberofPiGroup o=PiServerDb" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb
MemberofPiGroup eq-enabled:on

-- /opt/dsee7/bin/dsconf -t MemberofPiGroup reindex o=PiServerDb
## PiServerDbdb2: Indexing attribute: MemberofPiGroup
## PiServerDbdb2: Index buffer bucket size: 0
## PiServerDbdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t MemberofPiGroup o=PiServerDb

-- /opt/dsee7/bin/dsconf create-index o=PiServerDb displayname
-- Done /opt/dsee7/bin/dsconf create-index o=PiServerDb displayname

-- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr displayname o=PiServerDb" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr displayname o=PiServerDb" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr displayname o=PiServerDb" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
sub-enabled:on

-- /opt/dsee7/bin/dsconf -t displayname reindex o=PiServerDb
## PiServerDbdb2: Indexing attribute: displayname
## PiServerDbdb2: Index buffer bucket size: 100
## PiServerDbdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t displayname o=PiServerDb

-- /opt/dsee7/bin/dsconf create-index o=mlusers mlsubMail
-- Done /opt/dsee7/bin/dsconf create-index o=mlusers mlsubMail

-- /opt/dsee7/bin/dsconf set-index-prop o=mlusers mlsubMail
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mlsubMail o=mlusers" to reindex.
```

```
-- Done /opt/dsee7/bin/dsconf set-index-prop o=mlusers mlsubMail
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t mlsubMail reindex o=mlusers
## mlusersdb2: Indexing attribute: mlsubMail
## mlusersdb2: Index buffer bucket size: 0
## mlusersdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mlsubMail o=mlusers

-- /opt/dsee7/bin/dsconf create-index o=mlusers mlsubListIdentifier
-- Done /opt/dsee7/bin/dsconf create-index o=mlusers mlsubListIdentifier

-- /opt/dsee7/bin/dsconf set-index-prop o=mlusers mlsubListIdentifier
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mlsubListIdentifier o=mlusers" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=mlusers
mlsubListIdentifier eq-enabled:on

-- /opt/dsee7/bin/dsconf -t mlsubListIdentifier reindex o=mlusers
## mlusersdb2: Indexing attribute: mlsubListIdentifier
## mlusersdb2: Index buffer bucket size: 0
## mlusersdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mlsubListIdentifier o=mlusers

Successful Completion. Consult
/var/tmp/dssetup_20120906232525/dssetup.log for details
[101 Thu Sep 06 23:28:19 root@host1% /opt/sun/comms/dssetup# ]
# stty -echo
stty -echo
[102 Thu Sep 06 23:30:13 root@host1% /opt/sun/comms/dssetup# ]
# ls /var/tmp/dssetup_20120906232525/
total 171
   2 99user_new.ldif     70 dssetup.log          5 save/
   5 dssetup.ldif        89 dssetup.sh*
[103 Thu Sep 06 23:30:28 root@host1% /opt/sun/comms/dssetup# ]
# ls /var/tmp/dssetup_20120906232525/save
total 637
 154 00core.ldif                   17 50ns-mail.ldif
  16 00ds6pwp.ldif                 35 50ns-mcd-browser.ldif
   5 05rfc2247.ldif                11 50ns-mcd-config.ldif
   3 05rfc2927.ldif                 7 50ns-mcd-li.ldif
  16 11rfc2307.ldif                42 50ns-mcd-mail.ldif
  10 20subscriber.ldif              3 50ns-media.ldif
   7 25java-object.ldif            16 50ns-mlm.ldif
  19 28pilot.ldif                 100 50ns-msg.ldif
  25 30ns-common.ldif               7 50ns-netshare.ldif
   7 50iplanet-servicemgt.ldif      5 50ns-news.ldif
  14 50ns-admin.ldif                3 50ns-proxy.ldif
  15 50ns-calendar.ldif             7 50ns-value.ldif
   4 50ns-certificate.ldif          8 50ns-wcal.ldif
  24 50ns-compass.ldif              4 50ns-web.ldif
```

```
  14 50ns-delegated-admin.ldif      2 99user.ldif
  33 50ns-directory.ldif
   4 50ns-legacy.ldif
[104 Thu Sep 06 23:30:31 root@host1% /opt/sun/comms/dssetup# ]
# cat /var/tmp/dssetup_20120906232525/99user_new.ldif
#
# Copyright 2003 Sun Microsystems, Inc. All Rights Reserved
# Patents Pending.Use is subject to license terms.
#
#
# PROPRIETARY/CONFIDENTIAL. Use of this product is subject to
# license terms. Copyright (c) 2001 Sun Microsystems, Inc.
# Some preexisting portions Copyright (c) 2001 Netscape Communications
Corp.
# All rights reserved.
#
#
# User-defined schema
#
dn: cn=schema
[105 Thu Sep 06 23:30:39 root@host1% /opt/sun/comms/dssetup# ]
# cat /var/tmp/dssetup_20120906232525/dssetup.ldif
# This Ldif file contains the changes to be made to the Directory
# Run it like this:
#   cd /opt/SUNWdsee/dsee6/bin
#   ./ldapmodify -p 389 -h host1 -D binddn -j passwdfile -c -f
/var/tmp/dssetup_20120906232525/dssetup.ldif

#--------------------------------------------------
# This section creates the installer metadata
#--------------------------------------------------

##########################################
# dn: cn=schema
# Add the schema for sunkeyvalue. Required by sunCommsMetaData
objectclass
# Note that sunkeyvalue may have already been added by Access Manager
##########################################
dn: cn=schema
changetype: modify
add: attributeTypes
attributeTypes: ( 1.3.6.1.4.1.42.2.27.9.1.83 NAME ( 'sunkeyvalue' ) DESC
'Attribute to store the encoded key values of the services' SYNTAX
1.3.6.1.4.1.1466.115.121.1.26 X-ORIGIN 'Sun ONE Identity Management' )

##########################################
# dn: cn=schema
# Add the schema for the Comm Servers installer metadata information
##########################################
dn: cn=schema
changetype: modify
add: objectClasses
objectClasses: ( 1.3.6.1.4.1.42.2.27.2.1.39 NAME 'sunCommsMetaData' DESC
'Objectclass for storing meta data for Sun Communication' SUP top
STRUCTURAL MUST ( cn ) MAY ( sunkeyvalue ) )
```

```
########################################
# dn: cn=CommServers,o=comms-config
# Create the DN for the installer metadata for Comm Servers
########################################
dn: cn=CommServers,o=comms-config
changetype: add
objectclass: top
objectclass: sunCommsMetaData
sunkeyvalue: dssetup_ver=6.4
sunkeyvalue: dssetup_rev=24.03
sunkeyvalue: dcsuffix=o=internet
sunkeyvalue: ugsuffix=o=usergroup
sunkeyvalue: mlsuffix=o=mlusers
sunkeyvalue: schematype=1
aci:
(target="ldap:///cn=CommServers,o=comms-config")(targetattr!="aci")(version
3.0; acl "Anonymous access to dssetup config"; allow
(read,search,compare) userdn="ldap:///anyone";)
[106 Thu Sep 06 23:30:54 root@host1% /opt/sun/comms/dssetup# ]
# cat /var/tmp/dssetup_20120906232525/dssetup.sh
#! /bin/sh
# This shell script contains the commands to run against the Directory
#set -x

#
# Usage
#
usage()
{
  echo "Usage: $0 -D <binddn> -j <passwdfile>"
  echo "  -D binddn        bind dn"
  echo "  -j <passwdfile>  read bind passwd from 'file' for simple
authentication"
  exit 1
}

if [ $# -lt 1 ]
then
  echo "You must specify either -j"
  usage
fi

jflag=0
Dflag=0
while getopts D:j: c; do
  case $c in
  D)
    Dflag=1
    BINDDN=$OPTARG;;
  j)
    jflag=1
    pflag=-j
    parg=$OPTARG;;
  \?)
    usage;;
  esac
```

```
done
shift `expr $OPTIND - 1`

if [ $Dflag -eq 0 ]
then
  echo "You must specify the -D switch"
  usage
fi

if [ $jflag -eq 0 ]
then
  echo "You must specify -j"
  usage
fi

if [ $# -ge 1 ]
then
  echo "Unrecognized argument $*"
  usage
fi

if [ `/usr/bin/id | cut -d= -f2 | cut -d\( -f1` != 0 ]
then
  echo
  echo "To run this utility you need to be the system's root user. \n"
  echo
  exit 1
fi

echo -- Updating Schema files...
echo -- Copying 20subscriber.ldif
cp /opt/sun/comms/dssetup/sbin/schema/20subscriber.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-delegated-admin.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-delegated-admin.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-mail.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-mail.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-mlm.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-mlm.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-msg.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-msg.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-value.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-value.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 55ims-ical.ldif
cp /opt/sun/comms/dssetup/sbin/schema/55ims-ical.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 56ims-schema.ldif
cp /opt/sun/comms/dssetup/sbin/schema/56ims-schema.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 65im.ldif
cp /opt/sun/comms/dssetup/sbin/schema/65im.ldif
```

```
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 70sun-schema2.ldif
cp /opt/sun/comms/dssetup/sbin/schema/70sun-schema2.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 71sun-am.ldif
cp /opt/sun/comms/dssetup/sbin/schema/71sun-am.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 60iplanet-calendar.ldif
cp /opt/sun/comms/dssetup/sbin/schema/60iplanet-calendar.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-iabs.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-iabs.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 98ns-dummy-uwc.ldif
cp /opt/sun/comms/dssetup/sbin/schema/98ns-dummy-uwc.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 70delgated-admin.ldif
cp /opt/sun/comms/dssetup/sbin/schema/70delgated-admin.ldif
/var/opt/sun/directory/ds7/config/schema

echo -- Stopping Directory Server
/opt/dsee7/bin/dsadm stop /var/opt/sun/directory/ds7
if [ $? != 0 ]; then
  echo "Stopping the Directory server failed"
  exit 1
fi
sleep 5

echo -- Starting Directory Server
/opt/dsee7/bin/dsadm start /var/opt/sun/directory/ds7
if [ $? != 0 ]; then
  echo "The server may not have restarted properly"
  echo "Please restart it manually"
fi
sleep 5

echo -- Creating Suffix o=comms-config
/opt/dsee7/bin/dsconf create-suffix --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured --db-name
comms-configdb2 o=comms-config
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-suffix returned $stat"
fi
echo -- Done Creating o=comms-config
echo

echo -- Creating Suffix o=usergroup
/opt/dsee7/bin/dsconf create-suffix --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured --db-name usergroupdb2
o=usergroup
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-suffix returned $stat"
fi
echo -- Done Creating o=usergroup
```

```
echo

echo -- Creating Suffix o=internet
/opt/dsee7/bin/dsconf create-suffix --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured --db-name internetdb2
o=internet
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-suffix returned $stat"
fi
echo -- Done Creating o=internet
echo

echo -- Creating Suffix o=pab
/opt/dsee7/bin/dsconf create-suffix --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured --db-name pabdb2 o=pab
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-suffix returned $stat"
fi
echo -- Done Creating o=pab
echo

echo -- Creating Suffix o=PiServerDb
/opt/dsee7/bin/dsconf create-suffix --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured --db-name PiServerDbdb2
o=PiServerDb
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-suffix returned $stat"
fi
echo -- Done Creating o=PiServerDb
echo

echo -- Creating Suffix o=mlusers
/opt/dsee7/bin/dsconf create-suffix --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured --db-name mlusersdb2
o=mlusers
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-suffix returned $stat"
fi
echo -- Done Creating o=mlusers
echo

echo -- Applying ldif file /var/tmp/dssetup_20120906232525/dssetup.ldif
cd /opt/SUNWdsee/dsee6/bin
./ldapmodify -p 389 -h host1 -D "$BINDDN" $pflag "$parg" -c -e
/var/tmp/dssetup_20120906232525/dssetup.ldif.rej -f
/var/tmp/dssetup_20120906232525/dssetup.ldif
stat=$?
echo -- rejects to /var/tmp/dssetup_20120906232525/dssetup.ldif.rej
status = $stat
if [ $stat -eq 0 ]; then
  echo "-- ldapmodify returned $stat"
elif [ $stat -eq 20 ]; then
```

```
  echo "-- WARNING: ldapmodify returned $stat"
else
  echo "-- ERROR: ldapmodify returned $stat"
  exit $stat;
fi
echo -- Done Applying ldif file
/var/tmp/dssetup_20120906232525/dssetup.ldif
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup cosspecifier
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"cosspecifier"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup"
"cosspecifier"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup cosspecifier
pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"cosspecifier" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
cosspecifier pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t cosspecifier reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "cosspecifier" "o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "cosspecifier"
"o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup inetCos
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "inetCos"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup" "inetCos"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup inetCos
```

```
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "inetCos"
"eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup inetCos
eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t inetCos reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "inetCos" "o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "inetCos" "o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup memberOf
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "memberOf"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup" "memberOf"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "memberOf"
"eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
sub-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "memberOf"
"sub-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
sub-enabled:on
```

```
echo

echo -- /opt/dsee7/bin/dsconf -t memberOf reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "memberOf" "o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "memberOf" "o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup groupid
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "groupid"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup" "groupid"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "groupid"
"pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "groupid"
"eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
sub-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "groupid"
"sub-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
```

```
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
sub-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t groupid reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "groupid" "o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "groupid" "o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup icsCalendar
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"icsCalendar"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup"
"icsCalendar"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"icsCalendar" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendar pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"icsCalendar" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendar eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
approx-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
```

```
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"icsCalendar" "approx-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendar approx-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
sub-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"icsCalendar" "sub-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendar sub-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t icsCalendar reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "icsCalendar" "o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "icsCalendar"
"o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup ou
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "ou"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup" "ou"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup ou
pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "ou"
"pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup ou
pres-enabled:on
echo
```

```
echo -- /opt/dsee7/bin/dsconf -t ou reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "ou" "o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "ou" "o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup
mailEquivalentAddress
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailEquivalentAddress"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup"
"mailEquivalentAddress"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailEquivalentAddress" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailEquivalentAddress" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress approx-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailEquivalentAddress" "approx-enabled:on"
stat=$?
```

```
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress approx-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress sub-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailEquivalentAddress" "sub-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress sub-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t mailEquivalentAddress reindex
o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "mailEquivalentAddress"
"o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "mailEquivalentAddress"
"o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup deleted
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "deleted"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup" "deleted"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "deleted"
"pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
pres-enabled:on
echo
```

```
echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "deleted"
"eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t deleted reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "deleted" "o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "deleted" "o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup mgrpUniqueId
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mgrpUniqueId"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup"
"mgrpUniqueId"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mgrpUniqueId
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mgrpUniqueId" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mgrpUniqueId eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t mgrpUniqueId reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "mgrpUniqueId" "o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "mgrpUniqueId"
```

```
"o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup mailUserStatus
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailUserStatus"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup"
"mailUserStatus"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailUserStatus
pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailUserStatus" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailUserStatus pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailUserStatus
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailUserStatus" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailUserStatus eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t mailUserStatus reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "mailUserStatus"
"o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "mailUserStatus"
"o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup icsCalendarOwned
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
```

```
"icsCalendarOwned"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup"
"icsCalendarOwned"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"icsCalendarOwned" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"icsCalendarOwned" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned approx-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"icsCalendarOwned" "approx-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned approx-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned sub-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"icsCalendarOwned" "sub-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
```

```
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned sub-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t icsCalendarOwned reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "icsCalendarOwned"
"o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "icsCalendarOwned"
"o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=internet inetDomainBaseDN
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=internet"
"inetDomainBaseDN"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=internet"
"inetDomainBaseDN"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=internet inetDomainBaseDN
pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=internet"
"inetDomainBaseDN" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=internet
inetDomainBaseDN pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=internet inetDomainBaseDN
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=internet"
"inetDomainBaseDN" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=internet
inetDomainBaseDN eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t inetDomainBaseDN reindex o=internet
```

```
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "inetDomainBaseDN"
"o=internet"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "inetDomainBaseDN"
"o=internet"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=internet
inetCanonicalDomainName
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=internet"
"inetCanonicalDomainName"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=internet"
"inetCanonicalDomainName"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=internet
inetCanonicalDomainName pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=internet"
"inetCanonicalDomainName" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=internet
inetCanonicalDomainName pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=internet
inetCanonicalDomainName eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=internet"
"inetCanonicalDomainName" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=internet
inetCanonicalDomainName eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t inetCanonicalDomainName reindex
o=internet
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "inetCanonicalDomainName"
"o=internet"
stat=$?
```

```
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "inetCanonicalDomainName"
"o=internet"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=internet mailDomainStatus
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=internet"
"mailDomainStatus"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=internet"
"mailDomainStatus"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=internet mailDomainStatus
pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=internet"
"mailDomainStatus" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=internet
mailDomainStatus pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=internet mailDomainStatus
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=internet"
"mailDomainStatus" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=internet
mailDomainStatus eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t mailDomainStatus reindex o=internet
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "mailDomainStatus"
"o=internet"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "mailDomainStatus"
"o=internet"
echo
```

```
echo -- /opt/dsee7/bin/dsconf create-index o=pab memberOfManagedGroup
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=pab"
"memberOfManagedGroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=pab"
"memberOfManagedGroup"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfManagedGroup
pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=pab"
"memberOfManagedGroup" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=pab
memberOfManagedGroup pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfManagedGroup
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=pab"
"memberOfManagedGroup" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=pab
memberOfManagedGroup eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t memberOfManagedGroup reindex o=pab
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "memberOfManagedGroup"
"o=pab"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "memberOfManagedGroup"
"o=pab"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=pab memberOfPABGroup
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=pab"
"memberOfPABGroup"
stat=$?
```

```
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=pab"
"memberOfPABGroup"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=pab"
"memberOfPABGroup" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=pab"
"memberOfPABGroup" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t memberOfPABGroup reindex o=pab
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "memberOfPABGroup" "o=pab"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "memberOfPABGroup" "o=pab"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=pab memberOfPAB
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=pab" "memberOfPAB"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=pab" "memberOfPAB"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB
pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
```

```
"$parg" --port 389 --hostname host1 --unsecured "o=pab" "memberOfPAB"
"pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB
pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=pab" "memberOfPAB"
"eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB
eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t memberOfPAB reindex o=pab
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "memberOfPAB" "o=pab"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "memberOfPAB" "o=pab"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=pab un
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=pab" "un"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=pab" "un"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=pab un eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=pab" "un"
"eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=pab un eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t un reindex o=pab
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
```

```
--port 389 --hostname host1 --unsecured -t "un" "o=pab"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "un" "o=pab"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=PiServerDb MemberOfPiBook
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=PiServerDb"
"MemberOfPiBook"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=PiServerDb"
"MemberOfPiBook"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb MemberOfPiBook
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=PiServerDb"
"MemberOfPiBook" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb
MemberOfPiBook eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t MemberOfPiBook reindex o=PiServerDb
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "MemberOfPiBook"
"o=PiServerDb"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "MemberOfPiBook"
"o=PiServerDb"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=PiServerDb MemberofPiGroup
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=PiServerDb"
"MemberofPiGroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=PiServerDb"
"MemberofPiGroup"
echo
```

```
echo -- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb
MemberofPiGroup eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=PiServerDb"
"MemberofPiGroup" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb
MemberofPiGroup eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t MemberofPiGroup reindex o=PiServerDb
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "MemberofPiGroup"
"o=PiServerDb"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "MemberofPiGroup"
"o=PiServerDb"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=PiServerDb displayname
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=PiServerDb"
"displayname"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=PiServerDb"
"displayname"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=PiServerDb"
"displayname" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb
displayname pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=PiServerDb"
"displayname" "eq-enabled:on"
```

```
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb
displayname eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
sub-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=PiServerDb"
"displayname" "sub-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb
displayname sub-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t displayname reindex o=PiServerDb
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "displayname" "o=PiServerDb"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "displayname"
"o=PiServerDb"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=mlusers mlsubMail
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=mlusers" "mlsubMail"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=mlusers" "mlsubMail"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=mlusers mlsubMail
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=mlusers" "mlsubMail"
"eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=mlusers mlsubMail
eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t mlsubMail reindex o=mlusers
```

```
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "mlsubMail" "o=mlusers"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "mlsubMail" "o=mlusers"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=mlusers mlsubListIdentifier
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=mlusers"
"mlsubListIdentifier"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=mlusers"
"mlsubListIdentifier"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=mlusers
mlsubListIdentifier eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=mlusers"
"mlsubListIdentifier" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=mlusers
mlsubListIdentifier eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t mlsubListIdentifier reindex o=mlusers
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "mlsubListIdentifier"
"o=mlusers"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "mlsubListIdentifier"
"o=mlusers"
echo
[107 Thu Sep 06 23:30:58 root@host1% /opt/sun/comms/dssetup# ]
# cat /var/tmp/dssetup_20120906232525/dssetup.log
-=-=-=-=-=-=-=-=-=-=-=-=-=

Running /usr/bin/perl ./sbin/comm_dssetup.pl

Welcome to the Directory Server preparation tool (Comms DSsetup)
6.4.0.24.0 for
Oracle Communications Unified Communications Suite
dssetup Version 6.4-24.03 (built Mon Jun 11 14:36:51 PDT 2012)
```

```
This tool prepares your directory server for use by the
communications services which include Messaging, Calendar and their
components.

The logfile is /var/tmp/dssetup_20120906232525/dssetup.log

Do you want to continue [y]:

Please enter the full path to the directory where the
Directory Server instance(s) reside ("server-root"), or
an explicit Directory Server instance directory

Directory server root [/var/opt/sun/directory] :

Please select a directory server instance from the following list:

[1]   ds7


Which instance do you want [1]:
Please enter the directory manager DN [cn=Directory Manager]:
stty -echo
Password:
stty echoConfiguration from DS config file:
- DS Install location: /opt/dsee7
- DS hostname: host1
- DS port: 389

ldapsearch location: /opt/SUNWdsee/dsee6/bin

./ldapsearch -D "cn=Directory Manager" -j
"/var/tmp/dssetup_20120906232525/dssetup.pw" -p 389 -h host1 -b
"cn=monitor" -s base objectclass=top version 2>&1
./ldapsearch output: version: 1
./ldapsearch output: dn: cn=monitor
./ldapsearch output: version: Sun-Directory-Server/11.1.1.3.0
B2010.0630.2203
-- Detected DS versions:
   full: 11.1.1.3.0
   major: 11
   minor: 1
   micro: 1
   patch: NONE

Detected DS version 11.1.1.3.0 on host1 port 389
-- Stored Dssetup data ver=0 rev=0, dctree=
   ug=, schematype=

Will this directory server be used for users/groups [yes]: WARNING: No
default suffix found in the Directory
A list of suffixes are as follows:
  No Suffixes Found

Please enter the Users/Groups base suffix [o=usergroup] :
-=-=-=-=-=-=-=-=-=-=-=
has_naming_context_ds6 get-suffix-prop result:
```

```
"o=usergroup": suffix does not exist.
The "get-suffix-prop" operation failed on "host1:389".

-=-=-=-=-=-=-=-=-=-=-=
There are 3 possible schema types:
  1   - schema 1
  1.5 - schema 2 compatibility mode for schema 1 systems
        that has been converted with commdirmig
  2   - schema 2

Please enter the Schema Type (1, 1.5, 2) [2]: 1
Please enter the DC Tree base suffix [o=internet]:
Do you want to update the schema files [yes]:
Do you want to configure new indexes [yes]:
Do you want to Reindex the new indexes now [yes]:
Here is a summary of the settings that you chose:

  Server Root                        : /var/opt/sun/directory
  Server Instance                    : ds7
  Users/Groups Directory             : yes
  Update Schema                      : yes
  Schema Type                        : 1
  DC Root                            : o=internet
  User/Group Root                    : o=usergroup
  Add New Indexes                    : yes
  ReIndex New Indexes Now            : yes
  Directory Manager DN               : cn=Directory Manager


Now ready to generate a shell script and ldif file to modify the
Directory.
No changes to the Directory Server will be made this time.
Do you want to continue [y]:
Generating files...

Checking to see if Suffixes need to be added

-=-=-=-=-=-=-=-=-=-=-=
has_naming_context_ds6 get-suffix-prop result:
"o=comms-config": suffix does not exist.
The "get-suffix-prop" operation failed on "host1:389".

-=-=-=-=-=-=-=-=-=-=-=
  Will Create suffix o=comms-config

-=-=-=-=-=-=-=-=-=-=-=
has_naming_context_ds6 get-suffix-prop result:
"o=usergroup": suffix does not exist.
The "get-suffix-prop" operation failed on "host1:389".

-=-=-=-=-=-=-=-=-=-=-=
  Will Create suffix o=usergroup

-=-=-=-=-=-=-=-=-=-=-=
has_naming_context_ds6 get-suffix-prop result:
"o=internet": suffix does not exist.
```

```
The "get-suffix-prop" operation failed on "host1:389".

-=-=-=-=-=-=-=-=-=-=-
  Will Create suffix o=internet

-=-=-=-=-=-=-=-=-=-=-
has_naming_context_ds6 get-suffix-prop result:
"o=pab": suffix does not exist.
The "get-suffix-prop" operation failed on "host1:389".

-=-=-=-=-=-=-=-=-=-=-
  Will Create suffix o=pab

-=-=-=-=-=-=-=-=-=-=-
has_naming_context_ds6 get-suffix-prop result:
"o=PiServerDb": suffix does not exist.
The "get-suffix-prop" operation failed on "host1:389".

-=-=-=-=-=-=-=-=-=-=-
  Will Create suffix o=PiServerDb

-=-=-=-=-=-=-=-=-=-=-
has_naming_context_ds6 get-suffix-prop result:
"o=mlusers": suffix does not exist.
The "get-suffix-prop" operation failed on "host1:389".

-=-=-=-=-=-=-=-=-=-=-
  Will Create suffix o=mlusers

Checking to see that uid uniqueness plugins are turned off
  Plugin is already disabled

Adding indexes
  Adding Indexes for User/group Tree (backend:usergroupdb2)
    Checking indexes for cn
      Default index DN exists
      Default index pres found
      Default index eq found
      Default index sub found
      No new indexes required
    Checking indexes for cosspecifier
      Index does not exist
        Index pres does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type cosspecifier
    Checking indexes for inetCos
      Index does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type inetCos
    Checking indexes for memberOf
      Index does not exist
        Index eq does not exist
        Index sub does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type memberOf
```

```
Checking indexes for groupid
  Index does not exist
    Index pres does not exist
    Index eq does not exist
    Index sub does not exist
  New indexes and Reindexing required
  ReIndex will happen for index type groupid
Checking indexes for mail
  Default index DN exists
  Default index pres found
  Default index eq found
  Default index sub found
  No new indexes required
Checking indexes for icsCalendar
  Index does not exist
    Index pres does not exist
    Index eq does not exist
    Index approx does not exist
    Index sub does not exist
  New indexes and Reindexing required
  ReIndex will happen for index type icsCalendar
Checking indexes for mailAlternateAddress
  Default index DN exists
  Default index eq found
  No new indexes required
Checking indexes for ou
  Index does not exist
    Index pres does not exist
  New indexes and Reindexing required
  ReIndex will happen for index type ou
Checking indexes for uniqueMember
  Default index DN exists
  Default index eq found
  No new indexes required
Checking indexes for member
  Default index DN exists
  Default index eq found
  No new indexes required
Checking indexes for mailEquivalentAddress
  Index does not exist
    Index pres does not exist
    Index eq does not exist
    Index approx does not exist
    Index sub does not exist
  New indexes and Reindexing required
  ReIndex will happen for index type mailEquivalentAddress
Checking indexes for deleted
  Index does not exist
    Index pres does not exist
    Index eq does not exist
  New indexes and Reindexing required
  ReIndex will happen for index type deleted
Checking indexes for mgrpUniqueId
  Index does not exist
    Index eq does not exist
  New indexes and Reindexing required
```

```
      ReIndex will happen for index type mgrpUniqueId
    Checking indexes for mailUserStatus
      Index does not exist
        Index pres does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type mailUserStatus
    Checking indexes for icsCalendarOwned
      Index does not exist
        Index pres does not exist
        Index eq does not exist
        Index approx does not exist
        Index sub does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type icsCalendarOwned
  Adding Indexes for DC Tree (backend:internetdb2)
    Checking indexes for inetDomainBaseDN
      Index does not exist
        Index pres does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type inetDomainBaseDN
    Checking indexes for inetCanonicalDomainName
      Index does not exist
        Index pres does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type inetCanonicalDomainName
    Checking indexes for mailDomainStatus
      Index does not exist
        Index pres does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type mailDomainStatus
  Adding Indexes for PAB Tree (backend:pabdb2)
    Checking indexes for memberOfManagedGroup
      Index does not exist
        Index pres does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type memberOfManagedGroup
    Checking indexes for memberOfPABGroup
      Index does not exist
        Index pres does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type memberOfPABGroup
    Checking indexes for memberOfPAB
      Index does not exist
        Index pres does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type memberOfPAB
    Checking indexes for un
      Index does not exist
        Index eq does not exist
```

```
      New indexes and Reindexing required
      ReIndex will happen for index type un
  Adding Indexes for New PAB Tree (backend:PiServerDbdb2)
    Checking indexes for MemberOfPiBook
      Index does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type MemberOfPiBook
    Checking indexes for MemberofPiGroup
      Index does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type MemberofPiGroup
    Checking indexes for displayname
      Index does not exist
        Index pres does not exist
        Index eq does not exist
        Index sub does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type displayname
  Adding Indexes for Mailing List Tree (backend:mlusersdb2)
    Checking indexes for mail
      Default index DN exists
      Default index pres found
      Default index eq found
      Default index sub found
      No new indexes required
    Checking indexes for mlsubMail
      Index does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type mlsubMail
    Checking indexes for mlsubListIdentifier
      Index does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type mlsubListIdentifier

Checking to see if DN needs to be created for suffixes

Generating ldif for installer metadata
  Generating ldif for Adding schema for installer metadata
  Generating ldif for Creating DN: cn=CommServers,o=comms-config
The following files have been created:
   /var/tmp/dssetup_20120906232525/dssetup.sh
   /var/tmp/dssetup_20120906232525/dssetup.ldif

Running /var/tmp/dssetup_20120906232525/dssetup.sh will make changes to
the Directory
  You can run this file now or at a later time
Ready to execute the script now.

Do you want to continue [y]:
Running /var/tmp/dssetup_20120906232525/dssetup.sh -D "cn=Directory
Manager" -j /var/tmp/dssetup_20120906232525/dssetup.pw
-- Updating Schema files...
```

```
-- Copying 20subscriber.ldif
-- Copying 50ns-delegated-admin.ldif
-- Copying 50ns-mail.ldif
-- Copying 50ns-mlm.ldif
-- Copying 50ns-msg.ldif
-- Copying 50ns-value.ldif
-- Copying 55ims-ical.ldif
-- Copying 56ims-schema.ldif
-- Copying 65im.ldif
-- Copying 70sun-schema2.ldif
-- Copying 71sun-am.ldif
-- Copying 60iplanet-calendar.ldif
-- Copying 50ns-iabs.ldif
-- Copying 98ns-dummy-uwc.ldif
-- Copying 70delgated-admin.ldif
-- Stopping Directory Server
Directory Server instance '/var/opt/sun/directory/ds7' stopped
-- Starting Directory Server
Directory Server instance '/var/opt/sun/directory/ds7' started: pid=9750
-- Creating Suffix o=comms-config
-- Done Creating o=comms-config

-- Creating Suffix o=usergroup
-- Done Creating o=usergroup

-- Creating Suffix o=internet
-- Done Creating o=internet

-- Creating Suffix o=pab
-- Done Creating o=pab

-- Creating Suffix o=PiServerDb
-- Done Creating o=PiServerDb

-- Creating Suffix o=mlusers
-- Done Creating o=mlusers

-- Applying ldif file /var/tmp/dssetup_20120906232525/dssetup.ldif
modifying entry cn=schema

modifying entry cn=schema

adding new entry cn=CommServers,o=comms-config

-- rejects to /var/tmp/dssetup_20120906232525/dssetup.ldif.rej status =
0
-- ldapmodify returned 0
-- Done Applying ldif file /var/tmp/dssetup_20120906232525/dssetup.ldif

-- /opt/dsee7/bin/dsconf create-index o=usergroup cosspecifier
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup cosspecifier

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup cosspecifier
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr cosspecifier o=usergroup" to reindex.
```

```
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup cosspecifier
pres-enabled:on

-- /opt/dsee7/bin/dsconf -t cosspecifier reindex o=usergroup
## usergroupdb2: Indexing attribute: cosspecifier
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t cosspecifier o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup inetCos
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup inetCos

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup inetCos
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr inetCos o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup inetCos
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t inetCos reindex o=usergroup
## usergroupdb2: Indexing attribute: inetCos
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t inetCos o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup memberOf
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup memberOf

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOf o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOf o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
sub-enabled:on

-- /opt/dsee7/bin/dsconf -t memberOf reindex o=usergroup
## usergroupdb2: Indexing attribute: memberOf
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t memberOf o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup groupid
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup groupid
```

```
-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr groupid o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr groupid o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr groupid o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
sub-enabled:on

-- /opt/dsee7/bin/dsconf -t groupid reindex o=usergroup
## usergroupdb2: Indexing attribute: groupid
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t groupid o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup icsCalendar
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup icsCalendar

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendar o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendar o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
approx-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendar o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
approx-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
sub-enabled:on
```

```
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendar o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
sub-enabled:on

-- /opt/dsee7/bin/dsconf -t icsCalendar reindex o=usergroup
## usergroupdb2: Indexing attribute: icsCalendar
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t icsCalendar o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup ou
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup ou

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup ou pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr ou o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup ou
pres-enabled:on

-- /opt/dsee7/bin/dsconf -t ou reindex o=usergroup
## usergroupdb2: Indexing attribute: ou
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t ou o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup mailEquivalentAddress
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup
mailEquivalentAddress

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailEquivalentAddress o=usergroup" to
reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailEquivalentAddress o=usergroup" to
reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress approx-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailEquivalentAddress o=usergroup" to
reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
```

```
mailEquivalentAddress approx-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailEquivalentAddress o=usergroup" to
reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress sub-enabled:on

-- /opt/dsee7/bin/dsconf -t mailEquivalentAddress reindex o=usergroup
## usergroupdb2: Indexing attribute: mailEquivalentAddress
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mailEquivalentAddress
o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup deleted
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup deleted

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr deleted o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr deleted o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t deleted reindex o=usergroup
## usergroupdb2: Indexing attribute: deleted
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t deleted o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup mgrpUniqueId
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup mgrpUniqueId

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mgrpUniqueId
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mgrpUniqueId o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup mgrpUniqueId
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t mgrpUniqueId reindex o=usergroup
## usergroupdb2: Indexing attribute: mgrpUniqueId
```

```
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mgrpUniqueId o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup mailUserStatus
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup mailUserStatus

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailUserStatus
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailUserStatus o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailUserStatus
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailUserStatus
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailUserStatus o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailUserStatus
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t mailUserStatus reindex o=usergroup
## usergroupdb2: Indexing attribute: mailUserStatus
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mailUserStatus o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup icsCalendarOwned
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup icsCalendarOwned

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendarOwned
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendarOwned o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendarOwned
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendarOwned o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendarOwned
approx-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendarOwned o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned approx-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendarOwned
```

```
sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendarOwned o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned sub-enabled:on

-- /opt/dsee7/bin/dsconf -t icsCalendarOwned reindex o=usergroup
## usergroupdb2: Indexing attribute: icsCalendarOwned
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t icsCalendarOwned o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=internet inetDomainBaseDN
-- Done /opt/dsee7/bin/dsconf create-index o=internet inetDomainBaseDN

-- /opt/dsee7/bin/dsconf set-index-prop o=internet inetDomainBaseDN
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr inetDomainBaseDN o=internet" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=internet inetDomainBaseDN
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=internet inetDomainBaseDN
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr inetDomainBaseDN o=internet" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=internet inetDomainBaseDN
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t inetDomainBaseDN reindex o=internet
## internetdb2: Indexing attribute: inetDomainBaseDN
## internetdb2: Index buffer bucket size: 0
## internetdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t inetDomainBaseDN o=internet

-- /opt/dsee7/bin/dsconf create-index o=internet inetCanonicalDomainName
-- Done /opt/dsee7/bin/dsconf create-index o=internet
inetCanonicalDomainName

-- /opt/dsee7/bin/dsconf set-index-prop o=internet
inetCanonicalDomainName pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr inetCanonicalDomainName o=internet" to
reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=internet
inetCanonicalDomainName pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=internet
inetCanonicalDomainName eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr inetCanonicalDomainName o=internet" to
reindex.
```

```
-- Done /opt/dsee7/bin/dsconf set-index-prop o=internet
inetCanonicalDomainName eq-enabled:on

-- /opt/dsee7/bin/dsconf -t inetCanonicalDomainName reindex o=internet
## internetdb2: Indexing attribute: inetCanonicalDomainName
## internetdb2: Index buffer bucket size: 0
## internetdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t inetCanonicalDomainName
o=internet

-- /opt/dsee7/bin/dsconf create-index o=internet mailDomainStatus
-- Done /opt/dsee7/bin/dsconf create-index o=internet mailDomainStatus

-- /opt/dsee7/bin/dsconf set-index-prop o=internet mailDomainStatus
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailDomainStatus o=internet" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=internet mailDomainStatus
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=internet mailDomainStatus
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailDomainStatus o=internet" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=internet mailDomainStatus
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t mailDomainStatus reindex o=internet
## internetdb2: Indexing attribute: mailDomainStatus
## internetdb2: Index buffer bucket size: 0
## internetdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mailDomainStatus o=internet

-- /opt/dsee7/bin/dsconf create-index o=pab memberOfManagedGroup
-- Done /opt/dsee7/bin/dsconf create-index o=pab memberOfManagedGroup

-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfManagedGroup
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfManagedGroup o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfManagedGroup
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfManagedGroup
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfManagedGroup o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfManagedGroup
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t memberOfManagedGroup reindex o=pab
## pabdb2: Indexing attribute: memberOfManagedGroup
```

```
## pabdb2: Index buffer bucket size: 0
## pabdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t memberOfManagedGroup o=pab

-- /opt/dsee7/bin/dsconf create-index o=pab memberOfPABGroup
-- Done /opt/dsee7/bin/dsconf create-index o=pab memberOfPABGroup

-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfPABGroup o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfPABGroup o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t memberOfPABGroup reindex o=pab
## pabdb2: Indexing attribute: memberOfPABGroup
## pabdb2: Index buffer bucket size: 0
## pabdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t memberOfPABGroup o=pab

-- /opt/dsee7/bin/dsconf create-index o=pab memberOfPAB
-- Done /opt/dsee7/bin/dsconf create-index o=pab memberOfPAB

-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfPAB o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfPAB o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t memberOfPAB reindex o=pab
## pabdb2: Indexing attribute: memberOfPAB
## pabdb2: Index buffer bucket size: 0
## pabdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t memberOfPAB o=pab

-- /opt/dsee7/bin/dsconf create-index o=pab un
```

```
-- Done /opt/dsee7/bin/dsconf create-index o=pab un

-- /opt/dsee7/bin/dsconf set-index-prop o=pab un eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr un o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab un eq-enabled:on

-- /opt/dsee7/bin/dsconf -t un reindex o=pab
## pabdb2: Indexing attribute: un
## pabdb2: Index buffer bucket size: 0
## pabdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t un o=pab

-- /opt/dsee7/bin/dsconf create-index o=PiServerDb MemberOfPiBook
-- Done /opt/dsee7/bin/dsconf create-index o=PiServerDb MemberOfPiBook

-- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb MemberOfPiBook
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr MemberOfPiBook o=PiServerDb" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb MemberOfPiBook
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t MemberOfPiBook reindex o=PiServerDb
## PiServerDbdb2: Indexing attribute: MemberOfPiBook
## PiServerDbdb2: Index buffer bucket size: 0
## PiServerDbdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t MemberOfPiBook o=PiServerDb

-- /opt/dsee7/bin/dsconf create-index o=PiServerDb MemberofPiGroup
-- Done /opt/dsee7/bin/dsconf create-index o=PiServerDb MemberofPiGroup

-- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb MemberofPiGroup
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr MemberofPiGroup o=PiServerDb" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb
MemberofPiGroup eq-enabled:on

-- /opt/dsee7/bin/dsconf -t MemberofPiGroup reindex o=PiServerDb
## PiServerDbdb2: Indexing attribute: MemberofPiGroup
## PiServerDbdb2: Index buffer bucket size: 0
## PiServerDbdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t MemberofPiGroup o=PiServerDb

-- /opt/dsee7/bin/dsconf create-index o=PiServerDb displayname
-- Done /opt/dsee7/bin/dsconf create-index o=PiServerDb displayname

-- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
pres-enabled:on
```

```
Index will not be used unless re-indexed.
Use "dsconf reindex --attr displayname o=PiServerDb" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr displayname o=PiServerDb" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr displayname o=PiServerDb" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
sub-enabled:on

-- /opt/dsee7/bin/dsconf -t displayname reindex o=PiServerDb
## PiServerDbdb2: Indexing attribute: displayname
## PiServerDbdb2: Index buffer bucket size: 100
## PiServerDbdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t displayname o=PiServerDb

-- /opt/dsee7/bin/dsconf create-index o=mlusers mlsubMail
-- Done /opt/dsee7/bin/dsconf create-index o=mlusers mlsubMail

-- /opt/dsee7/bin/dsconf set-index-prop o=mlusers mlsubMail
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mlsubMail o=mlusers" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=mlusers mlsubMail
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t mlsubMail reindex o=mlusers
## mlusersdb2: Indexing attribute: mlsubMail
## mlusersdb2: Index buffer bucket size: 0
## mlusersdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mlsubMail o=mlusers

-- /opt/dsee7/bin/dsconf create-index o=mlusers mlsubListIdentifier
-- Done /opt/dsee7/bin/dsconf create-index o=mlusers mlsubListIdentifier

-- /opt/dsee7/bin/dsconf set-index-prop o=mlusers mlsubListIdentifier
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mlsubListIdentifier o=mlusers" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=mlusers
mlsubListIdentifier eq-enabled:on

-- /opt/dsee7/bin/dsconf -t mlsubListIdentifier reindex o=mlusers
```

```
## mlusersdb2: Indexing attribute: mlsubListIdentifier
## mlusersdb2: Index buffer bucket size: 0
## mlusersdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mlsubListIdentifier o=mlusers
```

```
Successful Completion. Consult
/var/tmp/dssetup_20120906232525/dssetup.log for details
```

DSsetup 6.4-24 Sample Session - Fresh Directory Server 7.0 Instance for Schema 2

DSsetup 6.4-24 Sample Session - Fresh Directory Server 7.0 Instance for Schema 2

This section outlines the commands to run and lists a sample session.

Topics:

- Summary of Commands Run
- Comments
- Session

Summary of Commands Run

```
sbin/comm_dssetup.pl
stty -echo
ls /var/tmp/dssetup_20120906235554
ls /var/tmp/dssetup_20120906235554/save
cat /var/tmp/dssetup_20120906235554/99user_new.ldif
cat /var/tmp/dssetup_20120906235554/dssetup.ldif
cat /var/tmp/dssetup_20120906235554/dssetup.sh
cat /var/tmp/dssetup_20120906235554/dssetup.log
```

Comments

To create a pristine DS instance:

```
cd /opt/dsee11g/dsee7/bin
./dsadm create /var/opt/sun/directory/ds7
./dsadm start /var/opt/sun/directory/ds7
./dsadm delete /var/opt/sun/directory/ds7
```

Session

```
# sbin/comm_dssetup.pl

Welcome to the Directory Server preparation tool (Comms DSsetup)
6.4.0.24.0 for
Oracle Communications Unified Communications Suite
dssetup Version 6.4-24.03 (built Mon Jun 11 14:36:51 PDT 2012)

This tool prepares your directory server for use by the
communications services which include Messaging, Calendar and their
components.

The logfile is /var/tmp/dssetup_20120906235554/dssetup.log

Do you want to continue [y]:
```

```
Please enter the full path to the directory where the
Directory Server instance(s) reside ("server-root"), or
an explicit Directory Server instance directory

Directory server root [/var/opt/sun/directory] :


Please select a directory server instance from the following list:

[1]   ds7


Which instance do you want [1]:

Please enter the directory manager DN [cn=Directory Manager]:

Password:

Configuration from DS config file:
- DS Install location: /opt/dsee7
- DS hostname: host1
- DS port: 389

ldapsearch location: /opt/SUNWdsee/dsee6/bin

Detected DS version 11.1.1.3.0 on host1 port 389

Will this directory server be used for users/groups [yes]:

WARNING: No default suffix found in the Directory
A list of suffixes are as follows:
  No Suffixes Found

Please enter the Users/Groups base suffix [o=usergroup] :

There are 3 possible schema types:
  1   - schema 1
  1.5 - schema 2 compatibility mode for schema 1 systems
        that has been converted with commdirmig
  2   - schema 2

Please enter the Schema Type (1, 1.5, 2) [2]:


Do you want to update the schema files [yes]:


Do you want to configure new indexes [yes]:


Do you want to Reindex the new indexes now [yes]:


Here is a summary of the settings that you chose:
```

```
  Server Root                        : /var/opt/sun/directory
  Server Instance                    : ds7
  Users/Groups Directory             : yes
  Update Schema                      : yes
  Schema Type                        : 2
  DC Root                            : o=usergroup
  User/Group Root                    : o=usergroup
  Add New Indexes                    : yes
  ReIndex New Indexes Now            : yes
  Directory Manager DN               : cn=Directory Manager


Now ready to generate a shell script and ldif file to modify the
Directory.
No changes to the Directory Server will be made this time.
Do you want to continue [y]:

Generating files...

Checking to see if Suffixes need to be added
  Will Create suffix o=comms-config
  Will Create suffix o=usergroup
  Will Create suffix o=pab
  Will Create suffix o=PiServerDb
  Will Create suffix o=mlusers

Checking to see that uid uniqueness plugins are turned off
  Plugin is already disabled

Adding indexes
  Adding Indexes for User/group Tree (backend:usergroupdb2)
    Checking indexes for cn
      No new indexes required
    Checking indexes for cosspecifier
      New indexes and Reindexing required
      ReIndex will happen for index type cosspecifier
    Checking indexes for inetCos
      New indexes and Reindexing required
      ReIndex will happen for index type inetCos
    Checking indexes for memberOf
      New indexes and Reindexing required
      ReIndex will happen for index type memberOf
    Checking indexes for groupid
      New indexes and Reindexing required
      ReIndex will happen for index type groupid
    Checking indexes for mail
      No new indexes required
    Checking indexes for icsCalendar
      New indexes and Reindexing required
      ReIndex will happen for index type icsCalendar
    Checking indexes for mailAlternateAddress
      No new indexes required
    Checking indexes for ou
      New indexes and Reindexing required
      ReIndex will happen for index type ou
    Checking indexes for uniqueMember
```

```
      No new indexes required
    Checking indexes for member
      No new indexes required
    Checking indexes for mailEquivalentAddress
      New indexes and Reindexing required
      ReIndex will happen for index type mailEquivalentAddress
    Checking indexes for deleted
      New indexes and Reindexing required
      ReIndex will happen for index type deleted
    Checking indexes for mgrpUniqueId
      New indexes and Reindexing required
      ReIndex will happen for index type mgrpUniqueId
    Checking indexes for mailUserStatus
      New indexes and Reindexing required
      ReIndex will happen for index type mailUserStatus
    Checking indexes for icsCalendarOwned
      New indexes and Reindexing required
      ReIndex will happen for index type icsCalendarOwned
  Adding Schema2 specific Indexes for User/Group Tree
(backend:usergroupdb2)
    Checking indexes for inetDomainBaseDN
      New indexes and Reindexing required
      ReIndex will happen for index type inetDomainBaseDN
    Checking indexes for sunOrganizationAlias
      New indexes and Reindexing required
      ReIndex will happen for index type sunOrganizationAlias
    Checking indexes for sunPreferredDomain
      New indexes and Reindexing required
      ReIndex will happen for index type sunPreferredDomain
    Checking indexes for mailDomainStatus
      New indexes and Reindexing required
      ReIndex will happen for index type mailDomainStatus
    Checking indexes for o
      New indexes and Reindexing required
      ReIndex will happen for index type o
    Checking indexes for associatedDomain
      New indexes and Reindexing required
      ReIndex will happen for index type associatedDomain
  Adding Indexes for PAB Tree (backend:pabdb2)
    Checking indexes for memberOfManagedGroup
      New indexes and Reindexing required
      ReIndex will happen for index type memberOfManagedGroup
    Checking indexes for memberOfPABGroup
      New indexes and Reindexing required
      ReIndex will happen for index type memberOfPABGroup
    Checking indexes for memberOfPAB
      New indexes and Reindexing required
      ReIndex will happen for index type memberOfPAB
    Checking indexes for un
      New indexes and Reindexing required
      ReIndex will happen for index type un
  Adding Indexes for New PAB Tree (backend:PiServerDbdb2)
    Checking indexes for MemberOfPiBook
      New indexes and Reindexing required
      ReIndex will happen for index type MemberOfPiBook
    Checking indexes for MemberofPiGroup
```

```
      New indexes and Reindexing required
      ReIndex will happen for index type MemberofPiGroup
    Checking indexes for displayname
      New indexes and Reindexing required
      ReIndex will happen for index type displayname
  Adding Indexes for Mailing List Tree (backend:mlusersdb2)
    Checking indexes for mail
      No new indexes required
    Checking indexes for mlsubMail
      New indexes and Reindexing required
      ReIndex will happen for index type mlsubMail
    Checking indexes for mlsubListIdentifier
      New indexes and Reindexing required
      ReIndex will happen for index type mlsubListIdentifier

Checking to see if DN needs to be created for suffixes

Generating ldif for installer metadata
  Generating ldif for Adding schema for installer metadata
  Generating ldif for Creating DN: cn=CommServers,o=comms-config
The following files have been created:
   /var/tmp/dssetup_20120906235554/dssetup.sh
   /var/tmp/dssetup_20120906235554/dssetup.ldif

Running /var/tmp/dssetup_20120906235554/dssetup.sh will make changes to
the Directory
  You can run this file now or at a later time
Ready to execute the script now.

Do you want to continue [y]:

Running /var/tmp/dssetup_20120906235554/dssetup.sh -D "cn=Directory
Manager" -j /var/tmp/dssetup_20120906235554/dssetup.pw
-- Updating Schema files...
-- Copying 20subscriber.ldif
-- Copying 50ns-delegated-admin.ldif
-- Copying 50ns-mail.ldif
-- Copying 50ns-mlm.ldif
-- Copying 50ns-msg.ldif
-- Copying 50ns-value.ldif
-- Copying 55ims-ical.ldif
-- Copying 56ims-schema.ldif
-- Copying 65im.ldif
-- Copying 70sun-schema2.ldif
-- Copying 71sun-am.ldif
-- Copying 60iplanet-calendar.ldif
-- Copying 50ns-iabs.ldif
-- Copying 98ns-dummy-uwc.ldif
-- Copying 70delgated-admin.ldif
-- Stopping Directory Server
Directory Server instance '/var/opt/sun/directory/ds7' stopped
-- Starting Directory Server
Directory Server instance '/var/opt/sun/directory/ds7' started:
pid=10904
-- Creating Suffix o=comms-config
-- Done Creating o=comms-config
```

```
-- Creating Suffix o=usergroup
-- Done Creating o=usergroup

-- Creating Suffix o=pab
-- Done Creating o=pab

-- Creating Suffix o=PiServerDb
-- Done Creating o=PiServerDb

-- Creating Suffix o=mlusers
-- Done Creating o=mlusers

-- Applying ldif file /var/tmp/dssetup_20120906235554/dssetup.ldif
modifying entry cn=schema

modifying entry cn=schema

adding new entry cn=CommServers,o=comms-config

-- rejects to /var/tmp/dssetup_20120906235554/dssetup.ldif.rej status =
0
-- ldapmodify returned 0
-- Done Applying ldif file /var/tmp/dssetup_20120906235554/dssetup.ldif

-- /opt/dsee7/bin/dsconf create-index o=usergroup cosspecifier
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup cosspecifier

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup cosspecifier
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr cosspecifier o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup cosspecifier
pres-enabled:on

-- /opt/dsee7/bin/dsconf -t cosspecifier reindex o=usergroup
## usergroupdb2: Indexing attribute: cosspecifier
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t cosspecifier o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup inetCos
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup inetCos

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup inetCos
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr inetCos o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup inetCos
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t inetCos reindex o=usergroup
## usergroupdb2: Indexing attribute: inetCos
## usergroupdb2: Index buffer bucket size: 0
```

```
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t inetCos o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup memberOf
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup memberOf

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOf o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOf o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
sub-enabled:on

-- /opt/dsee7/bin/dsconf -t memberOf reindex o=usergroup
## usergroupdb2: Indexing attribute: memberOf
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t memberOf o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup groupid
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup groupid

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr groupid o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr groupid o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr groupid o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
sub-enabled:on

-- /opt/dsee7/bin/dsconf -t groupid reindex o=usergroup
## usergroupdb2: Indexing attribute: groupid
```

```
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t groupid o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup icsCalendar
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup icsCalendar

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendar o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendar o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
approx-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendar o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
approx-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendar o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
sub-enabled:on

-- /opt/dsee7/bin/dsconf -t icsCalendar reindex o=usergroup
## usergroupdb2: Indexing attribute: icsCalendar
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t icsCalendar o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup ou
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup ou

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup ou pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr ou o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup ou
pres-enabled:on

-- /opt/dsee7/bin/dsconf -t ou reindex o=usergroup
## usergroupdb2: Indexing attribute: ou
```

```
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t ou o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup mailEquivalentAddress
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup
mailEquivalentAddress

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailEquivalentAddress o=usergroup" to
reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailEquivalentAddress o=usergroup" to
reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress approx-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailEquivalentAddress o=usergroup" to
reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress approx-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailEquivalentAddress o=usergroup" to
reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress sub-enabled:on

-- /opt/dsee7/bin/dsconf -t mailEquivalentAddress reindex o=usergroup
## usergroupdb2: Indexing attribute: mailEquivalentAddress
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mailEquivalentAddress
o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup deleted
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup deleted

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
pres-enabled:on
```

```
Index will not be used unless re-indexed.
Use "dsconf reindex --attr deleted o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr deleted o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t deleted reindex o=usergroup
## usergroupdb2: Indexing attribute: deleted
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t deleted o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup mgrpUniqueId
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup mgrpUniqueId

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mgrpUniqueId
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mgrpUniqueId o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup mgrpUniqueId
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t mgrpUniqueId reindex o=usergroup
## usergroupdb2: Indexing attribute: mgrpUniqueId
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mgrpUniqueId o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup mailUserStatus
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup mailUserStatus

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailUserStatus
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailUserStatus o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailUserStatus
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailUserStatus
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailUserStatus o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailUserStatus
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t mailUserStatus reindex o=usergroup
```

```
## usergroupdb2: Indexing attribute: mailUserStatus
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mailUserStatus o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup icsCalendarOwned
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup icsCalendarOwned

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendarOwned
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendarOwned o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendarOwned
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendarOwned o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendarOwned
approx-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendarOwned o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned approx-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendarOwned
sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendarOwned o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned sub-enabled:on

-- /opt/dsee7/bin/dsconf -t icsCalendarOwned reindex o=usergroup
## usergroupdb2: Indexing attribute: icsCalendarOwned
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t icsCalendarOwned o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup inetDomainBaseDN
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup inetDomainBaseDN

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup inetDomainBaseDN
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr inetDomainBaseDN o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
inetDomainBaseDN pres-enabled:on
```

```
-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup inetDomainBaseDN
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr inetDomainBaseDN o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
inetDomainBaseDN eq-enabled:on

-- /opt/dsee7/bin/dsconf -t inetDomainBaseDN reindex o=usergroup
## usergroupdb2: Indexing attribute: inetDomainBaseDN
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t inetDomainBaseDN o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup sunOrganizationAlias
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup
sunOrganizationAlias

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup sunOrganizationAlias
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr sunOrganizationAlias o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
sunOrganizationAlias pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup sunOrganizationAlias
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr sunOrganizationAlias o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
sunOrganizationAlias eq-enabled:on

-- /opt/dsee7/bin/dsconf -t sunOrganizationAlias reindex o=usergroup
## usergroupdb2: Indexing attribute: sunOrganizationAlias
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t sunOrganizationAlias
o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup sunPreferredDomain
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup
sunPreferredDomain

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup sunPreferredDomain
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr sunPreferredDomain o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
sunPreferredDomain pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup sunPreferredDomain
eq-enabled:on
Index will not be used unless re-indexed.
```

```
Use "dsconf reindex --attr sunPreferredDomain o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
sunPreferredDomain eq-enabled:on

-- /opt/dsee7/bin/dsconf -t sunPreferredDomain reindex o=usergroup
## usergroupdb2: Indexing attribute: sunPreferredDomain
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t sunPreferredDomain o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup mailDomainStatus
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup mailDomainStatus

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailDomainStatus
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailDomainStatus o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailDomainStatus pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailDomainStatus
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailDomainStatus o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailDomainStatus eq-enabled:on

-- /opt/dsee7/bin/dsconf -t mailDomainStatus reindex o=usergroup
## usergroupdb2: Indexing attribute: mailDomainStatus
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mailDomainStatus o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup o
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup o

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup o pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr o o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup o
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup o eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr o o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup o eq-enabled:on

-- /opt/dsee7/bin/dsconf -t o reindex o=usergroup
## usergroupdb2: Indexing attribute: o
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.
```

```
Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t o o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup associatedDomain
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup associatedDomain

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup associatedDomain
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr associatedDomain o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
associatedDomain pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup associatedDomain
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr associatedDomain o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
associatedDomain eq-enabled:on

-- /opt/dsee7/bin/dsconf -t associatedDomain reindex o=usergroup
## usergroupdb2: Indexing attribute: associatedDomain
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t associatedDomain o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=pab memberOfManagedGroup
-- Done /opt/dsee7/bin/dsconf create-index o=pab memberOfManagedGroup

-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfManagedGroup
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfManagedGroup o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfManagedGroup
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfManagedGroup
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfManagedGroup o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfManagedGroup
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t memberOfManagedGroup reindex o=pab
## pabdb2: Indexing attribute: memberOfManagedGroup
## pabdb2: Index buffer bucket size: 0
## pabdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t memberOfManagedGroup o=pab

-- /opt/dsee7/bin/dsconf create-index o=pab memberOfPABGroup
-- Done /opt/dsee7/bin/dsconf create-index o=pab memberOfPABGroup
```

```
-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfPABGroup o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfPABGroup o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t memberOfPABGroup reindex o=pab
## pabdb2: Indexing attribute: memberOfPABGroup
## pabdb2: Index buffer bucket size: 0
## pabdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t memberOfPABGroup o=pab

-- /opt/dsee7/bin/dsconf create-index o=pab memberOfPAB
-- Done /opt/dsee7/bin/dsconf create-index o=pab memberOfPAB

-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfPAB o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfPAB o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t memberOfPAB reindex o=pab
## pabdb2: Indexing attribute: memberOfPAB
## pabdb2: Index buffer bucket size: 0
## pabdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t memberOfPAB o=pab

-- /opt/dsee7/bin/dsconf create-index o=pab un
-- Done /opt/dsee7/bin/dsconf create-index o=pab un

-- /opt/dsee7/bin/dsconf set-index-prop o=pab un eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr un o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab un eq-enabled:on

-- /opt/dsee7/bin/dsconf -t un reindex o=pab
## pabdb2: Indexing attribute: un
```

```
## pabdb2: Index buffer bucket size: 0
## pabdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t un o=pab

-- /opt/dsee7/bin/dsconf create-index o=PiServerDb MemberOfPiBook
-- Done /opt/dsee7/bin/dsconf create-index o=PiServerDb MemberOfPiBook

-- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb MemberOfPiBook
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr MemberOfPiBook o=PiServerDb" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb MemberOfPiBook
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t MemberOfPiBook reindex o=PiServerDb
## PiServerDbdb2: Indexing attribute: MemberOfPiBook
## PiServerDbdb2: Index buffer bucket size: 0
## PiServerDbdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t MemberOfPiBook o=PiServerDb

-- /opt/dsee7/bin/dsconf create-index o=PiServerDb MemberofPiGroup
-- Done /opt/dsee7/bin/dsconf create-index o=PiServerDb MemberofPiGroup

-- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb MemberofPiGroup
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr MemberofPiGroup o=PiServerDb" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb
MemberofPiGroup eq-enabled:on

-- /opt/dsee7/bin/dsconf -t MemberofPiGroup reindex o=PiServerDb
## PiServerDbdb2: Indexing attribute: MemberofPiGroup
## PiServerDbdb2: Index buffer bucket size: 0
## PiServerDbdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t MemberofPiGroup o=PiServerDb

-- /opt/dsee7/bin/dsconf create-index o=PiServerDb displayname
-- Done /opt/dsee7/bin/dsconf create-index o=PiServerDb displayname

-- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr displayname o=PiServerDb" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr displayname o=PiServerDb" to reindex.
```

```
-- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr displayname o=PiServerDb" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
sub-enabled:on

-- /opt/dsee7/bin/dsconf -t displayname reindex o=PiServerDb
## PiServerDbdb2: Indexing attribute: displayname
## PiServerDbdb2: Index buffer bucket size: 100
## PiServerDbdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t displayname o=PiServerDb

-- /opt/dsee7/bin/dsconf create-index o=mlusers mlsubMail
-- Done /opt/dsee7/bin/dsconf create-index o=mlusers mlsubMail

-- /opt/dsee7/bin/dsconf set-index-prop o=mlusers mlsubMail
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mlsubMail o=mlusers" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=mlusers mlsubMail
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t mlsubMail reindex o=mlusers
## mlusersdb2: Indexing attribute: mlsubMail
## mlusersdb2: Index buffer bucket size: 0
## mlusersdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mlsubMail o=mlusers

-- /opt/dsee7/bin/dsconf create-index o=mlusers mlsubListIdentifier
-- Done /opt/dsee7/bin/dsconf create-index o=mlusers mlsubListIdentifier

-- /opt/dsee7/bin/dsconf set-index-prop o=mlusers mlsubListIdentifier
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mlsubListIdentifier o=mlusers" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=mlusers
mlsubListIdentifier eq-enabled:on

-- /opt/dsee7/bin/dsconf -t mlsubListIdentifier reindex o=mlusers
## mlusersdb2: Indexing attribute: mlsubListIdentifier
## mlusersdb2: Index buffer bucket size: 0
## mlusersdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mlsubListIdentifier o=mlusers

Successful Completion. Consult
/var/tmp/dssetup_20120906235554/dssetup.log for details
```

```
[129 Fri Sep 07 00:12:00 root@host1% /opt/sun/comms/dssetup# ]
# stty -echo
stty -echo
[130 Fri Sep 07 00:12:12 root@host1% /opt/sun/comms/dssetup# ]
# ls /var/tmp/dssetup_20120906235554
total 186
   2 99user_new.ldif     75 dssetup.log          5 save/
   5 dssetup.ldif        99 dssetup.sh*
[131 Fri Sep 07 00:12:23 root@host1% /opt/sun/comms/dssetup# ]
# ls /var/tmp/dssetup_20120906235554/save
total 637
 154 00core.ldif                   17 50ns-mail.ldif
  16 00ds6pwp.ldif                 35 50ns-mcd-browser.ldif
   5 05rfc2247.ldif                11 50ns-mcd-config.ldif
   3 05rfc2927.ldif                 7 50ns-mcd-li.ldif
  16 11rfc2307.ldif                42 50ns-mcd-mail.ldif
  10 20subscriber.ldif              3 50ns-media.ldif
   7 25java-object.ldif            16 50ns-mlm.ldif
  19 28pilot.ldif                 100 50ns-msg.ldif
  25 30ns-common.ldif               7 50ns-netshare.ldif
   7 50iplanet-servicemgt.ldif      5 50ns-news.ldif
  14 50ns-admin.ldif                3 50ns-proxy.ldif
  15 50ns-calendar.ldif             7 50ns-value.ldif
   4 50ns-certificate.ldif          8 50ns-wcal.ldif
  24 50ns-compass.ldif              4 50ns-web.ldif
  14 50ns-delegated-admin.ldif      2 99user.ldif
  33 50ns-directory.ldif
   4 50ns-legacy.ldif
[132 Fri Sep 07 00:12:34 root@host1% /opt/sun/comms/dssetup# ]
# cat /var/tmp/dssetup_20120906235554/99user_new.ldif
#
# Copyright 2003 Sun Microsystems, Inc. All Rights Reserved
# Patents Pending.Use is subject to license terms.
#
#
# PROPRIETARY/CONFIDENTIAL. Use of this product is subject to
# license terms. Copyright (c) 2001 Sun Microsystems, Inc.
# Some preexisting portions Copyright (c) 2001 Netscape Communications
Corp.
# All rights reserved.
#
#
# User-defined schema
#
dn: cn=schema
[133 Fri Sep 07 00:12:46 root@host1% /opt/sun/comms/dssetup# ]
# cat /var/tmp/dssetup_20120906235554/dssetup.ldif
# This Ldif file contains the changes to be made to the Directory
# Run it like this:
#   cd /opt/SUNWdsee/dsee6/bin
#   ./ldapmodify -p 389 -h host1 -D binddn -j passwdfile -c -f
/var/tmp/dssetup_20120906235554/dssetup.ldif

#---------------------------------------------------
# This section creates the installer metadata
#---------------------------------------------------
```

```
##########################################
# dn: cn=schema
# Add the schema for sunkeyvalue. Required by sunCommsMetaData
objectclass
# Note that sunkeyvalue may have already been added by Access Manager
##########################################
dn: cn=schema
changetype: modify
add: attributeTypes
attributeTypes: ( 1.3.6.1.4.1.42.2.27.9.1.83 NAME ( 'sunkeyvalue' ) DESC
'Attribute to store the encoded key values of the services' SYNTAX
1.3.6.1.4.1.1466.115.121.1.26 X-ORIGIN 'Sun ONE Identity Management' )

##########################################
# dn: cn=schema
# Add the schema for the Comm Servers installer metadata information
##########################################
dn: cn=schema
changetype: modify
add: objectClasses
objectClasses: ( 1.3.6.1.4.1.42.2.27.2.1.39 NAME 'sunCommsMetaData' DESC
'Objectclass for storing meta data for Sun Communication' SUP top
STRUCTURAL MUST ( cn ) MAY ( sunkeyvalue ) )

##########################################
# dn: cn=CommServers,o=comms-config
# Create the DN for the installer metadata for Comm Servers
##########################################
dn: cn=CommServers,o=comms-config
changetype: add
objectclass: top
objectclass: sunCommsMetaData
sunkeyvalue: dssetup_ver=6.4
sunkeyvalue: dssetup_rev=24.03
sunkeyvalue: dcsuffix=o=usergroup
sunkeyvalue: ugsuffix=o=usergroup
sunkeyvalue: mlsuffix=o=mlusers
sunkeyvalue: schematype=2
aci:
(target="ldap:///cn=CommServers,o=comms-config")(targetattr!="aci")(version
3.0; acl "Anonymous access to dssetup config"; allow
(read,search,compare) userdn="ldap:///anyone";)
[134 Fri Sep 07 00:12:50 root@host1% /opt/sun/comms/dssetup# ]
# cat /var/tmp/dssetup_20120906235554/dssetup.sh
#! /bin/sh
# This shell script contains the commands to run against the Directory
#set -x

#
# Usage
#
usage()
{
  echo "Usage: $0 -D <binddn> -j <passwdfile>"
  echo "  -D binddn        bind dn"
```

```
  echo "  -j <passwdfile>  read bind passwd from 'file' for simple
authentication"
  exit 1
}

if [ $# -lt 1 ]
then
  echo "You must specify either -j"
  usage
fi

jflag=0
Dflag=0
while getopts D:j: c; do
  case $c in
  D)
    Dflag=1
    BINDDN=$OPTARG;;
  j)
    jflag=1
    pflag=-j
    parg=$OPTARG;;
  \?)
    usage;;
  esac
done
shift `expr $OPTIND - 1`

if [ $Dflag -eq 0 ]
then
  echo "You must specify the -D switch"
  usage
fi

if [ $jflag -eq 0 ]
then
  echo "You must specify -j"
  usage
fi

if [ $# -ge 1 ]
then
  echo "Unrecognized argument $*"
  usage
fi

if [ `/usr/bin/id | cut -d= -f2 | cut -d\( -f1` != 0 ]
then
  echo
  echo "To run this utility you need to be the system's root user. \n"
  echo
  exit 1
fi

echo -- Updating Schema files...
echo -- Copying 20subscriber.ldif
```

```
cp /opt/sun/comms/dssetup/sbin/schema/20subscriber.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-delegated-admin.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-delegated-admin.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-mail.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-mail.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-mlm.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-mlm.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-msg.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-msg.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-value.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-value.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 55ims-ical.ldif
cp /opt/sun/comms/dssetup/sbin/schema/55ims-ical.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 56ims-schema.ldif
cp /opt/sun/comms/dssetup/sbin/schema/56ims-schema.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 65im.ldif
cp /opt/sun/comms/dssetup/sbin/schema/65im.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 70sun-schema2.ldif
cp /opt/sun/comms/dssetup/sbin/schema/70sun-schema2.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 71sun-am.ldif
cp /opt/sun/comms/dssetup/sbin/schema/71sun-am.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 60iplanet-calendar.ldif
cp /opt/sun/comms/dssetup/sbin/schema/60iplanet-calendar.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 50ns-iabs.ldif
cp /opt/sun/comms/dssetup/sbin/schema/50ns-iabs.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 98ns-dummy-uwc.ldif
cp /opt/sun/comms/dssetup/sbin/schema/98ns-dummy-uwc.ldif
/var/opt/sun/directory/ds7/config/schema
echo -- Copying 70delgated-admin.ldif
cp /opt/sun/comms/dssetup/sbin/schema/70delgated-admin.ldif
/var/opt/sun/directory/ds7/config/schema

echo -- Stopping Directory Server
/opt/dsee7/bin/dsadm stop /var/opt/sun/directory/ds7
if [ $? != 0 ]; then
  echo "Stopping the Directory server failed"
  exit 1
fi
sleep 5

echo -- Starting Directory Server
/opt/dsee7/bin/dsadm start /var/opt/sun/directory/ds7
if [ $? != 0 ]; then
```

```
  echo "The server may not have restarted properly"
  echo "Please restart it manually"
fi
sleep 5

echo -- Creating Suffix o=comms-config
/opt/dsee7/bin/dsconf create-suffix --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured --db-name
comms-configdb2 o=comms-config
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-suffix returned $stat"
fi
echo -- Done Creating o=comms-config
echo

echo -- Creating Suffix o=usergroup
/opt/dsee7/bin/dsconf create-suffix --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured --db-name usergroupdb2
o=usergroup
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-suffix returned $stat"
fi
echo -- Done Creating o=usergroup
echo

echo -- Creating Suffix o=pab
/opt/dsee7/bin/dsconf create-suffix --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured --db-name pabdb2 o=pab
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-suffix returned $stat"
fi
echo -- Done Creating o=pab
echo

echo -- Creating Suffix o=PiServerDb
/opt/dsee7/bin/dsconf create-suffix --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured --db-name PiServerDbdb2
o=PiServerDb
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-suffix returned $stat"
fi
echo -- Done Creating o=PiServerDb
echo

echo -- Creating Suffix o=mlusers
/opt/dsee7/bin/dsconf create-suffix --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured --db-name mlusersdb2
o=mlusers
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-suffix returned $stat"
fi
```

```
echo -- Done Creating o=mlusers
echo

echo -- Applying ldif file /var/tmp/dssetup_20120906235554/dssetup.ldif
cd /opt/SUNWdsee/dsee6/bin
./ldapmodify -p 389 -h host1 -D "$BINDDN" $pflag "$parg" -c -e
/var/tmp/dssetup_20120906235554/dssetup.ldif.rej -f
/var/tmp/dssetup_20120906235554/dssetup.ldif
stat=$?
echo -- rejects to /var/tmp/dssetup_20120906235554/dssetup.ldif.rej
status = $stat
if [ $stat -eq 0 ]; then
  echo "-- ldapmodify returned $stat"
elif [ $stat -eq 20 ]; then
  echo "-- WARNING: ldapmodify returned $stat"
else
  echo "-- ERROR: ldapmodify returned $stat"
  exit $stat;
fi
echo -- Done Applying ldif file
/var/tmp/dssetup_20120906235554/dssetup.ldif
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup cosspecifier
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"cosspecifier"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup"
"cosspecifier"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup cosspecifier
pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"cosspecifier" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
cosspecifier pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t cosspecifier reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "cosspecifier" "o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "cosspecifier"
```

```
"o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup inetCos
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "inetCos"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup" "inetCos"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup inetCos
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "inetCos"
"eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup inetCos
eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t inetCos reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "inetCos" "o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "inetCos" "o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup memberOf
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "memberOf"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup" "memberOf"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "memberOf"
"eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
```

```
eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
sub-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "memberOf"
"sub-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
sub-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t memberOf reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "memberOf" "o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "memberOf" "o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup groupid
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "groupid"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup" "groupid"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "groupid"
"pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "groupid"
"eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
```

```
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
sub-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "groupid"
"sub-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
sub-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t groupid reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "groupid" "o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "groupid" "o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup icsCalendar
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"icsCalendar"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup"
"icsCalendar"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"icsCalendar" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendar pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
eq-enabled:on
```

```
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"icsCalendar" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendar eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
approx-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"icsCalendar" "approx-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendar approx-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
sub-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"icsCalendar" "sub-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendar sub-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t icsCalendar reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "icsCalendar" "o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "icsCalendar"
"o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup ou
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "ou"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup" "ou"
```

```
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup ou
pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "ou"
"pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup ou
pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t ou reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "ou" "o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "ou" "o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup
mailEquivalentAddress
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailEquivalentAddress"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup"
"mailEquivalentAddress"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailEquivalentAddress" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailEquivalentAddress" "eq-enabled:on"
```

```
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress approx-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailEquivalentAddress" "approx-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress approx-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress sub-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailEquivalentAddress" "sub-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress sub-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t mailEquivalentAddress reindex
o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "mailEquivalentAddress"
"o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "mailEquivalentAddress"
"o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup deleted
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "deleted"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup" "deleted"
echo
```

```
echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "deleted"
"pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "deleted"
"eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t deleted reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "deleted" "o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "deleted" "o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup mgrpUniqueId
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mgrpUniqueId"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup"
"mgrpUniqueId"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mgrpUniqueId
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mgrpUniqueId" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
```

```
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mgrpUniqueId eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t mgrpUniqueId reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "mgrpUniqueId" "o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "mgrpUniqueId"
"o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup mailUserStatus
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailUserStatus"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup"
"mailUserStatus"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailUserStatus
pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailUserStatus" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailUserStatus pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailUserStatus
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailUserStatus" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailUserStatus eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t mailUserStatus reindex o=usergroup
```

```
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "mailUserStatus"
"o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "mailUserStatus"
"o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup icsCalendarOwned
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"icsCalendarOwned"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup"
"icsCalendarOwned"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"icsCalendarOwned" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"icsCalendarOwned" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned approx-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"icsCalendarOwned" "approx-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
```

```
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned approx-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned sub-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"icsCalendarOwned" "sub-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned sub-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t icsCalendarOwned reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "icsCalendarOwned"
"o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "icsCalendarOwned"
"o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup inetDomainBaseDN
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"inetDomainBaseDN"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup"
"inetDomainBaseDN"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
inetDomainBaseDN pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"inetDomainBaseDN" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
inetDomainBaseDN pres-enabled:on
echo
```

```
echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
inetDomainBaseDN eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"inetDomainBaseDN" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
inetDomainBaseDN eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t inetDomainBaseDN reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "inetDomainBaseDN"
"o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "inetDomainBaseDN"
"o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup
sunOrganizationAlias
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"sunOrganizationAlias"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup"
"sunOrganizationAlias"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
sunOrganizationAlias pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"sunOrganizationAlias" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
sunOrganizationAlias pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
sunOrganizationAlias eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"sunOrganizationAlias" "eq-enabled:on"
```

```
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
sunOrganizationAlias eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t sunOrganizationAlias reindex
o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "sunOrganizationAlias"
"o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "sunOrganizationAlias"
"o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup
sunPreferredDomain
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"sunPreferredDomain"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup"
"sunPreferredDomain"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
sunPreferredDomain pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"sunPreferredDomain" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
sunPreferredDomain pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
sunPreferredDomain eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"sunPreferredDomain" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
```

```
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
sunPreferredDomain eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t sunPreferredDomain reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "sunPreferredDomain"
"o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "sunPreferredDomain"
"o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup mailDomainStatus
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailDomainStatus"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup"
"mailDomainStatus"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailDomainStatus pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailDomainStatus" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailDomainStatus pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailDomainStatus eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"mailDomainStatus" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailDomainStatus eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t mailDomainStatus reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
```

```
--port 389 --hostname host1 --unsecured -t "mailDomainStatus"
"o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "mailDomainStatus"
"o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup o
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "o"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup" "o"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup o
pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "o"
"pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup o
pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup o eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup" "o"
"eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup o
eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t o reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "o" "o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "o" "o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=usergroup associatedDomain
```

```
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"associatedDomain"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=usergroup"
"associatedDomain"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
associatedDomain pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"associatedDomain" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
associatedDomain pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
associatedDomain eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=usergroup"
"associatedDomain" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
associatedDomain eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t associatedDomain reindex o=usergroup
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "associatedDomain"
"o=usergroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "associatedDomain"
"o=usergroup"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=pab memberOfManagedGroup
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=pab"
"memberOfManagedGroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
```

```
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=pab"
"memberOfManagedGroup"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfManagedGroup
pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=pab"
"memberOfManagedGroup" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=pab
memberOfManagedGroup pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfManagedGroup
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=pab"
"memberOfManagedGroup" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=pab
memberOfManagedGroup eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t memberOfManagedGroup reindex o=pab
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "memberOfManagedGroup"
"o=pab"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "memberOfManagedGroup"
"o=pab"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=pab memberOfPABGroup
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=pab"
"memberOfPABGroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=pab"
"memberOfPABGroup"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
```

```
pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=pab"
"memberOfPABGroup" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=pab"
"memberOfPABGroup" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t memberOfPABGroup reindex o=pab
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "memberOfPABGroup" "o=pab"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "memberOfPABGroup" "o=pab"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=pab memberOfPAB
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=pab" "memberOfPAB"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=pab" "memberOfPAB"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB
pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=pab" "memberOfPAB"
"pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB
pres-enabled:on
```

```
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=pab" "memberOfPAB"
"eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB
eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t memberOfPAB reindex o=pab
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "memberOfPAB" "o=pab"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "memberOfPAB" "o=pab"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=pab un
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=pab" "un"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=pab" "un"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=pab un eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=pab" "un"
"eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=pab un eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t un reindex o=pab
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "un" "o=pab"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "un" "o=pab"
echo
```

```
echo -- /opt/dsee7/bin/dsconf create-index o=PiServerDb MemberOfPiBook
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=PiServerDb"
"MemberOfPiBook"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=PiServerDb"
"MemberOfPiBook"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb MemberOfPiBook
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=PiServerDb"
"MemberOfPiBook" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb
MemberOfPiBook eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t MemberOfPiBook reindex o=PiServerDb
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "MemberOfPiBook"
"o=PiServerDb"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "MemberOfPiBook"
"o=PiServerDb"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=PiServerDb MemberofPiGroup
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=PiServerDb"
"MemberofPiGroup"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=PiServerDb"
"MemberofPiGroup"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb
MemberofPiGroup eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=PiServerDb"
"MemberofPiGroup" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
```

```
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb
MemberofPiGroup eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t MemberofPiGroup reindex o=PiServerDb
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "MemberofPiGroup"
"o=PiServerDb"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "MemberofPiGroup"
"o=PiServerDb"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=PiServerDb displayname
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=PiServerDb"
"displayname"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=PiServerDb"
"displayname"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
pres-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=PiServerDb"
"displayname" "pres-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb
displayname pres-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=PiServerDb"
"displayname" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb
displayname eq-enabled:on
echo
```

```
echo -- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
sub-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=PiServerDb"
"displayname" "sub-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb
displayname sub-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t displayname reindex o=PiServerDb
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "displayname" "o=PiServerDb"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "displayname"
"o=PiServerDb"
echo

echo -- /opt/dsee7/bin/dsconf create-index o=mlusers mlsubMail
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=mlusers" "mlsubMail"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=mlusers" "mlsubMail"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=mlusers mlsubMail
eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=mlusers" "mlsubMail"
"eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=mlusers mlsubMail
eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t mlsubMail reindex o=mlusers
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "mlsubMail" "o=mlusers"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "mlsubMail" "o=mlusers"
echo
```

```
echo -- /opt/dsee7/bin/dsconf create-index o=mlusers mlsubListIdentifier
/opt/dsee7/bin/dsconf create-index --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=mlusers"
"mlsubListIdentifier"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf create-index returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf create-index "o=mlusers"
"mlsubListIdentifier"
echo

echo -- /opt/dsee7/bin/dsconf set-index-prop o=mlusers
mlsubListIdentifier eq-enabled:on
/opt/dsee7/bin/dsconf set-index-prop --user-dn "$BINDDN" --pwd-file
"$parg" --port 389 --hostname host1 --unsecured "o=mlusers"
"mlsubListIdentifier" "eq-enabled:on"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf set-index-prop returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf set-index-prop o=mlusers
mlsubListIdentifier eq-enabled:on
echo

echo -- /opt/dsee7/bin/dsconf -t mlsubListIdentifier reindex o=mlusers
/opt/dsee7/bin/dsconf reindex --user-dn "$BINDDN" --pwd-file "$parg"
--port 389 --hostname host1 --unsecured -t "mlsubListIdentifier"
"o=mlusers"
stat=$?
if [ $stat -ne 0 ]; then
  echo "-- WARNING: /opt/dsee7/bin/dsconf reindex returned $stat"
fi
echo -- Done /opt/dsee7/bin/dsconf reindex -t "mlsubListIdentifier"
"o=mlusers"
echo
[135 Fri Sep 07 00:12:52 root@host1% /opt/sun/comms/dssetup# ]
# cat /var/tmp/dssetup_20120906235554/dssetup.log
-=-=-=-=-=-=-=-=-=-=-=-=-=-=

Running /usr/bin/perl sbin/comm_dssetup.pl

Welcome to the Directory Server preparation tool (Comms DSsetup)
6.4.0.24.0 for
Oracle Communications Unified Communications Suite
dssetup Version 6.4-24.03 (built Mon Jun 11 14:36:51 PDT 2012)

This tool prepares your directory server for use by the
communications services which include Messaging, Calendar and their
components.

The logfile is /var/tmp/dssetup_20120906235554/dssetup.log

Do you want to continue [y]:
```

```
Please enter the full path to the directory where the
Directory Server instance(s) reside ("server-root"), or
an explicit Directory Server instance directory

Directory server root [/var/opt/sun/directory] :

Please select a directory server instance from the following list:

[1]   ds7


Which instance do you want [1]:
Please enter the directory manager DN [cn=Directory Manager]:
stty -echo
Password:
stty echoConfiguration from DS config file:
- DS Install location: /opt/dsee7
- DS hostname: host1
- DS port: 389

ldapsearch location: /opt/SUNWdsee/dsee6/bin

./ldapsearch -D "cn=Directory Manager" -j
"/var/tmp/dssetup_20120906235554/dssetup.pw" -p 389 -h host1 -b
"cn=monitor" -s base objectclass=top version 2>&1
./ldapsearch output: version: 1
./ldapsearch output: dn: cn=monitor
./ldapsearch output: version: Sun-Directory-Server/11.1.1.3.0
B2010.0630.2203
-- Detected DS versions:
   full: 11.1.1.3.0
   major: 11
   minor: 1
   micro: 1
   patch: NONE

Detected DS version 11.1.1.3.0 on host1 port 389
-- Stored Dssetup data ver=0 rev=0, dctree=
   ug=, schematype=

Will this directory server be used for users/groups [yes]: WARNING: No
default suffix found in the Directory
A list of suffixes are as follows:
  No Suffixes Found

Please enter the Users/Groups base suffix [o=usergroup] :
-=-=-=-=-=-=-=-=-=-=-=
has_naming_context_ds6 get-suffix-prop result:
"o=usergroup": suffix does not exist.
The "get-suffix-prop" operation failed on "host1:389".

-=-=-=-=-=-=-=-=-=-=-=
There are 3 possible schema types:
  1   - schema 1
  1.5 - schema 2 compatibility mode for schema 1 systems
        that has been converted with commdirmig
```

```
  2   - schema 2

Please enter the Schema Type (1, 1.5, 2) [2]:
Do you want to update the schema files [yes]:
Do you want to configure new indexes [yes]:
Do you want to Reindex the new indexes now [yes]:
Here is a summary of the settings that you chose:

  Server Root                        : /var/opt/sun/directory
  Server Instance                    : ds7
  Users/Groups Directory             : yes
  Update Schema                      : yes
  Schema Type                        : 2
  DC Root                            : o=usergroup
  User/Group Root                    : o=usergroup
  Add New Indexes                    : yes
  ReIndex New Indexes Now            : yes
  Directory Manager DN               : cn=Directory Manager


Now ready to generate a shell script and ldif file to modify the
Directory.
No changes to the Directory Server will be made this time.
Do you want to continue [y]:
Generating files...

Checking to see if Suffixes need to be added

-=-=-=-=-=-=-=-=-=-=-
has_naming_context_ds6 get-suffix-prop result:
"o=comms-config": suffix does not exist.
The "get-suffix-prop" operation failed on "host1:389".

-=-=-=-=-=-=-=-=-=-=-
  Will Create suffix o=comms-config

-=-=-=-=-=-=-=-=-=-=-
has_naming_context_ds6 get-suffix-prop result:
"o=usergroup": suffix does not exist.
The "get-suffix-prop" operation failed on "host1:389".

-=-=-=-=-=-=-=-=-=-=-
  Will Create suffix o=usergroup

-=-=-=-=-=-=-=-=-=-=-
has_naming_context_ds6 get-suffix-prop result:
"o=pab": suffix does not exist.
The "get-suffix-prop" operation failed on "host1:389".

-=-=-=-=-=-=-=-=-=-=-
  Will Create suffix o=pab

-=-=-=-=-=-=-=-=-=-=-
has_naming_context_ds6 get-suffix-prop result:
"o=PiServerDb": suffix does not exist.
The "get-suffix-prop" operation failed on "host1:389".
```

```
-=-=-=-=-=-=-=-=-=-=
  Will Create suffix o=PiServerDb

-=-=-=-=-=-=-=-=-=-=
has_naming_context_ds6 get-suffix-prop result:
"o=mlusers": suffix does not exist.
The "get-suffix-prop" operation failed on "host1:389".

-=-=-=-=-=-=-=-=-=-=
  Will Create suffix o=mlusers

Checking to see that uid uniqueness plugins are turned off
  Plugin is already disabled

Adding indexes
  Adding Indexes for User/group Tree (backend:usergroupdb2)
    Checking indexes for cn
      Default index DN exists
      Default index pres found
      Default index eq found
      Default index sub found
      No new indexes required
    Checking indexes for cosspecifier
      Index does not exist
        Index pres does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type cosspecifier
    Checking indexes for inetCos
      Index does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type inetCos
    Checking indexes for memberOf
      Index does not exist
        Index eq does not exist
        Index sub does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type memberOf
    Checking indexes for groupid
      Index does not exist
        Index pres does not exist
        Index eq does not exist
        Index sub does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type groupid
    Checking indexes for mail
      Default index DN exists
      Default index pres found
      Default index eq found
      Default index sub found
      No new indexes required
    Checking indexes for icsCalendar
      Index does not exist
        Index pres does not exist
        Index eq does not exist
```

```
        Index approx does not exist
        Index sub does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type icsCalendar
    Checking indexes for mailAlternateAddress
      Default index DN exists
      Default index eq found
      No new indexes required
    Checking indexes for ou
      Index does not exist
        Index pres does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type ou
    Checking indexes for uniqueMember
      Default index DN exists
      Default index eq found
      No new indexes required
    Checking indexes for member
      Default index DN exists
      Default index eq found
      No new indexes required
    Checking indexes for mailEquivalentAddress
      Index does not exist
        Index pres does not exist
        Index eq does not exist
        Index approx does not exist
        Index sub does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type mailEquivalentAddress
    Checking indexes for deleted
      Index does not exist
        Index pres does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type deleted
    Checking indexes for mgrpUniqueId
      Index does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type mgrpUniqueId
    Checking indexes for mailUserStatus
      Index does not exist
        Index pres does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type mailUserStatus
    Checking indexes for icsCalendarOwned
      Index does not exist
        Index pres does not exist
        Index eq does not exist
        Index approx does not exist
        Index sub does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type icsCalendarOwned
  Adding Schema2 specific Indexes for User/Group Tree
(backend:usergroupdb2)
```

```
    Checking indexes for inetDomainBaseDN
      Index does not exist
        Index pres does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type inetDomainBaseDN
    Checking indexes for sunOrganizationAlias
      Index does not exist
        Index pres does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type sunOrganizationAlias
    Checking indexes for sunPreferredDomain
      Index does not exist
        Index pres does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type sunPreferredDomain
    Checking indexes for mailDomainStatus
      Index does not exist
        Index pres does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type mailDomainStatus
    Checking indexes for o
      Index does not exist
        Index pres does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type o
    Checking indexes for associatedDomain
      Index does not exist
        Index pres does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type associatedDomain
  Adding Indexes for PAB Tree (backend:pabdb2)
    Checking indexes for memberOfManagedGroup
      Index does not exist
        Index pres does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type memberOfManagedGroup
    Checking indexes for memberOfPABGroup
      Index does not exist
        Index pres does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type memberOfPABGroup
    Checking indexes for memberOfPAB
      Index does not exist
        Index pres does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type memberOfPAB
    Checking indexes for un
```

```
      Index does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type un
  Adding Indexes for New PAB Tree (backend:PiServerDbdb2)
    Checking indexes for MemberOfPiBook
      Index does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type MemberOfPiBook
    Checking indexes for MemberofPiGroup
      Index does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type MemberofPiGroup
    Checking indexes for displayname
      Index does not exist
        Index pres does not exist
        Index eq does not exist
        Index sub does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type displayname
  Adding Indexes for Mailing List Tree (backend:mlusersdb2)
    Checking indexes for mail
      Default index DN exists
      Default index pres found
      Default index eq found
      Default index sub found
      No new indexes required
    Checking indexes for mlsubMail
      Index does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type mlsubMail
    Checking indexes for mlsubListIdentifier
      Index does not exist
        Index eq does not exist
      New indexes and Reindexing required
      ReIndex will happen for index type mlsubListIdentifier

Checking to see if DN needs to be created for suffixes

Generating ldif for installer metadata
  Generating ldif for Adding schema for installer metadata
  Generating ldif for Creating DN: cn=CommServers,o=comms-config
The following files have been created:
   /var/tmp/dssetup_20120906235554/dssetup.sh
   /var/tmp/dssetup_20120906235554/dssetup.ldif

Running /var/tmp/dssetup_20120906235554/dssetup.sh will make changes to
the Directory
  You can run this file now or at a later time
Ready to execute the script now.

Do you want to continue [y]:
Running /var/tmp/dssetup_20120906235554/dssetup.sh -D "cn=Directory
```

```
Manager" -j /var/tmp/dssetup_20120906235554/dssetup.pw
-- Updating Schema files...
-- Copying 20subscriber.ldif
-- Copying 50ns-delegated-admin.ldif
-- Copying 50ns-mail.ldif
-- Copying 50ns-mlm.ldif
-- Copying 50ns-msg.ldif
-- Copying 50ns-value.ldif
-- Copying 55ims-ical.ldif
-- Copying 56ims-schema.ldif
-- Copying 65im.ldif
-- Copying 70sun-schema2.ldif
-- Copying 71sun-am.ldif
-- Copying 60iplanet-calendar.ldif
-- Copying 50ns-iabs.ldif
-- Copying 98ns-dummy-uwc.ldif
-- Copying 70delgated-admin.ldif
-- Stopping Directory Server
Directory Server instance '/var/opt/sun/directory/ds7' stopped
-- Starting Directory Server
Directory Server instance '/var/opt/sun/directory/ds7' started:
pid=10904
-- Creating Suffix o=comms-config
-- Done Creating o=comms-config

-- Creating Suffix o=usergroup
-- Done Creating o=usergroup

-- Creating Suffix o=pab
-- Done Creating o=pab

-- Creating Suffix o=PiServerDb
-- Done Creating o=PiServerDb

-- Creating Suffix o=mlusers
-- Done Creating o=mlusers

-- Applying ldif file /var/tmp/dssetup_20120906235554/dssetup.ldif
modifying entry cn=schema

modifying entry cn=schema

adding new entry cn=CommServers,o=comms-config

-- rejects to /var/tmp/dssetup_20120906235554/dssetup.ldif.rej status =
0
-- ldapmodify returned 0
-- Done Applying ldif file /var/tmp/dssetup_20120906235554/dssetup.ldif

-- /opt/dsee7/bin/dsconf create-index o=usergroup cosspecifier
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup cosspecifier

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup cosspecifier
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr cosspecifier o=usergroup" to reindex.
```

```
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup cosspecifier
pres-enabled:on

-- /opt/dsee7/bin/dsconf -t cosspecifier reindex o=usergroup
## usergroupdb2: Indexing attribute: cosspecifier
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t cosspecifier o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup inetCos
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup inetCos

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup inetCos
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr inetCos o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup inetCos
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t inetCos reindex o=usergroup
## usergroupdb2: Indexing attribute: inetCos
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t inetCos o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup memberOf
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup memberOf

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOf o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOf o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup memberOf
sub-enabled:on

-- /opt/dsee7/bin/dsconf -t memberOf reindex o=usergroup
## usergroupdb2: Indexing attribute: memberOf
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t memberOf o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup groupid
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup groupid
```

```
-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr groupid o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr groupid o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr groupid o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup groupid
sub-enabled:on

-- /opt/dsee7/bin/dsconf -t groupid reindex o=usergroup
## usergroupdb2: Indexing attribute: groupid
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t groupid o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup icsCalendar
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup icsCalendar

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendar o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendar o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
approx-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendar o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
approx-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
sub-enabled:on
```

```
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendar o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendar
sub-enabled:on

-- /opt/dsee7/bin/dsconf -t icsCalendar reindex o=usergroup
## usergroupdb2: Indexing attribute: icsCalendar
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t icsCalendar o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup ou
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup ou

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup ou pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr ou o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup ou
pres-enabled:on

-- /opt/dsee7/bin/dsconf -t ou reindex o=usergroup
## usergroupdb2: Indexing attribute: ou
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t ou o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup mailEquivalentAddress
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup
mailEquivalentAddress

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailEquivalentAddress o=usergroup" to
reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailEquivalentAddress o=usergroup" to
reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress approx-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailEquivalentAddress o=usergroup" to
reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
```

```
mailEquivalentAddress approx-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailEquivalentAddress o=usergroup" to
reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailEquivalentAddress sub-enabled:on

-- /opt/dsee7/bin/dsconf -t mailEquivalentAddress reindex o=usergroup
## usergroupdb2: Indexing attribute: mailEquivalentAddress
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mailEquivalentAddress
o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup deleted
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup deleted

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr deleted o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr deleted o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup deleted
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t deleted reindex o=usergroup
## usergroupdb2: Indexing attribute: deleted
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t deleted o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup mgrpUniqueId
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup mgrpUniqueId

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mgrpUniqueId
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mgrpUniqueId o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup mgrpUniqueId
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t mgrpUniqueId reindex o=usergroup
## usergroupdb2: Indexing attribute: mgrpUniqueId
```

```
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mgrpUniqueId o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup mailUserStatus
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup mailUserStatus

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailUserStatus
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailUserStatus o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailUserStatus
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailUserStatus
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailUserStatus o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailUserStatus
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t mailUserStatus reindex o=usergroup
## usergroupdb2: Indexing attribute: mailUserStatus
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mailUserStatus o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup icsCalendarOwned
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup icsCalendarOwned

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendarOwned
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendarOwned o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendarOwned
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendarOwned o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendarOwned
approx-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendarOwned o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned approx-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup icsCalendarOwned
```

```
sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr icsCalendarOwned o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
icsCalendarOwned sub-enabled:on

-- /opt/dsee7/bin/dsconf -t icsCalendarOwned reindex o=usergroup
## usergroupdb2: Indexing attribute: icsCalendarOwned
## usergroupdb2: Index buffer bucket size: 100
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t icsCalendarOwned o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup inetDomainBaseDN
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup inetDomainBaseDN

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup inetDomainBaseDN
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr inetDomainBaseDN o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
inetDomainBaseDN pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup inetDomainBaseDN
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr inetDomainBaseDN o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
inetDomainBaseDN eq-enabled:on

-- /opt/dsee7/bin/dsconf -t inetDomainBaseDN reindex o=usergroup
## usergroupdb2: Indexing attribute: inetDomainBaseDN
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t inetDomainBaseDN o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup sunOrganizationAlias
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup
sunOrganizationAlias

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup sunOrganizationAlias
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr sunOrganizationAlias o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
sunOrganizationAlias pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup sunOrganizationAlias
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr sunOrganizationAlias o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
sunOrganizationAlias eq-enabled:on
```

```
-- /opt/dsee7/bin/dsconf -t sunOrganizationAlias reindex o=usergroup
## usergroupdb2: Indexing attribute: sunOrganizationAlias
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t sunOrganizationAlias
o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup sunPreferredDomain
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup
sunPreferredDomain

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup sunPreferredDomain
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr sunPreferredDomain o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
sunPreferredDomain pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup sunPreferredDomain
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr sunPreferredDomain o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
sunPreferredDomain eq-enabled:on

-- /opt/dsee7/bin/dsconf -t sunPreferredDomain reindex o=usergroup
## usergroupdb2: Indexing attribute: sunPreferredDomain
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t sunPreferredDomain o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup mailDomainStatus
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup mailDomainStatus

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailDomainStatus
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailDomainStatus o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailDomainStatus pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup mailDomainStatus
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mailDomainStatus o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
mailDomainStatus eq-enabled:on

-- /opt/dsee7/bin/dsconf -t mailDomainStatus reindex o=usergroup
## usergroupdb2: Indexing attribute: mailDomainStatus
## usergroupdb2: Index buffer bucket size: 0
```

```
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mailDomainStatus o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup o
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup o

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup o pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr o o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup o
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup o eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr o o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup o eq-enabled:on

-- /opt/dsee7/bin/dsconf -t o reindex o=usergroup
## usergroupdb2: Indexing attribute: o
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t o o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=usergroup associatedDomain
-- Done /opt/dsee7/bin/dsconf create-index o=usergroup associatedDomain

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup associatedDomain
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr associatedDomain o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
associatedDomain pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=usergroup associatedDomain
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr associatedDomain o=usergroup" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=usergroup
associatedDomain eq-enabled:on

-- /opt/dsee7/bin/dsconf -t associatedDomain reindex o=usergroup
## usergroupdb2: Indexing attribute: associatedDomain
## usergroupdb2: Index buffer bucket size: 0
## usergroupdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t associatedDomain o=usergroup

-- /opt/dsee7/bin/dsconf create-index o=pab memberOfManagedGroup
-- Done /opt/dsee7/bin/dsconf create-index o=pab memberOfManagedGroup

-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfManagedGroup
```

```
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfManagedGroup o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfManagedGroup
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfManagedGroup
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfManagedGroup o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfManagedGroup
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t memberOfManagedGroup reindex o=pab
## pabdb2: Indexing attribute: memberOfManagedGroup
## pabdb2: Index buffer bucket size: 0
## pabdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t memberOfManagedGroup o=pab

-- /opt/dsee7/bin/dsconf create-index o=pab memberOfPABGroup
-- Done /opt/dsee7/bin/dsconf create-index o=pab memberOfPABGroup

-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfPABGroup o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfPABGroup o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPABGroup
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t memberOfPABGroup reindex o=pab
## pabdb2: Indexing attribute: memberOfPABGroup
## pabdb2: Index buffer bucket size: 0
## pabdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t memberOfPABGroup o=pab

-- /opt/dsee7/bin/dsconf create-index o=pab memberOfPAB
-- Done /opt/dsee7/bin/dsconf create-index o=pab memberOfPAB

-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfPAB o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB
pres-enabled:on
```

```
-- /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr memberOfPAB o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab memberOfPAB
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t memberOfPAB reindex o=pab
## pabdb2: Indexing attribute: memberOfPAB
## pabdb2: Index buffer bucket size: 0
## pabdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t memberOfPAB o=pab

-- /opt/dsee7/bin/dsconf create-index o=pab un
-- Done /opt/dsee7/bin/dsconf create-index o=pab un

-- /opt/dsee7/bin/dsconf set-index-prop o=pab un eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr un o=pab" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=pab un eq-enabled:on

-- /opt/dsee7/bin/dsconf -t un reindex o=pab
## pabdb2: Indexing attribute: un
## pabdb2: Index buffer bucket size: 0
## pabdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t un o=pab

-- /opt/dsee7/bin/dsconf create-index o=PiServerDb MemberOfPiBook
-- Done /opt/dsee7/bin/dsconf create-index o=PiServerDb MemberOfPiBook

-- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb MemberOfPiBook
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr MemberOfPiBook o=PiServerDb" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb MemberOfPiBook
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t MemberOfPiBook reindex o=PiServerDb
## PiServerDbdb2: Indexing attribute: MemberOfPiBook
## PiServerDbdb2: Index buffer bucket size: 0
## PiServerDbdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t MemberOfPiBook o=PiServerDb

-- /opt/dsee7/bin/dsconf create-index o=PiServerDb MemberofPiGroup
-- Done /opt/dsee7/bin/dsconf create-index o=PiServerDb MemberofPiGroup

-- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb MemberofPiGroup
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr MemberofPiGroup o=PiServerDb" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb
```

```
MemberofPiGroup eq-enabled:on

-- /opt/dsee7/bin/dsconf -t MemberofPiGroup reindex o=PiServerDb
## PiServerDbdb2: Indexing attribute: MemberofPiGroup
## PiServerDbdb2: Index buffer bucket size: 0
## PiServerDbdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t MemberofPiGroup o=PiServerDb

-- /opt/dsee7/bin/dsconf create-index o=PiServerDb displayname
-- Done /opt/dsee7/bin/dsconf create-index o=PiServerDb displayname

-- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
pres-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr displayname o=PiServerDb" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
pres-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr displayname o=PiServerDb" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
eq-enabled:on

-- /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
sub-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr displayname o=PiServerDb" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=PiServerDb displayname
sub-enabled:on

-- /opt/dsee7/bin/dsconf -t displayname reindex o=PiServerDb
## PiServerDbdb2: Indexing attribute: displayname
## PiServerDbdb2: Index buffer bucket size: 100
## PiServerDbdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t displayname o=PiServerDb

-- /opt/dsee7/bin/dsconf create-index o=mlusers mlsubMail
-- Done /opt/dsee7/bin/dsconf create-index o=mlusers mlsubMail

-- /opt/dsee7/bin/dsconf set-index-prop o=mlusers mlsubMail
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mlsubMail o=mlusers" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=mlusers mlsubMail
eq-enabled:on

-- /opt/dsee7/bin/dsconf -t mlsubMail reindex o=mlusers
## mlusersdb2: Indexing attribute: mlsubMail
## mlusersdb2: Index buffer bucket size: 0
## mlusersdb2: Finished indexing.
```

```
Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mlsubMail o=mlusers

-- /opt/dsee7/bin/dsconf create-index o=mlusers mlsubListIdentifier
-- Done /opt/dsee7/bin/dsconf create-index o=mlusers mlsubListIdentifier

-- /opt/dsee7/bin/dsconf set-index-prop o=mlusers mlsubListIdentifier
eq-enabled:on
Index will not be used unless re-indexed.
Use "dsconf reindex --attr mlsubListIdentifier o=mlusers" to reindex.
-- Done /opt/dsee7/bin/dsconf set-index-prop o=mlusers
mlsubListIdentifier eq-enabled:on

-- /opt/dsee7/bin/dsconf -t mlsubListIdentifier reindex o=mlusers
## mlusersdb2: Indexing attribute: mlsubListIdentifier
## mlusersdb2: Index buffer bucket size: 0
## mlusersdb2: Finished indexing.

Task completed (slapd exit code: 0).
-- Done /opt/dsee7/bin/dsconf reindex -t mlsubListIdentifier o=mlusers
```

```
Successful Completion. Consult
/var/tmp/dssetup_20120906235554/dssetup.log for details
```

Configuration Worksheets - Calendar Server

Configuration Worksheets - Oracle Communications Calendar Server Version 7 Update 3

Print and fill out this worksheet to use when responding to the Oracle Communications Calendar Server `init-config` script configuration options.

Calendar Server 7 Update 3 Worksheet

Option	Default Value	Fill in Your Site's Value (to Respond to the Script)
Directory to store configuration and data files	`/var/opt/sun/comms/davserver`	
Server Host	`localhost`	
DNS	-	
MySQL Server or Oracle Database (for back end)	-	
Questions for MySQL Server		
Server Host	`localhost`	
MySQL Server Port	`3306`	
MySQL Runtime User	`caldav`	
MySQL Password	–	
Database User ID	`caldav`	
Database User Password	–	
Calendar Database Name	`caldav`	
Questions for Oracle Database		
Server Host	`localhost`	
Oracle Database Port	`1512`	
Service Name	`orcl`	
Database User ID	`caldav`	

Database User Password	-	
iSchedule Database User ID [1]	`ischedule`	
ISchedule Database User Password	-	
Attachment Store Directory	`/var/opt/sun/comms/davserver/db`	
Application Server Installation Directory	`/opt/SUNWappserver`	
Application Server Domain Directory	`/opt/SUNWappserver/domains/domain1`	
Application Server Document Root Directory	`/opt/SUNWappserver/domains/domain1/docroot`	
Application Server Instance Name	`server`	
Virtual Server Identifier	`server`	
Application Server Instance HTTP Port	`8080`	
Administration Server Port	`4848`	
Administrator User ID	`admin`	
Administrator Password		
Secure Administration Server Instance	(selected)	
URI Path for Calendar Server 7 Update 1	`/`	
LDAP URL	`ldap://`*hostname*`:389`	
LDAP Server Host Name	*FQDN of your host*	
LDAP Server Port	`389`	
Directory Manager DN	`cn=Directory Manager`	
Directory Manager Password	–	
DC Tree Suffix	The default value comes from when you run `comms_dssetup.pl` against the Directory Server.	
LDAP Unique ID Attribute	`davUniqueId`	

Default Domain (DC Tree Suffix)	(This value depends on the Directory Server root suffix that is detected at `init-config` run time.)	
Mail Server Host Name (SMTP Server)	–	
Mail Server Port Number (SMTP Server)	`25`	
Calendar Administrator Username	`calmaster`	
Calendar Administrator Password	–	

[1] The iSchedule database is used to manage external calendar invitations. The established standard for scheduling between two separate calendar servers is still only through iMIP, which sends calendar data over email. Previously, end users had to manually import such invitations and responses that arrived in email into their calendars. Now, starting with Messaging Server 7 Update 5, you can use an iSchedule channel that interprets such mail messages and posts them to the Calendar server directly. Thus, external invitations and responses get into users' calendars without any user intervention. See Using the iSchedule Channel to Handle iMIP Messages for instructions on how to set up Messaging Server. No special setup is required for Calendar server. If you remove the iSchedule database configuration, Calendar Server does not function correctly without it.

Configuration Worksheets - comm_dssetup.pl Script

comm_dssetup.pl Script Worksheet

Print and fill out this worksheet to use when responding to the `comm_dssetup.pl` script configuration options. You use `comm_dssetup.pl` to prepare the Directory Server LDAP schema for Communications Suite products.

This sheet assumes you are using Scheme 2, the default for a new installation.

Option	Default Value	Fill in Your Site's Value (to Respond to the Script)
Directory Server Root	The default depends on the Directory Server version detected. The `comm_dssetup.pl` script does attempt to heuristically determine the value.	
Directory Manager DN	`cn=Directory Manager`	
Directory Manager Password	–	
Use directory server for users/groups	Yes	
Users/Groups base suffix	The default depends on what is detected. The `comm_dssetup.pl` script does attempt to heuristically determine the value.	
Schema type?	2. However, if you run `comm_dssetup.pl` again, it defaults to the value choosen the previous time.	
Update the schema files?	Yes	
Configure new indexes?	Yes	
Reindex new indexes?	Yes	

Configuration Worksheets - Convergence

Convergence Configuration Worksheets Version 2

Before you configure Convergence, gather the necessary configuration information.

Convergence Configuration Options lists the configuration options required for Convergence. GlassFish Server Configuration Options lists the configuration options required by Convergence to be deployed on GlassFish Server.

Print and fill out these worksheets to use when responding to the Convergence `init-config` script configuration options.

Convergence Configuration Options

Option	Description and Default Value	Fill in Your Site's Value (to Respond to the Script)
Configuration Directory	Directory to store configuration and data files. Default directory (on Solaris OS and Red Hat Linux): `/var/opt/sun/comms/iwc`. This directory should be different than the *iwc-base* directory. (On Solaris OS and Red Hat Linux, this is `/opt/sun/comms/iwc` by default).	
Convergence server host name	Host name of the machine where the Convergence software is installed. For example: `mymachine`.	
DNS domain name	The DNS domain for the host machine where the Convergence software is installed. For example: `siroe.com.`	
Convergence URL	URL where Convergence will be deployed. Enter the portion of the URL following the *`host name`*`:`*`port number`* For example: `/iwc`.	
Hosted domain support?	Select this option only if you have configured hosted domain support for Calendar Server.	
User/Group LDAP URL	Enter the Directory Server host and port where the User/Group is located. The URL should be in the format: `ldap://`*`LDAP host name with FQDN`*`:`*`LDAP port number`*`.` For example: `ldap://siroe.com:389`	
Bind DN	Enter the LDAP DN to be used to bind to the Directory Server managing the User/Group data. This is the User/Group Directory Manager. For example: "cn=Directory Manager".	
Bind password	Password for the Bind DN. Use the password defined in Directory Server for the Bind DN.	
DC Tree suffix	For Schema 1 configurations, this option specifies the base distinguished name (DN) of the DC Tree root suffix. For Schema 2 configurations, this option specifies the base DN of the root suffix under which the User/Group tree is located. You must enter a value for this option whether you are using Schema 1 or Schema 2. For example: `o=isp`	
Default domain name	When a user logs in to Convergence without including a mail domain component in the user name, this domain is used by default to supply the fully qualified domain name. For example: `sesta.com.` In this example, if a user logs in as `fred`, the user name is qualified as `fred@sesta.com`.	

Webmail host name	Host name where Messaging Server is installed. For example: `ms.sesta.com.`	
Webmail port number	Messaging Server HTTP (`mshttpd`) port number. For example, the default is: `8990`.	
Webmail SSL port number	Messaging Server SSL port number. Only needed if you enable login in secure mode.	
Webmail Admin user ID and password	Messaging Server administrator user ID and password. For example: `admin`.	
Calendar Server version	Calendar Server 6.3 or Calendar Server 7 and up. For example: `CS7 and up`.	
Calendar Server host name	Host name where Calendar Server is installed. For example: `cs.siroe.com`.	
Calendar Server port number	Calendar Server HTTP port number. For example: `8004`. Default: `80`.	
Calendar Server SSL port number	Calendar Server SSL port number. Only needed if you enable login in secure mode.	
Calendar Server URI	Calendar Server URI. Only needed if enabling with Calendar Server 7 and up. Default: `/davserver/wcap.`	
Calendar Server Admin user ID and password	Calendar Server administrator user ID and password. For example: `calmaster`.	
IM domain name	Domain name of the Instant Messaging Server. For example `varrius.com`.	
IM host name	Host name where Instant Messaging is installed. For example: `im.varrius.com`.	
IM port number	Instant Messaging HTTP port number. For example: `5269`. Default: `5269`.	
IM Httpbind Component JID	Instant Messaging Server httpbind component jid. For example: `httpbind.varrius.com`.	
IM Httpbind Component password	Instant Messaging Server httpbind component password.	
IM Avatar Component JID	Instant Messaging Server avatar component jid. For example: `avatar.varrius.com`.	
IM Avatar Component password	Instant Messaging Server avatar component password.	
Convergence administrator username	Administrator username. For example `admin`.	
Convergence administrator password	Administrator password.	

GlassFish Server Configuration Options

Option	Description	Fill in Your Site's Value (to Respond to the Script)
Application server installation directory	Directory where Application Server is installed. By default, this directory is `/opt/SUNWappserver`.	
Application server domain directory	By default, this directory is `/opt/SUNWappserver/domains/domain1`.	
Application server document root directory	By default, this directory is `/opt/SUNWappserver/domains/domain1/docroot`	
Application server target name	Name of the instance. For example: `server`.	
Virtual server identifier	Name of the application server virtual server identifier. For example: `server`.	
Application server instance HTTP port number	HTTP port number for the Application Server server instance (target). Default port number: `8080`.	
Administration Server port number	Port number for the Administration Server instance for application server. For example: `4848`.	
Administrator Server user ID and password.	User ID and password for the Administration Server administrator. User ID example: `admin`	
Secure Administration Server Instance	You will need to specify whether the HTTP access to the Administration Server instance is secure (HTTPS) or not (HTTP). By default, the Secure Administration Server Instance box shown in the Convergence `init-config` program is checked. If your access is not secure, uncheck the box.	

Configuration Worksheets - Delegated Administrator

Configuration Worksheets - Delegated Administrator for Oracle Communications Unified Communications Suite Version 7

Print and fill out this worksheet to use when responding to the `config-commda` script configuration options. You use `config-commda` to configure the Delegated Administrator console and utility.

> **Note**
> Support for Access Manager is deprecated. For more information, see: Access Manager Support Deprecation.

Option	Default Value	Fill in Your Site's Value (to Respond to the Script)
Directory to store the configuration and data files	`/var/opt/sun/comms/da`	
DA Server Host	*FQDN of your host*	
DA Server Port	8080	
Default Domain	*your domain*	
Default SSL Port	443	
Web Container	Web Server 6.x	
Install Root Directory (for DA Console)	(Default depends on web container selected)	
Instance Root Directory	(Default depends on web container selected)	
Server Instance Identifier	*FQDN of your host*	
Virtual Server Identifier	*FQDN of your host*	
Web Server HTTP Port	80	
Administration Server Port	8800	
Administrator User ID	admin	
Administrator Password	–	
Secure Administration Server Instance?	Unchecked	
Default Domain Separator	@	
Directory Access Mode	Direct LDAP	
DA Server Web Container (if Direct LDAP is chosen)	Web Server 6.x	
Access Manager Base Directory (if AM Mode is chosen)	`/opt/SUNWam`	

Install Root Directory (Default depends on web container selected in Direct LDAP mode or derived from Access Manager install in AM Mode)		
Access Manager Base Directory	`/opt/SUNWam`	
Web Container Install Root Directory (for DA Server)	Web Server 6.x	
Instance Root Directory	(Default depends on web container selected)	
Server Instance Identifier	*FQDN of your host*	
Virtual Server Identifier	*FQDN of your host*	
Web Server HTTP Port	80	
Administration Server Port	8800	
Administrator User ID	admin	
Administrator Password	–	
Secure Administration Server Instance?	Unchecked	
URL of Directory Server	`ldap://` *FQDN-of-your-host*`:389`	
Bind As	`cn=Directory Manager`	
Password	–	
DA Server Internal LDAP Username	`daAdmin`	*this value is hard-coded*
DA Server Internal LDAP Password	–	
AM Top level admin	`amadmin`	*this value is hard-coded by Access Manager*
AM admin password	–	
Access Manager Internal LDAP Auth Username	`amldapuser`	*this value is hard-coded by Access Manager*
AM Internal LDAP Auth Password for amldapuser	–	
Organization DN	`o=`*yourDefaultDomain*`,o=`*ugrootsuffix*	
Top Level Admin for Delegated Administrator	`admin`	
Password	–	
Load Sample Service Packages	Y	
Load Sample Organizations	Y	
Preferred Mailhost for Sample	*FQDN of your host*	

Configuration Worksheets - Indexing and Search Service

< Back to Installation Scenario - Indexing and Search Service

Indexing and Search Service for Oracle Communications Unified Communications Suite Worksheet Version 1 Update 4

Print and fill out this worksheet to use when responding to the `setup` script configuration options. You use `setup` to configure Indexing and Search Service. Differences between legacy configuration (`configutil`) and Unified Configuration (`msconfig`) parameters are shown where applicable.

Option and Example Value	Where Defined on Messaging Server	Where Defined on ISS Server	Fill In Your Site's Value
Fully qualified domain name of this system Example: `iss.example.com`	NA	`hostname`	
Base directory of the install Example: `/opt/sun/comms/jiss`	NA	`basedir`	
Cluster node type for Cluster Search Service configuration, either `web` or `index`	NA	`iss.cluster.type`	
Instance name Example: `iss1`	NA	`instance.name`	
User under which all ISS services will run Example: `jiss`	NA	`iss.user`	
Group under which all ISS services will run Example: `jiss`	NA	`iss.group`	
Location to store the Lucene indexes Example: `/var/opt/sun/comms/jiss/index`	NA	`iss.store.dir`	
Location of attachment data Example: `/var/opt/sun/comms/jiss/attach`	NA	`iss.data.dir`	
Temporary directory used for processing attachments Example: `/var/tmp/iss`	NA	`iss.tmp.dir`	
Location of ISS log files Example: `/var/opt/sun/comms/jiss/logs`	NA	`iss.log.dir`	

User/Group Directory Server LDAP URL Example: `ldap://dirhost.example.com:389`	`configutil` parameters: `local.ugldaphost` and `local.ugldapport` `msconfig` parameters: `base.ugldaphost` and `base.ugldapport`	`mail.ldap`	
User/Group Base DN Example: `dc=example,dc=com`	`configutil` parameter: `local.ugldapbasedn` `msconfig` parameter: `base.ugldapbasedn`	`mail.basedn`	
Schema Level Example: `1`	NA	`mail.schemalevel`	
DC Tree Base DN (only required for LDAP schema 1) Example: `o=internet`	NA	`mail.dcroot`	
Default LDAP port Example: `389`	Overwritten if LDAP host is defined in *host:port* format	`mail.ldap.port`	
Messaging Server Store fully qualified host name Example: `mailhost.example.com`	`configutil` parameter: `local.hostname` `msconfig` parameter: `base.hostname`	`mail.server`	
Comma-delimited list of mail server IPs Example: `10.0.0.1, 10.0.0.2`	NA	`mail.server.ip`	
Read-only mail store administrator user name Example: `indexeradmin`	To be set as `configutil` or `msconfig` parameter: `store.indexeradmins`	`mail.imap.admin.username`	
Read-only mail store administrator password	To be defined in User/Group Directory	`mail.imap.admin.password`	
IMAP port Example: `143`	NA	`mail.imap.port`	
IMQ broker host name and port for Messaging Server JMQ notifications Example: `mailhost.example.com:7676`	To be defined in `configutil` parameters: `local.store.notifyplugin.index.jmqhost` and `local.store.notifyplugin.index.jmqport` To be defined in `msconfig` parameters: `notifytarget:index.jmqhost` and `notifytarget:index.jmqport`	`mail.imq`	
JMQ notification destination type Example: `queue`	To be set as `configutil` parameter: `local.store.notifyplugin.index.destinationtype` To be set as `msconfig` parameter: `notifytarget:index.destinationtype`	`mail.imq.type`	

JMQ notification destination name Example: INDEXMS	To be set as configutil parameter local.store.notifyplugin.index.jmqtopic To be set as msconfig parameter: notifytarget:index.jmqtopic	mail.imq.name	
Username for IMQ broker handling Messaging Server JMQ notifications Example: jmquser	To be set as configutil parameter: local.store.notifyplugin.index.jmquser To be set as msconfig parameter: notifytarget:index.jmquser	mail.imq.user	
Password for IMQ broker handling Messaging Server JMQ notifications	To be set as configutil parameter local.store.notifyplugin.index.jmqpwd To be set as msconfig parameter: notifytarget:index.jmqpwd	mail.imq.password	
Administrator password	NA	mail.imq.password	
Location of the GlassFish directory Example: /opt/SUNWappserver	NA	appserv.dir	
GlassFish web port Example: 8080	NA	appserv.web.port	
GlassFish admin port Example: 4848	NA	appserv.admin.port	
GlassFish domain Example: domain1	NA	appserv.domain	
GlassFish administrative user Example: admin	NA	appserv.admin.user	
GlassFish administrative user's password	NA	appserv.admin.password	
ISS JMQ broker host name and port Example: jmq.example.com:7676	NA	imq.host	
ISS JMQ broker user name Example: jmquser	NA	iss.imq.user	
ISS JMQ broker password	NA	iss.imq.password	
Administrator password	NA	iss.imq.admin.password	
ISS Directory Server host and port Example: ldap.example.com:389	NA	ldap.host	
ISS Directory Manager DN Example: cn=Directory Manager	NA	java.naming.security.principal	

ISS Directory Server password	NA	`ldap.password`	
Storeui access method. Either `disk` for a single host environment or `http` for a multi-host environment.	NA	`iss.storeui.access.method`	

Configuration Worksheets - Instant Messaging

Configuration Worksheets - Instant Messaging Server Version 9

Print and fill out this worksheet to use when responding to the `configure` script, the utility that performs the initial Instant Messaging configuration.

(Solaris OS Only) If you are configuring High Availability service for Instant Messaging, see Instant Messaging HA Overview for specific information about values you can use for these parameters and additional parameters for your checklist.

> **Note**
> Support for Access Manager is deprecated. For more information, see: Access Manager Support Deprecation.

Configuration Parameters for Instant Messaging

Parameter	Description	Your Value
Installation Directory *im-svr-base*	Directory in which Instant Messaging is installed. By default, Instant Messaging is installed into the `/opt` directory as follows: Solaris OS, Red Hat Linux, and Oracle Linux: `/opt/sun/comms/im` (Solaris OS Only) If you will be configuring High Availability for Instant Messaging, see Selecting the Installation Directory for information about choosing an installation directory.	
Instant Messaging Server Host and Domain Name	Host name on which Instant Messaging is installed and the domain name associated with the host. For example: Host Name: `instantmessaging.siroe.com` Domain Name: `siroe.com` (Solaris Only) If you are configuring High Availability for Instant Messaging, use the logical host name.	
Multiplexor Port Number (Multiplexor Configuration Only)	The port number on which the Instant Messaging Server listens for incoming requests from Instant Messenger clients. Default: 5222	
Instant Messaging Server Port Number(Multiplexed XMPP Port)	The port number on which the Instant Messaging Server listens for incoming requests from the multiplexor. Default: 45222	
Instant Messaging Server-to-Server Port Number (XMPP Server Port)	The port number on which the Instant Messaging server listens for incoming requests from other Instant Messaging servers. In addition, if no multiplexor is installed, the server listens for incoming requests from Instant Messenger clients on this port. The port is also used by components such as HTTPBIND gateway, Calendar Agent, and the SMS gateway for creating a component session with the server. Default: 5269	
Gateway Connector Port	The port number on which you communicate with external Facebook instant messaging users. Default: 55222	
Disable Server	Select this option if the instance you installed acts as a multiplexor and not a server. If you select this option, you must provide a value for Remote Instant Messaging Server Host Name.	

Remote Instant Messaging Server Host Name (Multiplexor Configuration Only)	The host name of the Instant Messaging Server for which this multiplexor routes messages. If the multiplexor and server are installed on the same host, use localhost. (Solaris OS Only) If you will be configuring High Availability for Instant Messaging, use the logical host name. Dependencies: The Disable Server parameter must be selected, that is, server functionality is disabled.	
Sun Java System Access Manager Configuration	If the `configure` utility detects that you have installed the Access Manager SDK, you are prompted to provide answers for the following questions related to Access Manager: Are you planning to leverage an Access Manager deployment for SSO? If you enter yes, `configure` sets the `iim_server.usesso` parameter in the `iim.conf.xml` file to 1. See General Instant Messaging Server Configuration Properties for more information about this parameter. Are you planning to leverage an Access Manager deployment for Policy? If you choose yes, you need to run the `imadmin assign_services` command when you are finished running the `configure` utility. See To Configure Instant Messaging After Installation and Assigning Instant Messaging and Presence Services to End Users for more instructions on using the `imadmin assign_services` command. If you choose no, you will be asked whether you want to store user, conference room, and news channel properties in a file or in LDAP. In addition, if Instant Messaging will use Access Manager policies in an Application Server deployment, you need to restart the Application Server when you finish configuring Instant Messaging. If you do not restart the Application Server, Instant Messaging services do not appear in the Access Manager console (amconsole).	
LDAP Host Name	In a deployment with an LDAP server, the host name of the LDAP server that contains user and group information for Instant Messaging. For example, `directory.siroe.com`. Dependencies: LDAP server such as Oracle Directory Server Enterprise Edition (formerly Sun Java System Directory Server Enterprise Edition).	
LDAP Port Number	In a deployment with an LDAP server, the port number on which the directory server listens for incoming requests. For example, 389. Dependencies: LDAP server such as Oracle Directory Server Enterprise Edition (formerly Sun Java System Directory Server Enterprise Edition).	
Base DN	In a deployment with an LDAP server, the base distinguished name in the directory tree that contains user and group information for Instant Messaging. For example, `o=example.com`. Dependencies: LDAP server such as Oracle Directory Server Enterprise Edition (formerly Sun Java System Directory Server Enterprise Edition).	
Bind DN	In a deployment with Sun Java System Access Manager, during installation, you must provide the Directory Manager Bind DN and password. This Bind DN is used to update the directory schema with the Instant Messaging and presence service templates and attributes only. This requires Directory Manager access. The Directory Manager Bind DN and password are not saved or used beyond installation and initial configuration. In a deployment with an LDAP server but without Access Manager, Instant Messaging uses this Bind DN to search users and groups in the directory. Leave this blank if the directory can be searched anonymously. You can change the bind credentials later if required as described in To Configure Bind Credentials for the Instant Messaging Server.. Dependencies: LDAP server such as Oracle Directory Server Enterprise Edition (formerly Sun Java System Directory Server Enterprise Edition).	
Bind Password	In a deployment with an LDAP server, the Bind DN password.	

Enable Email Integration, Enable Email Archiving (Optional)	If selected, enables Instant Messaging email archiving. Dependencies: SMTP Server such as Oracle Communications Messaging Server	
SMTP Server Host Name (Optional)	The host name of the SMTP server used to send email notification of messages to offline users. For example, `mail.siroe.com`. If the SMTP server does not use port 25, specify the port along with the host name. For example, if the SMTP server uses port 1025, then use `mail.siroe.com:1025`. Dependencies: SMTP server such as Oracle Communications Messaging Server.	
Calendar Server and Calendar Agent Configuration	The `configure` utility asks if you want to enable the Calendar agent. If you choose to enable the Calendar agent, you need to provide the following information: From the configurator tool panel: Choose to Enable Calendar Agent by typing yes Choose to Enable local component by typing yes Specify XMPP server host name Specify XMPP server port Specify Notification Server host name Specify Notification Server port Specify Calendar alarm URL If you choose not to enable the Calendar agent, you can manually configure the Calendar agent later. More information about the Calendar agent configuration parameters and acceptable values is described in Using Calendar Pop-up Reminders.	
Database, Logs, and Runtime Files Pathname	The location where the runtime files, database, and logs are stored. Also referred to as *im-runtime-base*. Runtime files are read, created, and modified by the server during its normal operations. Some examples include log files,and persistent state information tied to client actions such as roster information, conferences, and so on. If you are configuring High Availability (HA) for Instant Messaging, this path must be globally available. See Configuring Instant Messaging 9 for High Availability for more information about HA. The `configure` utility appends a directory (`/default`) to the path you provide for the runtime files. The name of this directory is the instance to which the runtime files apply. Later, you can create multiple instances of Instant Messaging by creating additional instance directories with different names (for example `/secure`) and copying over files from the `/default` instance runtime directory. See Creating Multiple Instances from a Single Instant Messaging Installation . If you accept the following defaults when you run `configure`: Red Hat Linux and Oracle Linux: `/var/opt/sun/im/` Solaris OS: `/var/opt/sun/comms/im` The configure utility creates the following directories for the runtime files: Red Hat Linux and Oracle Linux: `/var/opt/sun/im/default` Solaris OS: `/var/opt/sun/comms/im/default` In addition, the following two subdirectories are created under the runtime directory. The database directory (*im-db-base*) defaults are as follows: Red Hat Linux and Oracle Linux: `/var/opt/sun/im/default/db` Solaris OS: `/var/opt/sun/comms/im/default/db` The log directory defaults are as follows: Red Hat Linux and Oracle Linux: `/var/opt/sun/im/default/log` Solaris OS: `/var/opt/sun/comms/im/default/log`	

XMPP/HTTP Gateway Deployment	Determines whether or not the XMPP/HTTP gateway is deployed. If you choose to deploy the gateway, the `configure` utility creates a default gateway configuration file (`httpbind.conf`) in the default Instant Messaging server instance's *im-cfg-base* directory if one does not already exist. If `httpbind.conf` already exists, the `configure` utility does not alter or overwrite the file. Default: true (gateway is deployed) **Note** If you are configuring the Instant Messaging Server to support Convergence, do not enable the XMPP/HTTP Gateway Deployment here. Set this value to `false`. The XMPP/HTTP Gateway is deployed through the Convergence server. Its value is set when you configure Convergence.	
XMPP/HTTP Gateway URI	Defines the URI for the HTTP component of the XMPP/HTTP gateway. Default: `http://`*im-svr-host*`:80/httpbind`	
SMS Gateway	Enables the Instant Messaging server to deliver chat messages and alerts in the form of SMS to the Instant Messaging users who are offline. From the configurator tool panel: 1. Choose the Enable SMS Gateway option by typing yes. 2. Choose the Enable Local Component option by typing yes.	
IMPS Gateway	Enables the Instant Messaging and presence service in mobile devices. When configuring the Instant Messaging server, set the Deploy IM IMPS Gateway option to yes.	
AOL/MSN/Yahoo Gateways	Enables you to communicate with external IM servers. From the configurator panel, choose: 1. Enable Yahoo Gateway: true if you want to enable the gateway on the server. 2. Enable Local Component: true to enable the gateway on the local machine (default port and host name is used). Entering false will allow you to enable it on another machine (need to enter the machine's port and host name).	
Facebook Gateway	Enables you to communicate with Facebook IM servers. From the configurator panel, choose: 1. Enable Facebook Gateway: true if you want to enable the gateway on the server. You then type the Facebook API Key, Facebook API Secret, and Gateway Connectors (*host*:*port*).	
`iim_server.useport`	Enables S2S (Static pool,Shoal,Federation) communication either through federation, or pool communication through the `add-coserver` option. To configure: 1. Install and configure Instant Messaging. 2. Enable `iim_server.useport` by setting true to enable S2S communication. 3. Start the servers.	

TLS-based Configuration	From the configurator panel, choose: Enable SSL [yes]: Server keystore file: Server password file: If you opt for Enable SSL, the respective server configuration is mandatorily set to TLS for all communication. To disable mandating TLS, set `iim_server.requiressl` to false by using the `imconfutil` command.	

Configuration Worksheets - Messaging Server

Messaging Server Worksheet
Version 7 Update 5

Print and fill out this worksheet to use when responding to the Messaging Server `configure` script configuration options.

Option	Default Value	Fill in Your Site's Value (to Respond to the Script)
Path for Data and Configuration Files	`/var/`*msg-svr-base*	
User Name for Server Processes	`mailsrv`	
Group Name for Server Processes	`mail` (if the User Name for Server Processes already exists, then the primary group for that User Name is used, and no option will be prompted for)	
Fully Qualified Host Name (FQHN)	*your host.your domain* For example: `myhost.west.sesta.com`	
Default mail domain name	*your domain*	
Hostname for LDAP Directory Server	blank (indicating the local hostname)	
LDAP administrator login	cn=Directory Manager	
LDAP administrator password	-	
Mail address for postmaster notices	`admin@`*your domain*	
Password for server administration	-	
Mail relay IP addresses (systems permitted to relay mail without authentication)	NA	

Configuring a Communications Suite Host to be Multi-Homed

Configuring an Oracle Communications Unified Communications Suite Host to Be Multi-Homed

When you install multiple instances of the same Communications Suite product on the same host, the different product instances use the same ports. If you run both instances of the product simultaneously, the ports conflict.

This information describes how to use a different IP address for each installation and configure the host to be multi-homed (accepting multiple IP addresses).

Topics:

- To Change the IP Address for Each Installation
- To Configure the Host to Be Multi-Homed
- To Configure Multiple Addresses Per Interface
- Multi-Home Example

To Change the IP Address for Each Installation

- Run the `ha_ip_config` utility. You must configure each installation to use a specific IP address, since the out-of-the-box default is to respond to any IP address (`INADDR_ANY`).

> **Note**
> The ENS service needs a separate step to change the IP address it responds to. A workaround is to either disable the ENS server for one of the installations (Unified Configuration uses `ens.enable`, legacy configuration uses `local.ens.enable`), or to change the port used by the ENS server. If you don't do this, one of the ENS servers does not start up. This may not be a huge issue at this time because the other ENS server handles the requests.

To Configure the Host to Be Multi-Homed

To configure a host to multi-homed, refer to http://docs.oracle.com/cd/E19082-01/819-3000/ipconfig-22a/index.html.

For more information, see the Solaris 2 FAQ.

To Configure Multiple Addresses Per Interface

To configure multiple addresses per interface, refer to http://docs.oracle.com/cd/E19082-01/819-3000/ipconfig-22a/index.html.

Multi-Home Example

The following example creates a multi-home on the host `myhost`.

1. Create the new interface.

```
# ifconfig -a
lo0: flags=2001000849<UP,LOOPBACK,RUNNING,MULTICAST,IPv4,VIRTUAL>
mtu 8232 index 1
        inet 127.0.0.1 netmask ff000000
e1000g0: flags=1000843<UP,BROADCAST,RUNNING,MULTICAST,IPv4> mtu
1500 index 2
        inet 10.1.110.114 netmask ffffff80 broadcast 10.1.110.127
        ether 0:c:f1:8e:fb:4
# ifconfig  e1000g0:1 plumb
# ifconfig -a
lo0: flags=2001000849<UP,LOOPBACK,RUNNING,MULTICAST,IPv4,VIRTUAL>
mtu 8232 index 1
        inet 127.0.0.1 netmask ff000000
e1000g0: flags=1000843<UP,BROADCAST,RUNNING,MULTICAST,IPv4> mtu
1500 index 2
        inet 10.1.110.114 netmask ffffff80 broadcast 10.1.110.127
        ether 0:c:f1:8e:fb:4
e1000g0:1: flags=1000842<BROADCAST,RUNNING,MULTICAST,IPv4> mtu 1500
index 2
        inet 0.0.0.0 netmask 0
# ifconfig e1000g0:1 10.1.110.16 up
```

2. Set the IP address for the Messaging Server on the alternate root (on `/var/tmp/altroot/opt/SUNWmsg2` in the following example):

```
# cd /var/tmp/altroot/opt/SUNWmsg2
# sbin/ha_ip_config

Please specify the IP address assigned to the HA logical host name.
Use
dotted decimal form, a.b.c.d

Logical IP address: 10.1.110.16

Please specify the path to the top level directory in which iMS is
installed.

iMS server root: /var/tmp/altroot/opt/SUNWmsg2

The iMS server root directory does not contain any slapd-*
subdirectories.
Skipping configuration of LDAP servers.

        Logical IP address: 10.1.110.16
        iMS server root: /var/tmp/altroot/opt/SUNWmsg2

Do you wish to change any of the above choices (yes/no) [no]?

Updating the file
/var/tmp/altroot/opt/SUNWmsg2/config/dispatcher.cnf
Updating the file
/var/tmp/altroot/opt/SUNWmsg2/config/job_controller.cnf
Setting the service.listenaddr configutil parameter
Setting the service.http.smtphost configutil parameter
Setting the local.watcher.enable configutil parameter
Setting the local.autorestart configutil parameter
Setting the metermaid.config.listenaddr configutil parameters
Setting the metermaid.config.serverhost configutil parameters
Setting the local.ens.port configutil parameter
Configuration successfully updated
```

3. Do the same for the Messaging Server on the default root.

```
# cd /opt/SUNWmsg
# sbin/ha_ip_config

Please specify the IP address assigned to the HA logical host name.
Use
dotted decimal form, a.b.c.d

Logical IP address: 10.1.110.114

Please specify the path to the top level directory in which iMS is
installed.

iMS server root: /opt/SUNWmsg

The iMS server root directory does not contain any slapd-*
subdirectories.
Skipping configuration of LDAP servers.

        Logical IP address: 10.1.110.114
        iMS server root: /opt/SUNWmsg

Do you wish to change any of the above choices (yes/no) [no]?

Updating the file /opt/SUNWmsg/config/dispatcher.cnf
Updating the file /opt/SUNWmsg/config/job_controller.cnf
Setting the service.listenaddr configutil parameter
Setting the service.http.smtphost configutil parameter
Setting the local.watcher.enable configutil parameter
Setting the local.autorestart configutil parameter
Setting the metermaid.config.listenaddr configutil parameters
Setting the metermaid.config.serverhost configutil parameters
Setting the local.ens.port configutil parameter
Configuration successfully updated
```

4. Disable the ENS server on one of the installation by setting `local.ens.enable` to `0`:

```
sbin/configutil -o local.ens.enable -v 0
```

5. Configure the netmask and broadcast on the new IP address:

```
# ifconfig e1000g0:1 down
# ifconfig e1000g0:1 netmask 0xffffff80
# ifconfig e1000g0:1
e1000g0:1: flags=1000842<BROADCAST,RUNNING,MULTICAST,IPv4> mtu 1500
index 2
        inet 10.1.110.16 netmask ffffff80 broadcast 10.255.255.255
# ifconfig e1000g0:1 broadcast 10.1.110.127
# ifconfig -a
lo0: flags=2001000849<UP,LOOPBACK,RUNNING,MULTICAST,IPv4,VIRTUAL>
mtu 8232 index 1
        inet 127.0.0.1 netmask ff000000
e1000g0: flags=1000843<UP,BROADCAST,RUNNING,MULTICAST,IPv4> mtu
1500 index 2
        inet 10.1.110.114 netmask ffffff80 broadcast 10.1.110.127
        ether 0:c:f1:8e:fb:4
e1000g0:1: flags=1000842<BROADCAST,RUNNING,MULTICAST,IPv4> mtu 1500
index 2
        inet 10.1.110.16 netmask ffffff80 broadcast 10.1.110.127
# ifconfig e1000g0:1 up
```

6. Edit `/etc/hosts` to add the new IP address 10.1.110.16 to it:

```
# cat /etc/hosts
127.0.0.1       localhost
10.1.110.114    myhost.west.sesta.com myhost        loghost
10.1.110.4      elegit.west.sesta.com
# multi-home - second IP address on ethernet port
10.1.110.16     myhost2.west.sesta.com myhost2
```

Configuring Individual Ports

Configuring Individual Ports for Multiple Installations of the Same Product on One Host

When multiple instances of the same Communications Suite product are installed on one host, they are initially configured to use the same ports. If you run both instances of the product simultaneously, the ports conflict.

To avoid conflicts, configure the ports for additional instances of the product so that they differ. (The initial instance can retain the original port settings as long as other instances are modified so that port numbers aren't re-used.)

For example, for Messaging Server, change the ports for the following processes:

- SMTP
- IMAP
- IMAP SSL
- POP
- POP over SSL
- HTTPD
- ENS
- job_controller
- watcher

The SSL versions of the ports must also be unique between instances. There may be additional ports to reconfigure that are not listed here, such as SMTP SUBMIT.

To look for MTA-related processes, you can use the following techniques.

- In Unified Configuration:

```
./msconfig
msconfig > show *port*
```

- In legacy configuation:
  - View the `dispatcher.cnf` file.
  - `store` and `mshttpd` ports can be found by using the `configutil` command.
  - MMP ports are also found by using the `configutil` command or through its configuration files.

In addition, you can identify ports by taking these actions:

- See Default Port Numbers.
- See Configuring POP, IMAP, and HTTP Services.
- You can `grep` the `masterconfig` file (`lib/config.meta`) for the word "port".
- Query the following options as shown in the following table:
  Port Options

Service	Unified Configuration Option	Legacy Configuration configutil Option	Default Value
watcher	`watcher.port`	`local.watcher.port`	49994
metermaid	`metermaid.port`	`metermaid.config.port`	63837
IMAP	`imap.port`	`service.imap.port`	143
IMAP SSL	`imap.sslport`	`service.imap.sslport`	993
POP	`pop.port`	`service.pop.port`	110
POP over SSL	`pop.sslport`	`service.pop.sslport`	995
Webmail	`http.port`	`service.http.port`	80
Webmail SSL	`http.sslport`	`service.http.sslport`	443
ens	`notifytarget:`*`name`*`.ensport`	`local.store.notifyplugin.ensport`	7997
jmq	`notifytarget:`*`name`*`.jmqport`	`local.store.notifyplugin.jmqport`	7676

Connector for Microsoft Outlook Installation Guide

Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite Installation Guide
Version 8

This information describes how to install the Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite.

Topic:

- Installing the Desktop Deployment Toolkit

For upgrade information, see the Connector for Microsoft Outlook Upgrade Guide, Installing and Configuring the Software on Your Desktop, and CommSuite:Understanding Connector for Microsoft Outlook Pre-Installation.

Installing Communications Suite on Solaris Zones

Installing Oracle Communications Unified Communications Suite on Solaris Zones
Version 7 Update 4

This information explains how to install Communications Suite on Solaris OS 10 Zones. For an overview of Solaris OS 10 with Communications Suite, see Overview of Solaris Zones.

Topics:

- Installing on Solaris OS 10 Zones: Best Practices
- Installing into a Non-Global Whole Root Zone
- Installing into a Non-Global Sparse Root Zone
- Guidelines for Using SunCluster HA Packages in a Non-Global Zone

Installing on Solaris OS 10 Zones: Best Practices

You can install Communications Suite components in the global zone, whole root non-global zones, and sparse non-global zones. Follow these guidelines:

- Treat the global zone as an "administration zone." Install shared components and OS patches in the global zone that are to be shared among all zones. However, do not install and run products from the global zone.
- Use whole root non-global zones to run Communications Suite products. Do not use the global zone or sparse zones. A whole root zone can have versions that are different from other whole root zones, thus giving it a measure of being "self-contained".
- There is one exception to the above two guidelines: install HA agents (MS_SCHA, CS_SCHA, IM_SCHA) in the global zone only. The Comms Installer automatically propagates HA agents to all non-global zones (i.e. the -G switch to pkgadd is not used for HA agents).

However be aware of the following aspects of zones:

- You can have different shared component versions in the whole root non-global zone, but it isn't entirely insulated. If you do a packaging or patching operation in the global zone for a shared component, that operation is also attempted in the whole root zone. Thus, to truly have different shared component versions, use an alternate root.
- To avoid affecting whole root zones you can attempt to never install and patch shared components in the global zone. However, it might not be realistic to never have to install or patch a shared component in the global zone. For example, NSS is a shared component, but it is part of Solaris OS. So to expect to never install and patch NSS in the global zone seems unrealistic, especially given it is a security component.
- Although it isn't a recommended best practice, you can use Communications Suite products in sparse non-global zones. Do note that shared components cannot be installed into the default root because many of them install into the read-only shared file system (`/usr`). Thus, you must run the installer in the global zone to install shared components into the default root. Prepend your selection with **~** in the global zone to install only the dependencies (that is, shared components). You do not have to install in the global zone first before installing in the sparse zone. The installer allows you to continue even when you do not install all the dependencies. However, upgrading the shared components in the global zone affects the sparse non-global zones, thus requiring downtime for all affected zones simultaneously.

> **Note**
> For Messaging Server, starting with Version 7 Update 5, sparse zone support is deprecated and may be removed in a future release.

Installing into a Non-Global Whole Root Zone

The non-global whole root zone scenario is the equivalent of installing Messaging Server on a single box with no zones. Simply install Communications Suite as you normally would.

> **Caution**
> Any operations performed in the global zone (such as installations, uninstallations, and patching) affect the whole root zones.

Installing into a Non-Global Sparse Root Zone

Although it isn't a recommended best practice, you can use Communications Suite Products in a non-global sparse root zone. To install Communications Suite in a non-global sparse root zone, you first need to install/upgrade the applicable OS patches and shared components in the global zone. You are unable to do so in the sparse root zone, because the `/usr` directory (where the shared components reside) is a read-only directory in the sparse root zone.

1. Follow pre-installation requirements as described in Installation Overview.
2. Verify that you are about to install the shared components and OS patches in the global zone and not the sparse root zone. To verify you are in the global zone, run `zonename`. The output should be `global`.
3. Run the installer in the global zone and only install/upgrade the OS patches and the Shared Components. Do not install Communications Suite components in the global zone. To do this, add a ~ (tilde) to the component number you want to install in the sparse zone.
   For example, if you plan to install Messaging Server in the sparse zone, you select ~1 during the global zone installation. The installer will know to only install dependencies and not the product itself.
4. Once you have the shared components and OS patches installed, install Communications Suite components in the sparse root zone.

Guidelines for Using SunCluster HA Packages in a Non-Global Zone

The HA agents (MS_SCHA, IM_SCHA, and CS_SCHA) should be installed in the global zone only. The Communications Suite Installer will propagate the installation of the HA agent to all non-global zones. This is required since the version of the HA agent must be identical on all zones.

Take the following steps to install the Communications Suite 7 Update 1 Sun Cluster HA agent in non-global zones:

1. Run the Communications Suite command in the global zone only:

   ```
   # commpkg install
   ```

   This command installs the Sun Cluster HA Agent package on global zone and all non-global zones.

2. If you have sparse zones that need the HA agent, run the Sun Cluster HA Agent initial configuration command in the global zone:

```
# <scha_base>/bin/init-config
```

3. In the whole root zones where you are going to use the HA agent, run the Sun Cluster HA Agent initial configuration command in the global zone:

```
# <scha_base>/bin/init-config
```

Installing Java For Communications Suite

Installing Java for Communications Suite 7 Update 4

Java is no longer bundled with the Oracle Communications Unified Communications Suite installer. The 32-bit and 64-bit JDKs require manual installation. Install the JDKs, rather than the JRE, because the JDKs include debugging tools such as `jstack` and the Delegated Administrator requires the JAR utility.

In the following, Solaris and Linux are treated separately:

- Downloading and Installing Java for Solaris
- Downloading and Installing Java for Linux

Downloading and Installing Java for Solaris

When you install Java for Solaris:

- Install both the 32-bit and 64-bit versions of Java.
  64-bit Java is treated as an add-on to 32-bit Java and must be installed after it.
- Install from tar.Z files. The tar.Z files contain SVR4 packages, and only the Java versions in SVR4 packages are covered by OS-recommended patch sets.

Some Communications Suite products support only Java 6, others support both Java 6 and Java 7. The following table lists Communications Suite products and the Java versions to use with them. Note that GlassFish 2.*x* does not support Java 7 and, as a result, any Communications Suite product with a dependency on it requires Java 6.

Product	Java version	Comments
Indexing and Search Service (server)	Java 7	Java 7 is preferable; if you use Java 6, you will need to do an index conversion when you upgrade from Java 6 to Java 7.
Indexing and Search Service (web)	Java 6	The web version of Indexing and Search Service is a GlassFish application; Java 6 is required.
Convergence	Java 6	Convergence is a GlassFish application; Java 6 is required.
Delegated Administrator	Java 6	Delegated Administrator is a GlassFish application; Java 6 is required.
Instant Messaging (server)	Java 7	No comments
Instant Messaging (web)	Java 6	The web version of Indexing and Search Service is a GlassFish application; Java 6 is required.
Calendar Server	Java 6	Calender Server is a GlassFish application; Java 6 is required.

There may be cases where two products are on the same machine and require different versions of Java. You can safely download and install both versions on the same machine.

Downloading Java for Solaris

To download Java for Solaris:

1. Determine the version of Java to install (see the table of Communications Suite products and Java versions under Downloading and Installing Java for Solaris.
2. Navigate to Oracle Java SE Downloads.
3. Click the Download button for the latest release of the JDK for the Java version you selected at Step 1.
   This displays the download page and a license agreement for the release you selected.
4. Accept the license agreement.
5. Download the SVR4-package tar.Z files for 32-bit and 64-bit installations.

Installing Java for Solaris

The following treats installing Java 6 and Java 7 separately:

- Installing Java 6 for Solaris
- Installing Java 7 for Solaris

Installing Java 6 for Solaris

When you install Java:

- Install the JDKs, rather than the JRE, because the JDKs include debugging tools such as `jstack` and the Delegated Administrator requires the JAR utility.
- Install both 32-bit and 64-bit Java.
- Install 32-bit Java before 64-bit Java.
- If two Communications Suite products run on the same machine and require different versions of the JDK, install both versions.

Examples in the steps that follow are for Java 6u45 for SPARC systems, the latest version of Java 6 at the time of this writing.

To install Java 6 for Solaris:

1. Uncompress, and untar the 32- and 64-bit Java tar.Z files.
   For example for SPARC systems:

   ```
   zcat jdk-6u45-solaris-sparc.tar.Z | tar xf -
   zcat jdk-6u45-solaris-sparcv9.tar.Z | tar xf -
   ```

2. Become `root`.
3. If there is an earlier SVR4 package version of Java 6 `installed`, uninstall it.
4. Install the package files, first the file for 32-bit Java, then the file for 64-bit Java.
   For example:

   ```
   pkgadd -d . SUNWj6rt SUNWj6dev SUNWj6cfg SUNWj6man
   pkgadd -d . SUNWj6rtx SUNWj6dvx
   ```

5. Verify that Java has been set up correctly.

   ```
   /usr/jdk/jdk1.6.0_45/bin/java -d64 -version
   ```

   The shell returns the current Java version. It should match the version you have just installed. For example:

```
java version "1.6.0_45"
Java(TM) SE Runtime Environment (build 1.6.0_45...)
...
```

Installing Java 7 for Solaris

When you install Java:

- Install the JDKs, rather than the JRE, because the JDKs include debugging tools such as `jstack` and the Delegated Administrator requires the JAR utility.
- Install both 32-bit and 64-bit Java.
- Install 32-bit Java before 64-bit Java.
- If two Communications Suite products run on the same machine and require different versions of the JDK, install both versions.

Examples in the steps that follow are for Java 7u21, the latest version of Java 7 at the time of this writing.

To install Java 7 for Solaris:

1. Uncompress, and untar the downloaded 32- and 64-bit Java tar.Z files.
   For example:

   ```
   zcat jdk-7u21-solaris-sparc.tar.Z | tar xf -
   zcat jdk-7u21-solaris-sparcv9.tar.Z | tar xf -
   ```

2. Become root.
3. If there is an earlier version of Java 7 installed, uninstall it.
4. Install the package files, first the file for 32-bit Java, then the file for 64-bit Java.
   For example:

   ```
   pkgadd -d . SUNWj7rt SUNWj7dev SUNWj7cfg SUNWj7man
   pkgadd -d . SUNWj7rtx SUNWj7dvx
   ```

5. Verify that Java has been set up correctly.

   ```
   /usr/jdk/jdk1.7.0_21/bin/java -d64 -version
   ```

   The shell returns the current Java version. It should match the version you have just installed. For example:

   ```
   java version "1.7.0_21"
   Java(TM) SE Runtime Environment (build 1.7.0_21...)
   ...
   ```

Downloading and Installing Java for Linux

When you install Java for Linux:

- The 32-bit and 64-bit versions of Java are separate and independent; in contrast to Solaris, Linux allows you to install 64-bit Java without installing 32-bit Java.
- Install from either a tar.gz archive file (Java 7) or a .bin (not rpm.bin) self-extracting binary (Java 6).

Do not install from rpm.bin or .bin files, which are for RPM-based installation. RPM-based installation does not allow you to install multiple versions of Java; installations from the tar.gz and .bin files do.

Some Communications Suite products support only Java 6, others support both Java 6 and Java 7. The following table lists Communications Suite products and the Java versions to use with them. Note that:

- For Java 6, always install the 32-bit version of Java.
- For Java 7, always install the 64-bit version of Java.
- GlassFish 2.*x* supports neither Java 7 nor 64-bit Java.
  As a result, for Linux, any Communications Suite product with a dependency on GlassFish 2.x requires 32-bit Java 6.

Product	Java version	Comments
Indexing and Search Service (server)	Java 7 (64-bit)	Java 7 is preferable; if you use Java 6, you will need to do an index conversion when you upgrade from Java 6 to Java 7.
Indexing and Search Service (web)	Java 6 (32-bit)	The web version of Indexing and Search Service is a GlassFish application; 32-bit Java 6 is required.
Convergence	Java 6 (32-bit)	Convergence is a GlassFish application; 32-bit Java 6 is required.
Delegated Administrator	Java 6 (32-bit)	Delegated Administrator is a GlassFish application; 32-bit Java 6 is required.
Instant Messaging (server)	Java 7 (64-bit)	No comments
Instant Messaging (web)	Java 6 (32-bit)	The web version of Instant Messaging is a GlassFish application; 32-bit Java 6 is required.
Calendar Server	Java 6 (32-bit)	Calender Server is a GlassFish application; 32-bit Java 6 is required.

There may be cases where two products are installed on the same machine and require different versions of Java. You can safely download and install both versions on the same machine.

Downloading Java for Linux

To download Java for Linux:

1. Determine the version of Java to install (see the table of Communications Suite products and Linux versions under Downloading and Installing Java for Linux
2. Navigate to Oracle Java SE Downloads.
3. Click the Download button for the latest release of the Java version you decided on at Step 1. This displays the download page and a license agreement for the release you selected.
4. Accept the license agreement.
5. Download the binaries.

Installing Java for Linux

The following treats installing Java 6 and Java 7 separately:

- Installing Java 6 for Linux
- Installing Java 7 for Linux

Installing Java 6 for Linux

When you install Java:

- Install the JDKs, rather than the JRE, because the JDKs include debugging tools such as `jstack` and the Delegated Administrator requires the JAR utility.
- If two Communications Suite products run on the same machine and require different versions of the JDK, install both versions.
- Install Java in `/usr/java`.

As part of the JDK installation, reset the symlink `/usr/java/latest` to point to the new JDK version.

Examples in the steps that follow are for Java 6u45, the latest version of Java 6 at the time of this writing.

To install Java 6 for Linux:

1. Become root
2. Extract Java in `/usr/java`.
   For example:

   ```
   chmod +x jdk-6u45-linux-i586.bin
   ./jdk-6u45-linux-i586.bin
   ```

3. Remove any earlier version of Java pointed to by the `latest` symlink and update the symlink to point to the new version of Java.
   For example:

   ```
   rm latest
   ln -s jdk1.6.0_45 latest
   ```

4. Verify that Java has been set up correctly.

   ```
   /usr/java/jdk1.6.0_45/bin/java -version
   ```

   The shell returns the current Java version. It should match the version you have just installed. For example:

   ```
   java version "1.6.0_45"
   Java(TM) SE Runtime Environment (build 1.6.0_45...)
   ...
   ```

Installing Java 7 for Linux

When you install Java:

- Install the JDKs, rather than the JRE, because the JDKs include debugging tools such as `jstack` and the Delegated Administrator requires the JAR utility.
- If two Communications Suite products run on the same machine and require different versions of the JDK, install both versions.
- Install Java in `/usr/java`.

Examples in the steps that follow are for Java 7u21, the latest version of Java 7 at the time of this writing.

1. Uncompress and open the downloaded tar.gz file in `/usr/java`.
   For example:

```
tar zxvf jdk-7u21-linux-x64.tar.gz
```

2. Remove any earlier version of Java pointed to by the `latest` symlink and update the symlink to point to the new version of Java.
   For example:

```
rm latest
ln -s jdk1.7.0_21 latest
```

3. Verify that Java has been set up correctly.

```
/usr/java/jdk1.7.0_21/bin/java -d64 -version
```

   The shell returns the current Java version. It should match the version you have just installed. For example:

```
java version "jdk1.7.0_21"
Java(TM) SE Runtime Environment (build 1.7.0_21...)
...
```

Installation Worksheets - Directory Server

Directory Server Settings Worksheet

Print and fill out this worksheet to use when responding to the Directory Server configuration options in the various product initial configurators.

Option	Default Value	Fill in Your Site's Value (to Respond to the Installer)
Instance Directory	`/var/opt/SUNWdsee/dsins1`	
Directory Instance Port	389	
Directory Instance SSL Port	636	
Directory Manager DN	`cn=Directory Manager`	
Directory Manager Password	NA	
Root Suffix	NA	

Installation Worksheets - Oracle iPlanet Web Server

Oracle iPlanet Web Server Settings Worksheet

Print and fill out this worksheet to use when responding to the Common and Web Server configuration options in the various product initial configurators.

Oracle iPlanet Web Server Settings

Option	Default Value	Fill in Your Site's Value (to Respond to the Installer)
Common Server Settings		
Host Name	*your host name*	
DNS Domain Name	*your DNS domain*	
Host IP address	*your host IP address*	**Verify correct address**
System user	`root`	
System group	`root`	
Web Server Settings		
Type of configuration	Configure Administration Instance as Server	
Start servers after system startup	Unchecked	
Server Host	*FDQN of your host*	
Admin Server SSL port	8989	
Admin Server HTTP port	8800	
Admin runtime user ID	`root`	
Web Server Name	*FDQN of your host*	
HTTP port	80	
Web Server runtime UNIX user ID	`webservd`	
Document root directory	`/var/opt/SUNWwbsvr7/https-`*hostname*`/docs`	

Installing Communications Suite in Silent Mode

Installing Oracle Communications Unified Communications Suite in Silent Mode
Version 7 Update 4

When you run the installer in *silent mode*, you are running a non-interactive session. The installation inputs are taken from the following sources:

- A silent installation file (also known as a state file)
- Command-line arguments
- Default settings

You can use silent mode to install multiple instances of the same software component and configuration without having to manually run an interactive installation for each instance.

Topics:

- To Run a Communications Suite Silent Installation
- About Upgrading Shared Components
- Silent Mode File Format

To Run a Communications Suite Silent Installation

1. Obtain the state file by one of the following two means.
   - Run an interactive installation session and use the state file that is created in the `/var/opt/CommsInstaller/logs/` directory. The state file name is similar to `silent_CommsInstaller_20070501135358`. A state file is automatically created for every run of the installation.
   - Create a silent state file without actually installing the software during the interactive session by using the `--dry-run` option, then modifying the state file. For example:

     ```
     # commpkg install --dry-run
     ```

2. Copy the state file to each host machine and edit the file as needed. See Silent Mode File Format.
3. Run the silent installation on each host.
   For example:

   ```
   # commpkg install --silent <Input File>
   ```

   where *Input File* is the path and name of the silent state file, for example `/var/opt/CommsInstaller/logs/silent_CommsInstaller_20070501135358`.
   For details about the `--silent` option, see the silent installation usage in commpkg install usage.

   > **Note**
   > Command-line arguments override the values and arguments in the state file.

About Upgrading Shared Components

By default, shared components that require user acceptance for upgrading are not upgraded when you

run a silent installation. The option to upgrade shared components in the silent state file is automatically disabled. That is, the option is set to `UPGRADESC=No`. This is true *even* if you explicitly asked to upgrade shared components when you ran the interactive installation that generated the silent state file. That is, you ran either `commpkg install --upgradeSC y` or you answered "yes" when prompted for each shared component that needed upgrading.

Disabling upgrading shared components in the silent state file is done because the other hosts on which you are propagating the installation might have different shared components installed, or different versions of the shared components. Therefore, it is safer to not upgrade the shared components by default.

You can upgrade shared components when you run a silent installation by performing either of the following actions:

- Use the `--upgradeSC y` option when you run the silent installation. (The command-line argument overrides the argument in the state file.)
- Edit the `UPGRADESC=No` option in the silent state file to: `UPGRADESC=Yes`.

Caution
If you do not upgrade shared components your installation might not work properly.

Silent Mode File Format

The silent mode file (also known as a state file) is formatted like a property file: blank lines are ignored, comment lines begin with a number sign (#) and properties are key/value pairs separated by an equals (=) sign. The following table shows which parameters you can change and provides examples:

Silent Mode File Parameters

Parameter	Description	Example
`VERB`	Indicates which function to perform. For a silent install, this is set to `install.`	`VERB=install`
`ALTDISTROPATH`	Indicates an alternate distro path	`ALTDISTROPATH=SunOS5.10_i86pc_DBG.OBJ/release`
`PKGOVERWRITE`	A boolean indicating whether to overwrite the existing installation packages. (See the --pkgOverwrite switch)	`PKGOVERWRITE=YES`
`INSTALLROOT`	Specifies installation root.	`INSTALLROOT=/opt/sun/comms`

ALTROOT	A boolean indicating whether this is an alternate root install.	ALTROOT=yes
EXCLUDEOS	Specifies to not upgrade operating system patches.	EXCLUDEOS=YES
EXCLUDESC	Specifies to exclude shared component patches	EXCLUDESC=no
COMPONENTS	A space separated list of mnemonics of the components to be installed. You can precede the mnemonic with a ~ to indicate that only the shared components for that product be installed.	to specify 64-bit Messaging Server: COMPONENTS=MS64
ACCEPTLICENSE	This option is no longer used	
UPGRADESC	Indicates whether all shared components should or should not be upgraded without prompting.	UPGRADESC=no
INSTALLNAME	The friendly name for the INSTALLROOT	INSTALLNAME=
COMPONENT_VERSIONS	unused	

To display a complete list of the product names (such as MS, MS64, CS) to use with the COMPONENTS property, run the commpkg info --listPackages command. This command displays the mnemonics for each product.

Sample Session - Communications Suite Install Using ALTROOT

Sample Session - Oracle Communications Unified Communications Suite Install Using ALTROOT Version 7 Update 4

This sample session shows an install and uninstall of Communications Suite 7 Update 4 by running the Communications Suite installer, `commpkg`, with the *ALTROOT* option. You can uninstall an *ALTROOT* by removing the entire *ALTROOT*.

Topics:

- Comments
- Summary of Commands Run
- Session

Comments

```
- IM9 says they now support altroot

(Carryover R7u1) Comments
- The /etc/softlist.xml file contains the "known" altroots to CI. It
  is not authoritative. The file is updated when CI finds changes on
  the system.
- When installing into an altroot, products are installed into the
altroot.
  OS patches are always installed into the default root (/).
  Some Shared components (SCs) are installed into the altroot and some
  are installed into the default root (/).
  MySQL is an example of a SC that is always installed into the default
  root.
- altroot install is available on solaris only, it uses the -R switch
  to pkgadd
- You must specify the altroot to "commpkg uninstall". The altroot is
  an optional 3rd argument to the commpkg command.
- Another way to uninstall an altroot, is to simply wipe out the
  entire altroot (with rm -r). The next time you run "commpkg info"
  it will fix up /etc/softlist.xml
- Only MS has been tested to use the SCs in the altroot location. Most
  other products have not done this testing, and thus probably may use
  the SC in the default altroot, and not the one in the altroot.
```

Summary of Commands Run

```
943  uname -a
  944  ./commpkg info
  945  cat /etc/softlist.xml
  946  ./commpkg install /opt/altroot
  947  cat
/opt/altroot/var/opt/CommsInstaller/logs/undoCommsInstall_20130507181559
  948  cat
/opt/altroot/var/opt/CommsInstaller/logs/silent_CommsInstaller_201305071815
949  cat
/opt/altroot/var/opt/CommsInstaller/logs/CommsInstaller_20130507181559.log
950  ./commpkg info
  951  ./commpkg info --verbose
  952  ./commpkg uninstall /opt/altroot
  953  cat
/opt/altroot/var/opt/CommsInstaller/logs/silent_CommsInstaller_201305071819
954  cat
/opt/altroot/var/opt/CommsInstaller/logs/CommsInstaller_20130507181939.log
955  ./commpkg info --verbose
  956  cat /etc/softlist.xml
  957  ls /opt/altroot
  958  ls -l /opt/altroot
  959  \rm -rf /opt/altroot
  960  ./commpkg info
  961  cat /etc/softlist.xml
```

Session

```
[943 Tue May 07 18:14:52 root@host1% /home/user/wspace/releases/ci74# ]
# uname -a
SunOS host1 5.10 Generic_147440-12 sun4v sparc sun4v
[944 Tue May 07 18:15:22 root@host1% /home/user/wspace/releases/ci74# ]
# ./commpkg info
-- LOGFILE: /tmp/CommsInstaller_20130507181525.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: It is highly recommended that you apply the
          latest OS Recommended Patch Cluster. commpkg will
          not do this automatically.
ALTROOT: /
  NAME: ""

[945 Tue May 07 18:15:33 root@host1% /home/user/wspace/releases/ci74# ]
# cat /etc/softlist.xml
<?xml version="1.0" encoding="utf-8"?>
<!-- Do not edit! This file is automatically generated. -->
```

```
<!-- Last Update: Wed Apr 24 15:54:57 PDT 2013 -->
<!-- By:
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74
./commpkg -->

<multi-inst-list>
  <install name="" root="/" suite="comms" />
</multi-inst-list>
[946 Tue May 07 18:15:41 root@host1% /home/user/wspace/releases/ci74# ]
# ./commpkg install /opt/altroot
-- LOGFILE: /tmp/CommsInstaller_20130507181559.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013

Welcome to the Oracle Communications Unified Communications Suite
Product Installer
This program will install selected components of the Communications
Suite
on your computer. Do note that the installer lays down the
bits, but does not do configuration. Separate configuration
steps for each individual product will be required.

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=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
INFO: altroot mode is activated.
-- Creating /opt/altroot
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: You must apply the latest OS Recommended Patchset
          Some products will not work properly without it
Do you want to continue ? [no] : yes
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Product Selection:

Shared Components (not shown) will be installed as required.
  you will be prompted later if Shared Components need to be upgraded.
OS patches (not shown) will be installed as required.

Communication Products:

    Item  Description
    ----  -----------
       1  Messaging Server (64bit) 7u5 (7.5-28.21)
       2  Comms DSsetup 6.4 (6.4-24.03)
       3  Calendar Server 7.0.3.10.0
       4  Instant Messaging 9.0.0.3.0
       5  Convergence 2 (2.0-6.01)
       6  Indexing and Search Service 1.0.4.16.0
       7  Comms Delegated Administrator 7 (7.0-7.00)
```

```
       8  Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
       9  Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)


Enter the items you wish to install. Enter q to quit.
Prefix an item with ~ to indicate you only want
  to install shared component dependencies of that product
You can enter multiple items using commas to separate them.
For example: 1,2

Please select the products you wish to install [1, 2, 3, 4, 5, 6, 7, 8,
9]:
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Generating list of things to install...
Checking for Shared Component Upgrade Requirements...
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
  WILL INSTALL: Instant Messaging API 9
  WILL INSTALL: LDAPJDK 4.21
  WARNING: JDK is not in the distro, it will NOT be installed...
           Please obtain and install it separately
  WILL INSTALL: International Components for Unicode ICU2,ICU3
  WILL INSTALL: Simple Authentication and Security Layer 2.19
  WILL INSTALL: LDAPCSDK6 Tools 6.0
                to /opt/altroot/directory
  WILL INSTALL: NSS/NSPR/JSS 4.8.8
  WILL INSTALL: Message Queue 4.4
  WILL INSTALL: Message Queue Localization 4.4
  WILL INSTALL: LDAPCSDK6 6.0
  WILL INSTALL: Java Help Runtime 2.0
  WILL INSTALL: Messaging Server (64bit) 7u5 (7.5-28.21)
                to /opt/altroot/messaging64
  WILL INSTALL: Comms DSsetup 6.4 (6.4-24.03)
                to /opt/altroot/dssetup
  WILL INSTALL: Calendar Server 7.0.3.10.0
                to /opt/altroot/davserver
  WILL INSTALL: Instant Messaging 9.0.0.3.0
                to /opt/altroot/im
  WILL INSTALL: Convergence 2 (2.0-6.01)
                to /opt/altroot/iwc
  WILL INSTALL: Indexing and Search Service 1.0.4.16.0
                to /opt/altroot/jiss
  WILL INSTALL: Comms Delegated Administrator 7 (7.0-7.00)
                to /opt/altroot/da
  WILL INSTALL: Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
                to /opt/altroot/msg_scha
  WILL INSTALL: Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)
                to /opt/altroot/im_scha
  WILL INSTALL: CommsInstaller 7.0.4.0.0
                to /opt/altroot/CommsInstaller
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Ready to install

Do you want to continue ? [yes] :

============================================================
Installing Instant Messaging API 9...
```

```
------ Executing Task 1 of 58 ...

============================================================
Installing LDAPJDK 4.21...
------ Executing Task 2 of 58 ...

============================================================
Installing International Components for Unicode ICU2,ICU3...
------ Executing Task 3 of 58 ...

============================================================
Installing Simple Authentication and Security Layer 2.19...
------ Executing Task 4 of 58 ...

============================================================
Installing LDAPCSDK6 Tools 6.0...
------ Executing Task 5 of 58 ...

============================================================
Installing NSS/NSPR/JSS 4.8.8...
------ Executing Task 6 of 58 ...
------ Executing Task 7 of 58 ...
------ Executing Task 8 of 58 ...
------ Executing Task 9 of 58 ...
------ Executing Task 10 of 58 ...
------ Executing Task 11 of 58 ...

============================================================
Installing Message Queue 4.4...
------ Executing Task 12 of 58 ...
------ Executing Task 13 of 58 ...
------ Executing Task 14 of 58 ...
------ Executing Task 15 of 58 ...
------ Executing Task 16 of 58 ...
------ Executing Task 17 of 58 ...
------ Executing Task 18 of 58 ...
------ Executing Task 19 of 58 ...
------ Executing Task 20 of 58 ...
------ Executing Task 21 of 58 ...

============================================================
Installing Message Queue Localization 4.4...
------ Executing Task 22 of 58 ...
------ Executing Task 23 of 58 ...
------ Executing Task 24 of 58 ...
------ Executing Task 25 of 58 ...
------ Executing Task 26 of 58 ...
------ Executing Task 27 of 58 ...
------ Executing Task 28 of 58 ...
------ Executing Task 29 of 58 ...
------ Executing Task 30 of 58 ...
------ Executing Task 31 of 58 ...
------ Executing Task 32 of 58 ...
------ Executing Task 33 of 58 ...
------ Executing Task 34 of 58 ...
------ Executing Task 35 of 58 ...
```

```
============================================================
Installing LDAPCSDK6 6.0...
------ Executing Task 36 of 58 ...
------ Executing Task 37 of 58 ...

============================================================
Installing Java Help Runtime 2.0...
------ Executing Task 38 of 58 ...
------ Executing Task 39 of 58 ...
------ Executing Task 40 of 58 ...
------ Executing Task 41 of 58 ...

============================================================
Installing Messaging Server (64bit) 7u5 (7.5-28.21)...
------ Executing Task 42 of 58 ...

============================================================
Installing Comms DSsetup 6.4 (6.4-24.03)...
------ Executing Task 43 of 58 ...

============================================================
Installing Calendar Server 7.0.3.10.0...
------ Executing Task 44 of 58 ...

============================================================
Installing Instant Messaging 9.0.0.3.0...
------ Executing Task 45 of 58 ...
------ Executing Task 46 of 58 ...
------ Executing Task 47 of 58 ...
------ Executing Task 48 of 58 ...
------ Executing Task 49 of 58 ...
------ Executing Task 50 of 58 ...
------ Executing Task 51 of 58 ...
------ Executing Task 52 of 58 ...

============================================================
Installing Convergence 2 (2.0-6.01)...
------ Executing Task 53 of 58 ...

============================================================
Installing Indexing and Search Service 1.0.4.16.0...
------ Executing Task 54 of 58 ...

============================================================
Installing Comms Delegated Administrator 7 (7.0-7.00)...
------ Executing Task 55 of 58 ...

============================================================
Installing Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)...
------ Executing Task 56 of 58 ...

============================================================
Installing Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)...
------ Executing Task 57 of 58 ...
```

```
============================================================
Installing CommsInstaller 7.0.4.0.0...
------ Executing Task 58 of 58 ...
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
SUMMARY:


All tasks PASSED
Checking JES java symlink...
INFO: /etc/softlist.xml updated

Hit Return to Continue:
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=

NOTICE: To undo the installation, run the commands in:

/opt/altroot/var/opt/CommsInstaller/logs/undoCommsInstall_20130507181559

NOTICE: silent file created in:

/opt/altroot/var/opt/CommsInstaller/logs/silent_CommsInstaller_201305071815
LOGFILE  created in:

/opt/altroot/var/opt/CommsInstaller/logs/CommsInstaller_20130507181559.log
were 1 Warning(s). Please consult the log file
[947 Tue May 07 18:17:07 root@host1% /home/user/wspace/releases/ci74# ]
# cat
/opt/altroot/var/opt/CommsInstaller/logs/undoCommsInstall_20130507181559
#! /bin/sh
# Note that only tasks that PASSED are undone
# For reference, tasks that FAILED or are irreversible are in comments
# WARNING WARNING WARNING
# Executing irreversible tasks may result in a non-functional system!!!
ADMIN=/opt/altroot/var/opt/CommsInstaller/logs/admin.quiet
set -v
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWcomms
#######################################################
# Finished Undo of: Installing CommsInstaller 7.0.4.0.0...
#######################################################
pkgrm -R /opt/altroot -n -a $ADMIN SUNWiimsc
#######################################################
# Finished Undo of: Installing Instant Messaging Sun Cluster HA agent
7.3 (7.3-01.02)...
#######################################################
pkgrm -R /opt/altroot -n -a $ADMIN SUNWmessaging-server-scha
#######################################################
# Finished Undo of: Installing Messaging Server Sun Cluster HA agent 7.0
(7.0-0.03)...
#######################################################
pkgrm -R /opt/altroot -n -a $ADMIN SUNWcommda
#######################################################
# Finished Undo of: Installing Comms Delegated Administrator 7
(7.0-7.00)...
#######################################################
pkgrm -R /opt/altroot -n -a $ADMIN SUNWjiss
#######################################################
```

```
# Finished Undo of: Installing Indexing and Search Service 1.0.4.16.0...
#######################################################
pkgrm -R /opt/altroot -n -a $ADMIN SUNWiwc
#######################################################
# Finished Undo of: Installing Convergence 2 (2.0-6.01)...
#######################################################
pkgrm -R /opt/altroot -n -a $ADMIN SUNWiimfed
pkgrm -R /opt/altroot -n -a $ADMIN SUNWiimw
pkgrm -R /opt/altroot -n -a $ADMIN SUNWiimgw
pkgrm -R /opt/altroot -n -a $ADMIN SUNWiimid
pkgrm -R /opt/altroot -n -a $ADMIN SUNWiimjd
pkgrm -R /opt/altroot -n -a $ADMIN SUNWiimm
pkgrm -R /opt/altroot -n -a $ADMIN SUNWiimin
pkgrm -R /opt/altroot -n -a $ADMIN SUNWiim
#######################################################
# Finished Undo of: Installing Instant Messaging 9.0.0.3.0...
#######################################################
pkgrm -R /opt/altroot -n -a $ADMIN SUNWdavserver
#######################################################
# Finished Undo of: Installing Calendar Server 7.0.3.10.0...
#######################################################
pkgrm -R /opt/altroot -n -a $ADMIN SUNWcomds
#######################################################
# Finished Undo of: Installing Comms DSsetup 6.4 (6.4-24.03)...
#######################################################
pkgrm -R /opt/altroot -n -a $ADMIN SUNWmessaging-server-64
#######################################################
# Finished Undo of: Installing Messaging Server (64bit) 7u5
(7.5-28.21)...
#######################################################
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWjhdoc
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWjhdem
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWjhdev
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWjhrt
#######################################################
# Finished Undo of: Installing Java Help Runtime 2.0...
#######################################################
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWldapcsdk-dev
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWldapcsdk-libs
#######################################################
# Finished Undo of: Installing LDAPCSDK6 6.0...
#######################################################
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWhiquc
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWhiqu
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWciquc
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWciqu
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWkiquc
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWkiqu
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWeiquc
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWeiqu
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWjiquc
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWjiqu
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWdiquc
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWdiqu
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWfiquc
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWfiqu
```

```
#####################################################
# Finished Undo of: Installing Message Queue Localization 4.4...
#####################################################
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWiqlen
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWiqcdv
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWiqcrt
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWiqfs
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWiqjx
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWiqum
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWiquc
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWiqdoc
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWiqu
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWiqr
#####################################################
# Finished Undo of: Installing Message Queue 4.4...
#####################################################
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWtlsu
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWtlsd
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWtls
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWprd
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWpr
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWjss
#####################################################
# Finished Undo of: Installing NSS/NSPR/JSS 4.8.8...
#####################################################
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWldapcsdk-tools
#####################################################
# Finished Undo of: Installing LDAPCSDK6 Tools 6.0...
#####################################################
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWsasl
#####################################################
# Finished Undo of: Installing Simple Authentication and Security Layer
2.19...
#####################################################
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWicu
#####################################################
# Finished Undo of: Installing International Components for Unicode
ICU2,ICU3...
#####################################################
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWljdk
#####################################################
# Finished Undo of: Installing LDAPJDK 4.21...
#####################################################
# IRREVERSIBLE: pkgrm -R /opt/altroot -n -a $ADMIN SUNWiimdv
#####################################################
# Finished Undo of: Installing Instant Messaging API 9...
#####################################################
[948 Tue May 07 18:17:32 root@host1% /home/user/wspace/releases/ci74# ]
# cat
/opt/altroot/var/opt/CommsInstaller/logs/silent_CommsInstaller_201305071815
Silent File for CommsInstaller 7.0.4.0.0 (7.4-0.05)
# Generated on 20130507181559
#

#
# verb used to create this silent file
```

```
#
VERB=install

#
# alternate distro path if not found where commpkg resides
#    and no --distro switch specified is
#
ALTDISTROPATH=/net/comms-nfs.example.com/export/megan/wspace/dl111122/relea
The installation root
#
INSTALLROOT=/opt/altroot

#
# flag to indicate whether to use alternate root install mode
#
ALTROOT=yes

#
# flag to indicate whether to perform pkg overwrite if the pkg already
exists
#
PKGOVERWRITE=no

#
# flag to indicate whether to exclude OS patches
#
EXCLUDEOS=no

#
# flag to indicate whether to exclude shared components
#
EXCLUDESC=no

#
# flag to indicate that all SC should or should not be upgraded without
prompting
#
UPGRADESC=no

#
# INSTALLROOT friendly name
#
INSTALLNAME=

#
# flag to indicate whether to skip OS Level Check
#
SKIPOSLEVELCHECK=no

#
# list of components (using mnemonics)
# A ~ in front of the product indicates that only the shared
# components are installed
#
COMPONENTS=MS64 DSSETUP DAV IM IWC JISS DA MS_SCHA IM_SCHA
COMPONENT_VERSIONS=
```

```
[949 Tue May 07 18:17:39 root@host1% /home/user/wspace/releases/ci74# ]
# cat
/opt/altroot/var/opt/CommsInstaller/logs/CommsInstaller_20130507181559.log
LOGFILE started Tue May  7 18:15:59 2013 ==========
LOGFILE = /tmp/CommsInstaller_20130507181559.log
Running /usr/bin/perl ./commpkg
-- /usr/bin/perl ./commpkg install /opt/altroot
-- ARGS:
   install
   /opt/altroot
-- perl version: 5.008004 pid: 5784
-- basetime: 1367975759 Tue May  7 18:15:59 2013
-- scriptDir:
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74
-- LOGFILE: /tmp/CommsInstaller_20130507181559.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013
-- UNAME = SunOS ARCH = sparc OS_VERS = 5.10 BITS = 64
uname -a 2>&1
SunOS host1 5.10 Generic_147440-12 sun4v sparc sun4v
-- Exit status: 0
!!! ENV
$VAR1 = {
          'HOME' => '/',
          'PS1' => '[\\! \\d \\t \\u@\\h% \\w\\$ ]
\\$ ',
          'LC_COLLATE' => '',
          'LC_ALL' => '',
          'CDPATH' => ':..:/home/user',
          'LC_NUMERIC' => '',
          'MAIL' => '/var/mail/uadmin',
          'TZ' => 'PST8PDT',
          'PWD' => '/home/user/wspace/releases/ci74',
          'LC_TIME' => '',
          'LANG' => 'C',
          'LC_MESSAGES' => '',
          'LC_CTYPE' => '',
          'LOGNAME' => 'uadmin',
          'SHLVL' => '1',
          'OLDPWD' => '/home/user/wspace/releases',
          'LC_MONETARY' => '',
          '_' => './commpkg',
          'PATH' =>
'/bin:/usr/bin:/usr/sbin:/sbin:/usr/etc::~user/bin:/usr/sbin:/usr/bin',
          'SHELL' => '/bin/sh',
          'HZ' => '',
          'TERM' => 'dumb'
        };
cat /etc/release 2>&1
                    Oracle Solaris 10 8/11 s10s_u10wos_17b SPARC
  Copyright (c) 1983, 2011, Oracle and/or its affiliates. All rights
reserved.
                            Assembled 23 August 2011
-- Exit status: 0
-- Recognized OS_VERS
!!! comms products found in distro
```

```
$VAR1 = [
          'MS64',
          'DSSETUP',
          'DAV',
          'IM',
          'IWC',
          'JISS',
          'DA',
          'MS_SCHA',
          'IM_SCHA'
        ];
!!! products found in distro, distrProds
$VAR1 = {
          'ST' => {
                    'Packages' => 1
                  },
          'SASL' => {
                      'Packages' => 1,
                      'Patches' => 1
                    },
          'IWC' => {
                     'Packages' => 1,
                     'Patches' => 1
                   },
          'IM' => {
                    'Packages' => 1,
                    'Patches' => 1
                  },
          'DSSETUP' => {
                         'Packages' => 1,
                         'Patches' => 1
                       },
          'LDAPJDK' => {
                         'Packages' => 1,
                         'Patches' => 1
                       },
          'MQ_L10N' => {
                         'Packages' => 1
                       },
          'MYSQL_MARKER' => {
                              'Packages' => 1
                            },
          'BZIP' => {
                      'Patches' => 1
                    },
          'ICU' => {
                     'Packages' => 1,
                     'Patches' => 1
                   },
          'IM_SCHA' => {
                         'Packages' => 1,
                         'Patches' => 1
                       },
          'MS64' => {
                      'Packages' => 1,
                      'Patches' => 1
```

```
                    },
          'LIBCPLUSPLUS' => {
                              'Patches' => 1
                            },
          'DAV' => {
                     'Packages' => 1,
                     'Patches' => 1
                   },
          'LDAPCSDK6' => {
                           'Packages' => 1
                         },
          'MS_SCHA' => {
                         'Packages' => 1
                       },
          'MQ' => {
                    'Packages' => 1
                  },
          'PATCHUTILS' => {
                            'Patches' => 1
                          },
          'JHRT' => {
                      'Packages' => 1
                    },
          'CI' => {
                    'Packages' => 1
                  },
          'IMAPI' => {
                       'Packages' => 1,
                       'Patches' => 1
                     },
          'DA' => {
                    'Packages' => 1,
                    'Patches' => 1
                  },
          'LDAPCSDK6_TOOLS' => {
                                 'Packages' => 1,
                                 'Patches' => 1
                               },
          'JISS' => {
                      'Packages' => 1,
                      'Patches' => 1
                    },
          'NSS' => {
                     'Packages' => 1,
                     'Patches' => 1
                   }
        };
/usr/bin/pkgcond -n is_what 2>&1
can_add_driver=0
can_remove_driver=0
can_update_driver=0
is_alternative_root=0
is_boot_environment=0
is_diskless_client=0
is_global_zone=1
is_mounted_miniroot=0
```

```
is_netinstall_image=0
is_nonglobal_zone=0
is_path_writable=1
is_running_system=1
is_sparse_root_nonglobal_zone=0
is_whole_root_nonglobal_zone=0
-- Exit status: 1
/usr/bin/pkgcond -n is_global_zone 2>&1
-- Exit status: 1
/usr/bin/pkgcond -n is_sparse_root_nonglobal_zone 2>&1
-- Exit status: 0
Reading Product Files...
Reading
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
Reading OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
QQQ findGetVersion ======
!!! getVersion
$VAR1 = {
          'SASL' => 'none',
          'IWC' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'MS64_L10N' => 'none',
          'MS' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'DSSETUP' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'MQ_L10N' => 'none',
          'ICU' => 'none',
          'MS64' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'DAV' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'LDAPCSDK6' => 'none',
          'CE' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'JDK' => 'none',
          'MYSQL' => 'none',
          'PATCHUTILS' => 'none',
          'MQ' => 'none',
          'IMAPI' => 'none',
          'CI' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.ins
'LDAPCSDK6_TOOLS' => 'none',
          'JISS' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'NSS' => 'none',
          'CS_L10N' => 'none',
          'IM' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'ST' => 'none',
          'RECOMMENDED' => 'none',
          'IM_L10N' => 'none',
          'CS_SCHA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
```

```
'LDAPJDK' => 'none',
          'BZIP' => 'none',
          'MYSQL_MARKER' => 'none',
          'IM_SCHA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'MS_L10N' => 'none',
          'LIBCPLUSPLUS' => 'none',
          'MS_SCHA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'CS' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'JHRT' => 'none',
          'CE_L10N' => 'none',
          'DA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
};
!!! prod_getVers
$VAR1 = {
          'SASL' => 0,
          'IWC' => '2.0-6.01',
          'MS64_L10N' => 0,
          'MS' => '7.2-7.02',
          'DSSETUP' => '6.4-24.03',
          'MQ_L10N' => 0,
          'ICU' => 0,
          'MS64' => '7.5-28.21',
          'DAV' => '7.3-10.10',
          'LDAPCSDK6' => 0,
          'CE' => '6.3-13.01',
          'JDK' => 0,
          'MYSQL' => 0,
          'PATCHUTILS' => 0,
          'MQ' => 0,
          'IMAPI' => 0,
          'CI' => '7.4-0.05',
          'LDAPCSDK6_TOOLS' => 0,
          'JISS' => '1.4-16.9301',
          'NSS' => 0,
          'CS_L10N' => 0,
          'IM' => '9.0-03.02',
          'ST' => 0,
          'RECOMMENDED' => 0,
          'IM_L10N' => 0,
          'CS_SCHA' => '6.3-1.01',
          'LDAPJDK' => 0,
          'BZIP' => 0,
          'MYSQL_MARKER' => 0,
          'IM_SCHA' => '7.3-01.02',
          'MS_L10N' => 0,
          'LIBCPLUSPLUS' => 0,
          'MS_SCHA' => '7.0-0.03',
          'CS' => '6.3-32.01',
          'JHRT' => 0,
          'CE_L10N' => 0,
          'DA' => '7.0-7.00'
        };
```

```
!!! prod_orclVers
$VAR1 = {
          'SASL' => 0,
          'IWC' => '\'Unrecognized Parameter\'',
          'MS64_L10N' => 0,
          'MS' => '\'Unrecognized Parameter\'',
          'DSSETUP' => '\'Unrecognized Parameter\'',
          'MQ_L10N' => 0,
          'ICU' => 0,
          'MS64' => '\'Unrecognized Parameter\'',
          'DAV' => '7.0.3.10.0',
          'LDAPCSDK6' => 0,
          'CE' => '\'Unrecognized Parameter\'',
          'JDK' => 0,
          'MYSQL' => 0,
          'PATCHUTILS' => 0,
          'MQ' => 0,
          'IMAPI' => 0,
          'CI' => '7.0.4.0.0',
          'LDAPCSDK6_TOOLS' => 0,
          'JISS' => '1.0.4.16.0',
          'NSS' => 0,
          'CS_L10N' => 0,
          'IM' => '9.0.0.3.0',
          'ST' => 0,
          'RECOMMENDED' => 0,
          'IM_L10N' => 0,
          'CS_SCHA' => '\'Unrecognized Parameter\'',
          'LDAPJDK' => 0,
          'BZIP' => 0,
          'MYSQL_MARKER' => 0,
          'IM_SCHA' => '\'Unrecognized Parameter\'',
          'MS_L10N' => 0,
          'LIBCPLUSPLUS' => 0,
          'MS_SCHA' => '\'Unrecognized Parameter\'',
          'CS' => '\'Unrecognized Parameter\'',
          'JHRT' => 0,
          'CE_L10N' => 0,
          'DA' => '\'Unrecognized Parameter\''
        };
!!! prod_builddate
$VAR1 = {
          'SASL' => 'none',
          'IWC' => '20130402',
          'MS64_L10N' => 'none',
          'MS' => '20090416',
          'DSSETUP' => '20120611',
          'MQ_L10N' => 'none',
          'ICU' => 'none',
          'MS64' => '20130408',
          'DAV' => '20130328',
          'LDAPCSDK6' => 'none',
          'CE' => '20090327',
          'JDK' => 'none',
          'MYSQL' => 'none',
          'PATCHUTILS' => 'none',
```

```
          'MQ' => 'none',
          'IMAPI' => 'none',
          'CI' => '20130409',
          'LDAPCSDK6_TOOLS' => 'none',
          'JISS' => '20130320',
          'NSS' => 'none',
          'CS_L10N' => 'none',
          'IM' => '20130405',
          'ST' => 'none',
          'RECOMMENDED' => 'none',
          'IM_L10N' => 'none',
          'CS_SCHA' => '20080331',
          'LDAPJDK' => 'none',
          'BZIP' => 'none',
          'MYSQL_MARKER' => 'none',
          'IM_SCHA' => '20080403',
          'MS_L10N' => 'none',
          'LIBCPLUSPLUS' => 'none',
          'MS_SCHA' => '20080519',
          'CS' => '20120921',
          'JHRT' => 'none',
          'CE_L10N' => 'none',
          'DA' => '20130319'
        };
====== End QQQ findGetVersion ======
INFO: prod_mktVers{NSS} (no map) = 4.8.8
INFO: prod_mktVers{SASL} (no map) = 2.19
INFO: prod_mktVers{LDAPCSDK6} (no map) = 6.0
INFO: prod_mktVers{LDAPCSDK6_TOOLS} (no map) = 6.0
INFO: prod_mktVers{ICU} (no map) = ICU2,ICU3
INFO: prod_mktVers{JDK} (no map) = 1.6.0
INFO: prod_mktVers{JHRT} (no map) = 2.0
INFO: prod_mktVers{MQ} (no map) = 4.4
INFO: prod_mktVers{MQ_L10N} (no map) = 4.4
INFO: prod_mktVers{LDAPJDK} (no map) = 4.21
INFO: prod_mktVers{IMAPI} (w/ map) = 9
INFO: prod_mktVers{LIBCPLUSPLUS} (no map) = 5.9
INFO: prod_mktVers{PATCHUTILS} (no map) = Unknown
INFO: prod_mktVers{BZIP} (no map) = 11.10
INFO: prod_mktVers{RECOMMENDED} (no map) = 2013.02.19
INFO: prod_mktVers{MYSQL_MARKER} (w/ map) = 1.1
INFO: prod_mktVers{MYSQL} (w/ map) = 5.5.8
INFO: prod_mktVers{ST} (no map) = 1.1.4
INFO: prod_mktVers{CI} (w/ map) = 7u4
INFO: prod_mktVers{MS64} (w/ map) = 7u5
INFO: prod_mktVers{DSSETUP} (w/ map) = 6.4
INFO: prod_mktVers{DAV} (w/ map) = 7u3
INFO: prod_mktVers{IM} (w/ map) = 9
INFO: prod_mktVers{IWC} (w/ map) = 2
INFO: prod_mktVers{JISS} (w/ map) = 1u4
INFO: prod_mktVers{DA} (w/ map) = 7
INFO: prod_mktVers{MS_SCHA} (no map) = 7.0
INFO: prod_mktVers{IM_SCHA} (no map) = 7.3

Welcome to the Oracle Communications Unified Communications Suite
Product Installer
```

```
This program will install selected components of the Communications
Suite
on your computer. Do note that the installer lays down the
bits, but does not do configuration. Separate configuration
steps for each individual product will be required.

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=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
INFO: altroot mode is activated.
-- Creating /opt/altroot
-- Setting owner:group for /opt/altroot to bin:bin
/bin/chown bin:bin /opt/altroot 2>&1
-- Exit status: 0
-- Setting permission for /opt/altroot to 755
/bin/chmod 755 /opt/altroot 2>&1
-- Exit status: 0
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
mkdir -p /opt/altroot/var/sadm/system/admin 2>&1
-- Exit status: 0
ln -s /var/sadm/system/admin/INST_RELEASE
/opt/altroot/var/sadm/system/admin/INST_RELEASE 2>&1
-- Exit status: 0
mkdir -m 1777 -p /opt/altroot/var/tmp 2>&1
-- Exit status: 0
Detecting Installed Products...
Checking LIBCPLUSPLUS 5.9 ...
  Checking pkg SUNWlibC... present.
  LIBCPLUSPLUS 5.9 is already present.
Checking PATCHUTILS Unknown ...
  Checking pkg SUNWpkgcmdsu... present.
  Checking pkg SUNWswmt... present.
  Checking pkg SUNWinstall-patch-utils-root... present.
  Checking pkg SUNWcsr... present.
  Checking pkg SUNWdtrc... present.
  Checking pkg SUNWzoneu... present.
  PATCHUTILS Unknown is already present.
Checking BZIP 11.10 ...
  Checking pkg SUNWbzip... present.
  BZIP 11.10 is already present.
Checking RECOMMENDED 2013.02.19 ...
  RECOMMENDED 2013.02.19 is not present.
Checking MYSQL_MARKER 1.1 ...
  Checking pkg SUNWcomms-mysql-marker... not present.
  MYSQL_MARKER 1.1 is not present.
Checking MYSQL_MARKER 1.0 ...
  Checking pkg SUNWcomms-mysql-marker... not present.
  MYSQL_MARKER 1.0 is not present.
Checking MYSQL 5.5.8 ...
  Checking pkg mysql... not present.
  MYSQL 5.5.8 is not present.
Checking MYSQL 5.1.36 ...
  Checking pkg mysql... not present.
  MYSQL 5.1.36 is not present.
Checking ST 1.1.4 ...
```

```
  Checking pkg SUNWservicetagr... present.
  Checking pkg SUNWservicetagu... present.
  Checking pkg SUNWstosreg... present.
  ST 1.1.4 is already present.
Checking NSS 4.8.8 ...
  Checking pkg SUNWjss... not present.
  Checking pkg SUNWpr... not present.
  Checking pkg SUNWprd... not present.
  Checking pkg SUNWtls... not present.
  Checking pkg SUNWtlsd... not present.
  Checking pkg SUNWtlsu... not present.
  NSS 4.8.8 is not present.
Checking SASL 2.19 ...
  Checking pkg SUNWsasl... not present.
  SASL 2.19 is not present.
Checking LDAPCSDK6 6.0 ...
  Checking pkg SUNWldapcsdk-libs... not present.
  Checking pkg SUNWldapcsdk-dev... not present.
  LDAPCSDK6 6.0 is not present.
Checking LDAPCSDK6_TOOLS 6.0 ...
  Checking pkg SUNWldapcsdk-tools... not present.
  LDAPCSDK6_TOOLS 6.0 is not present.
Checking ICU ICU2,ICU3 ...
  Checking pkg SUNWicu... not present.
  ICU ICU2,ICU3 is not present.
Checking JDK 1.6.0 ...
  Checking pkg SUNWj6rt... not present.
  Checking pkg SUNWj6rtx... not present.
  Checking pkg SUNWj6dev... not present.
  Checking pkg SUNWj6dvx... not present.
  Checking pkg SUNWj6cfg... not present.
  JDK 1.6.0 is not present.
Checking JDK 1.5.0 ...
  Checking pkg SUNWj5rt... not present.
  Checking pkg SUNWj5rtx... not present.
  Checking pkg SUNWj5cfg... not present.
  JDK 1.5.0 is not present.
Checking JHRT 2.0 ...
  Checking pkg SUNWjhrt... not present.
  Checking pkg SUNWjhdev... not present.
  Checking pkg SUNWjhdem... not present.
  Checking pkg SUNWjhdoc... not present.
  JHRT 2.0 is not present.
Checking MQ 4.4 ...
  Checking pkg SUNWiqr... not present.
  Checking pkg SUNWiqu... not present.
  Checking pkg SUNWiqdoc... not present.
  Checking pkg SUNWiquc... not present.
  Checking pkg SUNWiqum... not present.
  Checking pkg SUNWiqjx... not present.
  Checking pkg SUNWiqfs... not present.
  Checking pkg SUNWiqcrt... not present.
  Checking pkg SUNWiqcdv... not present.
  Checking pkg SUNWiqlen... not present.
  MQ 4.4 is not present.
Checking MQ 3.7 ...
```

```
  Checking pkg SUNWiqr... not present.
  Checking pkg SUNWiqu... not present.
  Checking pkg SUNWiqlpl... not present.
  Checking pkg SUNWiqdoc... not present.
  Checking pkg SUNWiquc... not present.
  Checking pkg SUNWiqum... not present.
  Checking pkg SUNWiqjx... not present.
  Checking pkg SUNWiqfs... not present.
  Checking pkg SUNWiqcrt... not present.
  Checking pkg SUNWiqcdv... not present.
  Checking pkg SUNWiqlen... not present.
  MQ 3.7 is not present.
Checking MQ 4.1 ...
  Checking pkg SUNWiqr... not present.
  Checking pkg SUNWiqu... not present.
  Checking pkg SUNWiqdoc... not present.
  Checking pkg SUNWiquc... not present.
  Checking pkg SUNWiqum... not present.
  Checking pkg SUNWiqjx... not present.
  Checking pkg SUNWiqfs... not present.
  Checking pkg SUNWiqcrt... not present.
  Checking pkg SUNWiqcdv... not present.
  MQ 4.1 is not present.
Checking MQ 4.3 ...
  Checking pkg SUNWiqr... not present.
  Checking pkg SUNWiqu... not present.
  Checking pkg SUNWiqdoc... not present.
  Checking pkg SUNWiquc... not present.
  Checking pkg SUNWiqum... not present.
  Checking pkg SUNWiqjx... not present.
  Checking pkg SUNWiqfs... not present.
  Checking pkg SUNWiqcrt... not present.
  Checking pkg SUNWiqcdv... not present.
  Checking pkg SUNWiqlen... not present.
  MQ 4.3 is not present.
Checking MQ_L10N 4.4 ...
  Checking pkg SUNWfiqu... not present.
  Checking pkg SUNWfiquc... not present.
  Checking pkg SUNWdiqu... not present.
  Checking pkg SUNWdiquc... not present.
  Checking pkg SUNWjiqu... not present.
  Checking pkg SUNWjiquc... not present.
  Checking pkg SUNWeiqu... not present.
  Checking pkg SUNWeiquc... not present.
  Checking pkg SUNWkiqu... not present.
  Checking pkg SUNWkiquc... not present.
  Checking pkg SUNWciqu... not present.
  Checking pkg SUNWciquc... not present.
  Checking pkg SUNWhiqu... not present.
  Checking pkg SUNWhiquc... not present.
  MQ_L10N 4.4 is not present.
Checking MQ_L10N 3.7 ...
  Checking pkg SUNWfiqu... not present.
  Checking pkg SUNWfiquc... not present.
  Checking pkg SUNWdiqu... not present.
  Checking pkg SUNWdiquc... not present.
```

```
  Checking pkg SUNWjiqu... not present.
  Checking pkg SUNWjiquc... not present.
  Checking pkg SUNWeiqu... not present.
  Checking pkg SUNWeiquc... not present.
  Checking pkg SUNWkiqu... not present.
  Checking pkg SUNWkiquc... not present.
  Checking pkg SUNWciqu... not present.
  Checking pkg SUNWciquc... not present.
  Checking pkg SUNWhiqu... not present.
  Checking pkg SUNWhiquc... not present.
  MQ_L10N 3.7 is not present.
Checking MQ_L10N 4.1 ...
  Checking pkg SUNWfiqu... not present.
  Checking pkg SUNWfiquc... not present.
  Checking pkg SUNWdiqu... not present.
  Checking pkg SUNWdiquc... not present.
  Checking pkg SUNWjiqu... not present.
  Checking pkg SUNWjiquc... not present.
  Checking pkg SUNWeiqu... not present.
  Checking pkg SUNWeiquc... not present.
  Checking pkg SUNWkiqu... not present.
  Checking pkg SUNWkiquc... not present.
  Checking pkg SUNWciqu... not present.
  Checking pkg SUNWciquc... not present.
  Checking pkg SUNWhiqu... not present.
  Checking pkg SUNWhiquc... not present.
  MQ_L10N 4.1 is not present.
Checking MQ_L10N 4.3 ...
  Checking pkg SUNWfiqu... not present.
  Checking pkg SUNWfiquc... not present.
  Checking pkg SUNWdiqu... not present.
  Checking pkg SUNWdiquc... not present.
  Checking pkg SUNWjiqu... not present.
  Checking pkg SUNWjiquc... not present.
  Checking pkg SUNWeiqu... not present.
  Checking pkg SUNWeiquc... not present.
  Checking pkg SUNWkiqu... not present.
  Checking pkg SUNWkiquc... not present.
  Checking pkg SUNWciqu... not present.
  Checking pkg SUNWciquc... not present.
  Checking pkg SUNWhiqu... not present.
  Checking pkg SUNWhiquc... not present.
  MQ_L10N 4.3 is not present.
Checking LDAPJDK 4.21 ...
  Checking pkg SUNWljdk... not present.
  LDAPJDK 4.21 is not present.
Checking IMAPI 9.0 ...
  Checking pkg SUNWiimdv... not present.
  IMAPI 9.0 is not present.
Checking IMAPI 7.0 ...
  Checking pkg SUNWiimdv... not present.
  IMAPI 7.0 is not present.
Checking IMAPI 7.3 ...
  Checking pkg SUNWiimdv... not present.
  IMAPI 7.3 is not present.
Checking IMAPI 8.0 ...
```

```
  Checking pkg SUNWiimdv... not present.
  IMAPI 8.0 is not present.
Checking CI 7.4 ...
  Checking pkg SUNWcomms... not present.
  CI 7.4 is not present.
Checking MS64 7.5 ...
  Checking pkg SUNWmessaging-server-64... not present.
  MS64 7.5 is not present.
Checking MS64 6.3 ...
  Checking pkg SUNWmessaging-server-64... not present.
  MS64 6.3 is not present.
Checking MS64 6.3_32 ...
  Checking pkg SUNWmsgin... not present.
  Checking pkg SUNWmsgen... not present.
  Checking pkg SUNWmsglb... not present.
  Checking pkg SUNWmsgco... not present.
  Checking pkg SUNWmsgmt... not present.
  Checking pkg SUNWmsgst... not present.
  Checking pkg SUNWmsgmp... not present.
  Checking pkg SUNWmsgwm... not present.
  Checking pkg SUNWmsgmf... not present.
  MS64 6.3_32 is not present.
Checking MS64 7.2_32 ...
  Checking pkg SUNWmessaging-server... not present.
  MS64 7.2_32 is not present.
Checking MS64 7.3_32 ...
  MS64 7.3_32 is not present.
Checking MS64 7.5_32 ...
  MS64 7.5_32 is not present.
Checking DSSETUP 6.4 ...
  Checking pkg SUNWcomds... not present.
  DSSETUP 6.4 is not present.
Checking DAV 7.3 ...
  Checking pkg SUNWdavserver... not present.
  DAV 7.3 is not present.
Checking IM 9.0 ...
  Checking pkg SUNWiim... not present.
  Checking pkg SUNWiimin... not present.
  Checking pkg SUNWiimm... not present.
  Checking pkg SUNWiimjd... not present.
  Checking pkg SUNWiimid... not present.
  Checking pkg SUNWiimgw... not present.
  Checking pkg SUNWiimw... not present.
  Checking pkg SUNWiimfed... not present.
  IM 9.0 is not present.
Checking IM 7.0 ...
  Checking pkg SUNWiimin... not present.
  Checking pkg SUNWiim... not present.
  Checking pkg SUNWiimm... not present.
  Checking pkg SUNWiimjd... not present.
  Checking pkg SUNWiimid... not present.
  Checking pkg SUNWiimc... not present.
  Checking pkg SUNWiimd... not present.
  IM 7.0 is not present.
Checking IM 7.3 ...
  Checking pkg SUNWiim... not present.
```

```
  Checking pkg SUNWiimin... not present.
  Checking pkg SUNWiimm... not present.
  Checking pkg SUNWiimjd... not present.
  Checking pkg SUNWiimid... not present.
  Checking pkg SUNWiimc... not present.
  Checking pkg SUNWiimd... not present.
  IM 7.3 is not present.
Checking IM 8.3 ...
  Checking pkg SUNWiim... not present.
  Checking pkg SUNWiimin... not present.
  Checking pkg SUNWiimm... not present.
  Checking pkg SUNWiimjd... not present.
  Checking pkg SUNWiimid... not present.
  Checking pkg SUNWiimc... not present.
  Checking pkg SUNWiimd... not present.
  Checking pkg SUNWiimgw... not present.
  IM 8.3 is not present.
Checking IWC 2.0 ...
  Checking pkg SUNWiwc... not present.
  IWC 2.0 is not present.
Checking IWC 1.0 ...
  Checking pkg SUNWiwc... not present.
  IWC 1.0 is not present.
Checking JISS 1.4 ...
  Checking pkg SUNWjiss... not present.
  JISS 1.4 is not present.
Checking JISS 0.9 ...
  Checking pkg SUNWjiss-common... not present.
  Checking pkg SUNWjiss-conf... not present.
  Checking pkg SUNWjiss-extjars... not present.
  Checking pkg SUNWjiss-indexapi... not present.
  Checking pkg SUNWjiss-jmqc... not present.
  Checking pkg SUNWjiss-rest... not present.
  Checking pkg SUNWjiss-search... not present.
  Checking pkg SUNWjiss-searchui... not present.
  Checking pkg SUNWjiss-store... not present.
  Checking pkg SUNWjiss-storeui... not present.
  JISS 0.9 is not present.
Checking DA 7.0 ...
  Checking pkg SUNWcommda... not present.
  DA 7.0 is not present.
Checking DA 6.4 ...
  Checking pkg SUNWcomic... not present.
  Checking pkg SUNWcomis... not present.
  DA 6.4 is not present.
Checking MS_SCHA 7.0 ...
  Checking pkg SUNWmessaging-server-scha... not present.
  MS_SCHA 7.0 is not present.
Checking MS_SCHA 6.0 ...
  Checking pkg SUNWscims... not present.
  MS_SCHA 6.0 is not present.
Checking IM_SCHA 7.3 ...
  Checking pkg SUNWiimsc... not present.
  IM_SCHA 7.3 is not present.
Checking IM_SCHA 7.0 ...
  Checking pkg SUNWiimsc... not present.
```

```
  IM_SCHA 7.0 is not present.
Checking MS 7.5_32 ...
  MS 7.5_32 is not present.
Checking MS 6.3_32 ...
  Checking pkg SUNWmsgin... not present.
  Checking pkg SUNWmsgen... not present.
  Checking pkg SUNWmsglb... not present.
  Checking pkg SUNWmsgco... not present.
  Checking pkg SUNWmsgmt... not present.
  Checking pkg SUNWmsgst... not present.
  Checking pkg SUNWmsgmp... not present.
  Checking pkg SUNWmsgwm... not present.
  Checking pkg SUNWmsgmf... not present.
  MS 6.3_32 is not present.
Checking MS 7.2_32 ...
  Checking pkg SUNWmessaging-server... not present.
  MS 7.2_32 is not present.
Checking MS 7.3_32 ...
  MS 7.3_32 is not present.
Checking MS_L10N 6.2 ...
  Checking pkg SUNWmsgde... not present.
  Checking pkg SUNWmsges... not present.
  Checking pkg SUNWmsgfr... not present.
  Checking pkg SUNWmsgja... not present.
  Checking pkg SUNWmsgko... not present.
  Checking pkg SUNWmsgzh... not present.
  Checking pkg SUNWmsgtw... not present.
  MS_L10N 6.2 is not present.
Checking MS_L10N 6.3 ...
  Checking pkg SUNWmsg-l10n... not present.
  MS_L10N 6.3 is not present.
Checking MS64_L10N 6.3 ...
  Checking pkg SUNWmessaging-server-l10n-64... not present.
  MS64_L10N 6.3 is not present.
Checking CS 6.3 ...
  Checking pkg SUNWics5... not present.
  Checking pkg SUNWica5... not present.
  CS 6.3 is not present.
Checking CS_L10N 6.2 ...
  Checking pkg SUNWdeics... not present.
  Checking pkg SUNWesics... not present.
  Checking pkg SUNWfrics... not present.
  Checking pkg SUNWjaics... not present.
  Checking pkg SUNWkoics... not present.
  Checking pkg SUNWzhics... not present.
  Checking pkg SUNWtwics... not present.
  CS_L10N 6.2 is not present.
Checking CS_L10N 6.3 ...
  Checking pkg SUNWics-l10n... not present.
  CS_L10N 6.3 is not present.
Checking IM_L10N 7.0 ...
  Checking pkg SUNWdiimc... not present.
  Checking pkg SUNWdiimd... not present.
  Checking pkg SUNWdimid... not present.
  Checking pkg SUNWeiimc... not present.
  Checking pkg SUNWeiimd... not present.
```

```
  Checking pkg SUNWeiimin... not present.
  Checking pkg SUNWeimid... not present.
  Checking pkg SUNWfiimc... not present.
  Checking pkg SUNWfiimd... not present.
  Checking pkg SUNWfiimin... not present.
  Checking pkg SUNWfimid... not present.
  Checking pkg SUNWjiimc... not present.
  Checking pkg SUNWjiimd... not present.
  Checking pkg SUNWjiimin... not present.
  Checking pkg SUNWjimid... not present.
  Checking pkg SUNWkiimc... not present.
  Checking pkg SUNWkiimd... not present.
  Checking pkg SUNWkiimin... not present.
  Checking pkg SUNWkimid... not present.
  Checking pkg SUNWciimc... not present.
  Checking pkg SUNWciimd... not present.
  Checking pkg SUNWciimin... not present.
  Checking pkg SUNWcimid... not present.
  Checking pkg SUNWhiimc... not present.
  Checking pkg SUNWhiimd... not present.
  Checking pkg SUNWhiimin... not present.
  Checking pkg SUNWhimid... not present.
  IM_L10N 7.0 is not present.
Checking IM_L10N 7.2 ...
  Checking pkg SUNWiimc-l10n... not present.
  Checking pkg SUNWiimd-l10n... not present.
  Checking pkg SUNWiimid-l10n... not present.
  Checking pkg SUNWiimin-l10n... not present.
  IM_L10N 7.2 is not present.
Checking CE 6.3 ...
  Checking pkg SUNWuwc... not present.
  CE 6.3 is not present.
Checking CE_L10N 6.2 ...
  Checking pkg SUNWduwc... not present.
  Checking pkg SUNWeuwc... not present.
  Checking pkg SUNWfuwc... not present.
  Checking pkg SUNWjuwc... not present.
  Checking pkg SUNWkuwc... not present.
  Checking pkg SUNWcuwc... not present.
  Checking pkg SUNWhuwc... not present.
  CE_L10N 6.2 is not present.
Checking CE_L10N 6.3 ...
  Checking pkg SUNWuwc-l10n... not present.
  CE_L10N 6.3 is not present.
Checking CS_SCHA 6.0 ...
  Checking pkg SUNWscics... not present.
  CS_SCHA 6.0 is not present.
Checking CS_SCHA 6.3 ...
  Checking pkg SUNWscics... not present.
  CS_SCHA 6.3 is not present.
Detecting Installed Patches...
-- chk4patch 119963-27 /tmp/.patchout_20130507181559.5784
-- Running patchadd  -p report...
--   Generating /tmp/.patchout_20130507181559.5784
patchadd  -p > /tmp/.patchout_20130507181559.5784 2>>
/tmp/CommsInstaller_20130507181559.log
```

```
-- Exit status: 0
--  older version at lineno 478 found 119963-24 - not acceptable
--  Exact match found at line 479
--  Final return status: 1
  LIBCPLUSPLUS patch 119963-27 is already present.
-- chk4patch 120900-04 /tmp/.patchout_20130507181559.5784
--  Exact match found at line 52
--  Final return status: 1
  PATCHUTILS patch 120900-04 is already present.
-- chk4patch 121133-02 /tmp/.patchout_20130507181559.5784
--  Exact match found at line 53
--  Final return status: 1
  PATCHUTILS patch 121133-02 is already present.
-- chk4patch 119254-88 /tmp/.patchout_20130507181559.5784
--  older version at lineno 227 found 119254-81 - not acceptable
--  Exact match found at line 230
--  Final return status: 1
  PATCHUTILS patch 119254-88 is already present.
-- chk4patch 126868-04 /tmp/.patchout_20130507181559.5784
--  Exact match found at line 555
--  Final return status: 1
  BZIP patch 126868-04 is already present.
-- chk4patch 137321-01 /tmp/.patchout_20130507181559.5784
--  Exact match found at line 556
--  Final return status: 1
  BZIP patch 137321-01 is already present.
-- chk4patch 119254-88 /tmp/.patchout_20130507181559.5784
--  older version at lineno 227 found 119254-81 - not acceptable
--  Exact match found at line 230
--  Final return status: 1
  RECOMMENDED patch 119254-88 is already present.
-- chk4patch 120272-28 /tmp/.patchout_20130507181559.5784
--  Newer version at line 297 found 120272-31
--  Final return status: 1
  RECOMMENDED patch 120272-28 is already present.
-- chk4patch 147147-26 /tmp/.patchout_20130507181559.5784
--  Final return status: 0
  RECOMMENDED patch 147147-26 is not present.
-- chk4patch 125358-15 /tmp/.patchout_altroot_20130507181559.5784
/opt/altroot -R /opt/altroot
-- Running patchadd -R /opt/altroot -p report...
--   Generating /tmp/.patchout_altroot_20130507181559.5784
patchadd -R /opt/altroot -p > /tmp/.patchout_altroot_20130507181559.5784
2>> /tmp/CommsInstaller_20130507181559.log
Cannot check name /opt/altroot/var/sadm/pkg.
Cannot open input /opt/altroot
-- Exit status: 0
--  Final return status: 0
  NSS patch 125358-15 is not present.
-- chk4patch 119345-08 /tmp/.patchout_altroot_20130507181559.5784
/opt/altroot -R /opt/altroot
--  Final return status: 0
  SASL patch 119345-08 is not present.
-- chk4patch 136798-03 /tmp/.patchout_altroot_20130507181559.5784
/opt/altroot -R /opt/altroot
--  Final return status: 0
```

```
  LDAPCSDK6_TOOLS patch 136798-03 is not present.
-- chk4patch 119810-07 /tmp/.patchout_altroot_20130507181559.5784
/opt/altroot -R /opt/altroot
--  Final return status: 0
  ICU patch 119810-07 is not present.
-- chk4patch 125136-35 /tmp/.patchout_altroot_20130507181559.5784
/opt/altroot -R /opt/altroot
--  Final return status: 0
  JDK patch 125136-35 is not present.
-- chk4patch 125137-35 /tmp/.patchout_altroot_20130507181559.5784
/opt/altroot -R /opt/altroot
--  Final return status: 0
  JDK patch 125137-35 is not present.
-- chk4patch 119725-06 /tmp/.patchout_altroot_20130507181559.5784
/opt/altroot -R /opt/altroot
--  Final return status: 0
  LDAPJDK patch 119725-06 is not present.
-- chk4patch 148582-03 /tmp/.patchout_altroot_20130507181559.5784
/opt/altroot -R /opt/altroot
--  Final return status: 0
  IMAPI patch 148582-03 is not present.
-- chk4patch 137204-28 /tmp/.patchout_altroot_20130507181559.5784
/opt/altroot -R /opt/altroot
--  Final return status: 0
  MS64 patch 137204-28 is not present.
-- chk4patch 118242-03 /tmp/.patchout_altroot_20130507181559.5784
/opt/altroot -R /opt/altroot
--  Final return status: 0
  DSSETUP patch 118242-03 is not present.
-- chk4patch 118245-24 /tmp/.patchout_altroot_20130507181559.5784
/opt/altroot -R /opt/altroot
--  Final return status: 0
  DSSETUP patch 118245-24 is not present.
-- chk4patch 142785-10 /tmp/.patchout_altroot_20130507181559.5784
/opt/altroot -R /opt/altroot
--  Final return status: 0
  DAV patch 142785-10 is not present.
-- chk4patch 148579-03 /tmp/.patchout_altroot_20130507181559.5784
/opt/altroot -R /opt/altroot
--  Final return status: 0
  IM patch 148579-03 is not present.
-- chk4patch 145711-06 /tmp/.patchout_altroot_20130507181559.5784
/opt/altroot -R /opt/altroot
--  Final return status: 0
  IWC patch 145711-06 is not present.
-- chk4patch 142824-16 /tmp/.patchout_altroot_20130507181559.5784
/opt/altroot -R /opt/altroot
--  Final return status: 0
  JISS patch 142824-16 is not present.
-- chk4patch 124581-07 /tmp/.patchout_altroot_20130507181559.5784
/opt/altroot -R /opt/altroot
--  Final return status: 0
  DA patch 124581-07 is not present.
-- chk4patch 137571-01 /tmp/.patchout_altroot_20130507181559.5784
/opt/altroot -R /opt/altroot
--  Final return status: 0
```

```
  IM_SCHA patch 137571-01 is not present.
====== QQQ detectProducts ======
QQQ Dumper
!!! present
$VAR1 = {
          '148579-03' => 'NOT_PRESENT',
          '142785-10' => 'NOT_PRESENT',
          'IWC' => {
                     '2.0' => 'NOT_PRESENT',
                     '1.0' => 'NOT_PRESENT'
                   },
          'SASL' => {
                      '2.19' => 'NOT_PRESENT'
                    },
          '119345-08' => 'NOT_PRESENT',
          'MS64_L10N' => {
                            '6.3' => 'NOT_PRESENT'
                          },
          '142824-16' => 'NOT_PRESENT',
          '119725-06' => 'NOT_PRESENT',
          '119810-07' => 'NOT_PRESENT',
          'MS' => {
                    '7.3_32' => 'NOT_PRESENT',
                    '7.2_32' => 'NOT_PRESENT',
                    '7.5_32' => 'NOT_PRESENT',
                    '6.3_32' => 'NOT_PRESENT'
                  },
          '137571-01' => 'NOT_PRESENT',
          'DSSETUP' => {
                          '6.4' => 'NOT_PRESENT'
                        },
          '126868-04' => 'PRESENT',
          '119254-88' => 'PRESENT',
          '120900-04' => 'PRESENT',
          '119963-27' => 'PRESENT',
          'MQ_L10N' => {
                          '4.3' => 'NOT_PRESENT',
                          '3.7' => 'NOT_PRESENT',
                          '4.1' => 'NOT_PRESENT',
                          '4.4' => 'NOT_PRESENT'
                        },
          'ICU' => {
                     'ICU2,ICU3' => 'NOT_PRESENT'
                   },
          '120272-28' => 'PRESENT',
          'MS64' => {
                      '7.5' => 'NOT_PRESENT',
                      '7.3_32' => 'NOT_PRESENT',
                      '7.5_32' => 'NOT_PRESENT',
                      '7.2_32' => 'NOT_PRESENT',
                      '6.3' => 'NOT_PRESENT',
                      '6.3_32' => 'NOT_PRESENT'
                    },
          'DAV' => {
                     '7.3' => 'NOT_PRESENT'
                   },
```

```
'LDAPCSDK6' => {
                '6.0' => 'NOT_PRESENT'
              },
'CE' => {
          '6.3' => 'NOT_PRESENT'
        },
'JDK' => {
           '1.6.0' => 'NOT_PRESENT',
           '1.5.0' => 'NOT_PRESENT'
         },
'125137-35' => 'NOT_PRESENT',
'MYSQL' => {
             '5.1.36' => 'NOT_PRESENT',
             '5.5.8' => 'NOT_PRESENT'
           },
'PATCHUTILS' => {
                  'Unknown' => 'PRESENT'
                },
'MQ' => {
          '4.3' => 'NOT_PRESENT',
          '3.7' => 'NOT_PRESENT',
          '4.1' => 'NOT_PRESENT',
          '4.4' => 'NOT_PRESENT'
        },
'125358-15' => 'NOT_PRESENT',
'CI' => {
          '7.4' => 'NOT_PRESENT'
        },
'IMAPI' => {
             '8.0' => 'NOT_PRESENT',
             '7.0' => 'NOT_PRESENT',
             '9.0' => 'NOT_PRESENT',
             '7.3' => 'NOT_PRESENT'
           },
'137321-01' => 'PRESENT',
'LDAPCSDK6_TOOLS' => {
                       '6.0' => 'NOT_PRESENT'
                     },
'125136-35' => 'NOT_PRESENT',
'JISS' => {
            '0.9' => 'NOT_PRESENT',
            '1.4' => 'NOT_PRESENT'
          },
'NSS' => {
           '4.8.8' => 'NOT_PRESENT'
         },
'CS_L10N' => {
               '6.2' => 'NOT_PRESENT',
               '6.3' => 'NOT_PRESENT'
             },
'ST' => {
          '1.1.4' => 'PRESENT'
        },
'IM' => {
          '8.3' => 'NOT_PRESENT',
          '7.0' => 'NOT_PRESENT',
```

```
          '9.0' => 'NOT_PRESENT',
          '7.3' => 'NOT_PRESENT'
        },
'RECOMMENDED' => {
                  '2013.02.19' => 'NOT_PRESENT'
                },
'IM_L10N' => {
              '7.2' => 'NOT_PRESENT',
              '7.0' => 'NOT_PRESENT'
            },
'136798-03' => 'NOT_PRESENT',
'CS_SCHA' => {
              '6.0' => 'NOT_PRESENT',
              '6.3' => 'NOT_PRESENT'
            },
'LDAPJDK' => {
              '4.21' => 'NOT_PRESENT'
            },
'MYSQL_MARKER' => {
                   '1.1' => 'NOT_PRESENT',
                   '1.0' => 'NOT_PRESENT'
                 },
'BZIP' => {
           '11.10' => 'PRESENT'
          },
'145711-06' => 'NOT_PRESENT',
'IM_SCHA' => {
              '7.0' => 'NOT_PRESENT',
              '7.3' => 'NOT_PRESENT'
            },
'148582-03' => 'NOT_PRESENT',
'MS_L10N' => {
              '6.2' => 'NOT_PRESENT',
              '6.3' => 'NOT_PRESENT'
            },
'LIBCPLUSPLUS' => {
                   '5.9' => 'PRESENT'
                 },
'121133-02' => 'PRESENT',
'118245-24' => 'NOT_PRESENT',
'118242-03' => 'NOT_PRESENT',
'MS_SCHA' => {
              '6.0' => 'NOT_PRESENT',
              '7.0' => 'NOT_PRESENT'
            },
'147147-26' => 'NOT_PRESENT',
'CS' => {
          '6.3' => 'NOT_PRESENT'
        },
'124581-07' => 'NOT_PRESENT',
'JHRT' => {
           '2.0' => 'NOT_PRESENT'
          },
'CE_L10N' => {
              '6.2' => 'NOT_PRESENT',
              '6.3' => 'NOT_PRESENT'
```

```
                        },
          'DA' => {
                    '6.4' => 'NOT_PRESENT',
                    '7.0' => 'NOT_PRESENT'
                  },
          '137204-28' => 'NOT_PRESENT'
        };
!!! pkgparams
$VAR1 = {
          'SUNWica5' => {},
          'SUNWmsgja' => {},
          'SUNWcomic' => {},
          'SUNWservicetagu' => {
                                  '1.1.4,REV=2008.03.21.07.54' => [

'SUNWservicetagu',
                                                                      '/',

'1.1.4.1',
                                                                      ''
                                                                    ]
                                  },
          'SUNWjimid' => {},
          'SUNWdiquc' => {},
          'SUNWmsgko' => {},
          'SUNWics5' => {},
          'SUNWmessaging-server-l10n-64' => {},
          'SUNWiqlpl' => {},
          'SUNWmsgco' => {},
          'SUNWfiquc' => {},
          'SUNWjiss-extjars' => {},
          'SUNWjhdem' => {},
          'SUNWiqfs' => {},
          'SUNWfimid' => {},
          'SUNWcomds' => {},
          'SUNWjhdev' => {},
          'SUNWj6rtx' => {},
          'SUNWiqum' => {},
          'SUNWduwc' => {},
          'SUNWhiimin' => {},
          'SUNWkiimin' => {},
          'SUNWeiimd' => {},
          'SUNWj6rt' => {},
          'SUNWj5rt' => {},
          'SUNWiimc-l10n' => {},
          'SUNWhiimc' => {},
          'SUNWmsg-l10n' => {},
          'SUNWfrics' => {},
          'SUNWciqu' => {},
          'SUNWkoics' => {},
          'SUNWdimid' => {},
          'SUNWjiquc' => {},
          'SUNWiimgw' => {},
          'SUNWiimd-l10n' => {},
          'SUNWhiquc' => {},
          'SUNWzhics' => {},
```

```
          'SUNWkiimd' => {},
          'SUNWiimfed' => {},
          'SUNWmsgmp' => {},
          'SUNWuwc' => {},
          'SUNWscics' => {},
          'SUNWiimc' => {},
          'SUNWhiimd' => {},
          'SUNWmessaging-server-scha' => {},
          'SUNWmsglb' => {},
          'SUNWtls' => {},
          'SUNWj6dvx' => {},
          'SUNWfuwc' => {},
          'SUNWlibC' => {
                         '5.10,REV=2004.12.22' => [
                                                    'SUNWlibC',
                                                    '/',
                                                    '5.10',
                                                    ''
                                                   ]
                       },
          'SUNWjiss-searchui' => {},
          'SUNWjiimin' => {},
          'SUNWcomms-mysql-marker' => {},
          'SUNWscims' => {},
          'SUNWiimjd' => {},
          'SUNWciimd' => {},
          'SUNWldapcsdk-dev' => {},
          'SUNWiqlen' => {},
          'SUNWiimid-l10n' => {},
          'SUNWiqr' => {},
          'SUNWdiimc' => {},
          'SUNWmsgwm' => {},
          'SUNWiimw' => {},
          'SUNWmessaging-server-64' => {},
          'SUNWeiquc' => {},
          'SUNWj5cfg' => {},
          'SUNWhiqu' => {},
          'SUNWjiss-search' => {},
          'SUNWiimdv' => {},
          'SUNWfiimd' => {},
          'SUNWj5rtx' => {},
          'SUNWiquc' => {},
          'SUNWiimid' => {},
          'SUNWmsgmt' => {},
          'SUNWljdk' => {},
          'SUNWcuwc' => {},
          'SUNWldapcsdk-libs' => {},
          'SUNWservicetagr' => {
                                '1.1.4,REV=2008.03.21.07.54' => [

'SUNWservicetagr',
                                                                  '/',

'1.1.4.1',
                                                                  ''
                                                                 ]
```

```
                                 },
          'SUNWciimc' => {},
          'SUNWjhrt' => {},
          'SUNWtlsd' => {},
          'SUNWmsgin' => {},
          'SUNWdtrc' => {
                         '11.10.0,REV=2005.01.21.15.53' => [

'SUNWdtrc',
                                                              '/',

'5.10/Generic',
                                                              ''
                                                            ]
                       },
          'SUNWhuwc' => {},
          'mysql' => {},
          'SUNWiqdoc' => {},
          'SUNWjiimd' => {},
          'SUNWjuwc' => {},
          'SUNWiimd' => {},
          'SUNWiqcrt' => {},
          'SUNWmsgzh' => {},
          'SUNWprd' => {},
          'SUNWjiss-conf' => {},
          'SUNWcommda' => {},
          'SUNWmsgen' => {},
          'SUNWjiss-store' => {},
          'SUNWiwc' => {},
          'SUNWjiss-storeui' => {},
          'SUNWiimin-l10n' => {},
          'SUNWiimsc' => {},
          'SUNWinstall-patch-utils-root' => {

'11.10,REV=2005.01.09.23.05' => [

'SUNWinstall-patch-utils-root',

'/',

'5.10',

''

]
                                                 },
          'SUNWiimin' => {},
          'SUNWuwc-l10n' => {},
          'SUNWmsgst' => {},
          'SUNWiqu' => {},
          'SUNWkiimc' => {},
          'SUNWiim' => {},
          'SUNWeiimin' => {},
          'SUNWcimid' => {},
          'SUNWiqcdv' => {},
          'SUNWldapcsdk-tools' => {},
```

```
          'SUNWjss' => {},
          'SUNWdiqu' => {},
          'SUNWjiss' => {},
          'SUNWj6cfg' => {},
          'SUNWhimid' => {},
          'SUNWciquc' => {},
          'SUNWcomms' => {},
          'SUNWjiqu' => {},
          'SUNWkiqu' => {},
          'SUNWkuwc' => {},
          'SUNWics-l10n' => {},
          'SUNWeiqu' => {},
          'SUNWmessaging-server' => {},
          'SUNWdavserver' => {},
          'SUNWmsgtw' => {},
          'SUNWeiimc' => {},
          'SUNWjaics' => {},
          'SUNWpkgcmdsu' => {
                              '11.11,REV=2005.01.09.23.05' => [

'SUNWpkgcmdsu',
                                                                  '/',
                                                                  '5.10',
                                                                  ''
                                                                ]
                            },
          'SUNWjiimc' => {},
          'SUNWeimid' => {},
          'SUNWiqjx' => {},
          'SUNWjhdoc' => {},
          'SUNWj6dev' => {},
          'SUNWmsges' => {},
          'SUNWpr' => {},
          'SUNWmsgmf' => {},
          'SUNWkimid' => {},
          'SUNWicu' => {},
          'SUNWjiss-rest' => {},
          'SUNWfiimin' => {},
          'SUNWswmt' => {
                          '11.10,REV=2005.01.10.17.19' => [
                                                             'SUNWswmt',
                                                             '/',
                                                             '5.10',
                                                             ''
                                                           ]
                        },
          'SUNWcomis' => {},
          'SUNWdeics' => {},
          'SUNWtwics' => {},
          'SUNWciimin' => {},
          'SUNWmsgfr' => {},
          'SUNWdiimd' => {},
          'SUNWjiss-common' => {},
          'SUNWeuwc' => {},
          'SUNWkiquc' => {},
          'SUNWstosreg' => {
```

```
                            '1.1.4,REV=2008.03.21.07.54' => [

'SUNWstosreg',
                                                                '/',

'1.1.4.1',
                                                                ''
                                                              ]
                          },
          'SUNWmsgde' => {},
          'SUNWjiss-jmqc' => {},
          'SUNWjiss-indexapi' => {},
          'SUNWbzip' => {
                         '11.10.0,REV=2005.01.08.05.16' => [

'SUNWbzip',
                                                                '/',

'5.10/SunOS Development',
                                                                ''
                                                              ]
                        },
          'SUNWtlsu' => {},
          'SUNWfiqu' => {},
          'SUNWsasl' => {},
          'SUNWfiimc' => {},
          'SUNWzoneu' => {
                           '11.10.0,REV=2005.01.21.15.53' => [

'SUNWzoneu',
                                                                '/',

'5.10/Generic',
                                                                ''
                                                              ]
                         },
          'SUNWcsr' => {
                         '11.10.0,REV=2005.01.21.15.53' => [
                                                              'SUNWcsr',
                                                              '/',

'5.10/Generic',
                                                              ''
                                                            ]
                        },
          'SUNWesics' => {},
          'SUNWiimm' => {}
        };
!!! installedprod
$VAR1 = {
          'PATCHUTILS' => {
                           'Unknown' => [
                                          '/',
                                          '5.10',
                                          'Not Found',
                                          'Unknown',
```

```
                                        'Not Found',
                                        'Not Found',
                                        'Not Found',
                                        '',
                                        'Not Found'
                                      ]
                          },
          'ST' => {
                    '1.1.4' => [
                                '/',
                                '1.1.4.1',
                                'Not Found',
                                '1.1.4',
                                'Not Found',
                                'Not Found',
                                'Not Found',
                                '',
                                'Not Found'
                              ]
                  },
          'LIBCPLUSPLUS' => {
                              '5.9' => [
                                        '/',
                                        '5.10',
                                        'Not Found',
                                        '5.9',
                                        'Not Found',
                                        'Not Found',
                                        'Not Found',
                                        '',
                                        'Not Found'
                                      ]
                            },
          'BZIP' => {
                      '11.10' => [
                                  '/',
                                  '5.10/SunOS Development',
                                  'Not Found',
                                  '11.10',
                                  'Not Found',
                                  'Not Found',
                                  'Not Found',
                                  '',
                                  'Not Found'
                                ]
                    }
        };
====== End QQQ detectProducts ======
-- Checking for RECOMMENDED patch 119254-88
   patch is PRESENT
-- Checking for RECOMMENDED patch 120272-28
   patch is PRESENT
-- Checking for RECOMMENDED patch 147147-26
   patch 147147-26: NOT_PRESENT
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
```

```
          patches are missing:
          147147-26
  NOTICE: You must apply the latest OS Recommended Patchset
          Some products will not work properly without it
Do you want to continue ? [no] : yes
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
====== QQQ ======
QQQ Dumper
!!! isUpgradable
$VAR1 = {};
!!! usePkgUpgradeFlag
$VAR1 = {};
Product Selection:

Shared Components (not shown) will be installed as required.
  you will be prompted later if Shared Components need to be upgraded.
OS patches (not shown) will be installed as required.

Communication Products:

    Item  Description
    ----  -----------
       1  Messaging Server (64bit) 7u5 (7.5-28.21)
       2  Comms DSsetup 6.4 (6.4-24.03)
       3  Calendar Server 7.0.3.10.0
       4  Instant Messaging 9.0.0.3.0
       5  Convergence 2 (2.0-6.01)
       6  Indexing and Search Service 1.0.4.16.0
       7  Comms Delegated Administrator 7 (7.0-7.00)
       8  Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
       9  Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)


Enter the items you wish to install. Enter q to quit.
Prefix an item with ~ to indicate you only want
  to install shared component dependencies of that product
You can enter multiple items using commas to separate them.
For example: 1,2

Please select the products you wish to install [1, 2, 3, 4, 5, 6, 7, 8,
9]: =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
QQQ selections: 0 MS64 0 DSSETUP 0 DAV 0 IM 0 IWC 0 JISS 0 DA 0 MS_SCHA
0 IM_SCHA
Generating list of things to install...
NOTICE: toInstall - PATCHUTILS IMAPI LDAPJDK ST JDK ICU SASL
LDAPCSDK6_TOOLS NSS MQ MQ_L10N LDAPCSDK6 BZIP JHRT LIBCPLUSPLUS MS64
DSSETUP DAV IM IWC JISS DA MS_SCHA IM_SCHA CI
Checking for Shared Component Upgrade Requirements...
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
  WILL INSTALL: Instant Messaging API 9
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IMAPI_20130507181559 SUNWiimdv
  WILL INSTALL: LDAPJDK 4.21
```

```
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPJDK_20130507181559 SUNWljdk
  WARNING: JDK is not in the distro, it will NOT be installed...
           Please obtain and install it separately
  WILL INSTALL: International Components for Unicode ICU2,ICU3
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_ICU_20130507181559 SUNWicu
  WILL INSTALL: Simple Authentication and Security Layer 2.19
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_SASL_20130507181559 SUNWsasl
  WILL INSTALL: LDAPCSDK6 Tools 6.0
                to /opt/altroot/directory
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPCSDK6_TOOLS_20130507181559 SUNWldapcsdk-tools
  WILL INSTALL: NSS/NSPR/JSS 4.8.8
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_NSS_20130507181559 SUNWjss
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_NSS_20130507181559 SUNWpr
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_NSS_20130507181559 SUNWprd
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_NSS_20130507181559 SUNWtls
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_NSS_20130507181559 SUNWtlsd
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
```

```
-r /tmp/.response_NSS_20130507181559 SUNWtlsu
  WILL INSTALL: Message Queue 4.4
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqr
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqu
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqdoc
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiquc
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqum
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqjx
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqfs
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqcrt
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqcdv
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqlen
  WILL INSTALL: Message Queue Localization 4.4
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
```

```
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWfiqu
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWfiquc
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWdiqu
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWdiquc
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWjiqu
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWjiquc
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWeiqu
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWeiquc
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWkiqu
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWkiquc
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWciqu
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
```

```
-r /tmp/.response_MQ_L10N_20130507181559 SUNWciquc
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWhiqu
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWhiquc
  WILL INSTALL: LDAPCSDK6 6.0
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPCSDK6_20130507181559 SUNWldapcsdk-libs
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPCSDK6_20130507181559 SUNWldapcsdk-dev
  WILL INSTALL: Java Help Runtime 2.0
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507181559 SUNWjhrt
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507181559 SUNWjhdev
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507181559 SUNWjhdem
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507181559 SUNWjhdoc
  WILL INSTALL: Messaging Server (64bit) 7u5 (7.5-28.21)
                to /opt/altroot/messaging64
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MS64_20130507181559 SUNWmessaging-server-64
  WILL INSTALL: Comms DSsetup 6.4 (6.4-24.03)
                to /opt/altroot/dssetup
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
```

```
-r /tmp/.response_DSSETUP_20130507181559 SUNWcomds
  WILL INSTALL: Calendar Server 7.0.3.10.0
                to /opt/altroot/davserver
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_DAV_20130507181559 SUNWdavserver
  WILL INSTALL: Instant Messaging 9.0.0.3.0
                to /opt/altroot/im
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiim
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiimin
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiimm
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiimjd
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiimid
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiimgw
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiimw
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiimfed
  WILL INSTALL: Convergence 2 (2.0-6.01)
                to /opt/altroot/iwc
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
```

```
-r /tmp/.response_IWC_20130507181559 SUNWiwc
  WILL INSTALL: Indexing and Search Service 1.0.4.16.0
                to /opt/altroot/jiss
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JISS_20130507181559 SUNWjiss
  WILL INSTALL: Comms Delegated Administrator 7 (7.0-7.00)
                to /opt/altroot/da
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_DA_20130507181559 SUNWcommda
  WILL INSTALL: Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
                to /opt/altroot/msg_scha
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MS_SCHA_20130507181559 SUNWmessaging-server-scha
  WILL INSTALL: Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)
                to /opt/altroot/im_scha
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_SCHA_20130507181559 SUNWiimsc
  WILL INSTALL: CommsInstaller 7.0.4.0.0
                to /opt/altroot/CommsInstaller
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_CI_20130507181559 SUNWcomms
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Ready to install

Do you want to continue ? [yes] :

============================================================
Installing Instant Messaging API 9...
------ Executing Task 1 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IMAPI_20130507181559 SUNWiimdv 2>&1
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Installation of <SUNWiimdv> was successful.
-- Exit status: 0

============================================================
```

```
Installing LDAPJDK 4.21...
------ Executing Task 2 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPJDK_20130507181559 SUNWljdk 2>&1

Installation of <SUNWljdk> was successful.
-- Exit status: 0

============================================================
Installing International Components for Unicode ICU2,ICU3...
------ Executing Task 3 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_ICU_20130507181559 SUNWicu 2>&1
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96793 blocks

Installation of <SUNWicu> was successful.
-- Exit status: 0

============================================================
Installing Simple Authentication and Security Layer 2.19...
------ Executing Task 4 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_SASL_20130507181559 SUNWsasl 2>&1
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Installation of <SUNWsasl> was successful.
-- Exit status: 0

============================================================
Installing LDAPCSDK6 Tools 6.0...
------ Executing Task 5 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPCSDK6_TOOLS_20130507181559 SUNWldapcsdk-tools 2>&1
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Installation of <SUNWldapcsdk-tools> was successful.
-- Exit status: 0

============================================================
Installing NSS/NSPR/JSS 4.8.8...
------ Executing Task 6 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_NSS_20130507181559 SUNWjss 2>&1
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Installation of <SUNWjss> was successful.
-- Exit status: 0
------ Executing Task 7 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_NSS_20130507181559 SUNWpr 2>&1
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Installation of <SUNWpr> was successful.
-- Exit status: 0
------ Executing Task 8 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_NSS_20130507181559 SUNWprd 2>&1
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Installation of <SUNWprd> was successful.
-- Exit status: 0
------ Executing Task 9 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_NSS_20130507181559 SUNWtls 2>&1
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Installation of <SUNWtls> was successful.
-- Exit status: 0
------ Executing Task 10 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_NSS_20130507181559 SUNWtlsd 2>&1
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Installation of <SUNWtlsd> was successful.
-- Exit status: 0
------ Executing Task 11 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_NSS_20130507181559 SUNWtlsu 2>&1
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Installation of <SUNWtlsu> was successful.
-- Exit status: 0

============================================================
Installing Message Queue 4.4...
------ Executing Task 12 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqr 2>&1
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Installation of <SUNWiqr> was successful.
-- Exit status: 0
------ Executing Task 13 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqu 2>&1
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Installation of <SUNWiqu> was successful.
-- Exit status: 0
------ Executing Task 14 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqdoc 2>&1
```

```
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Installation of <SUNWiqdoc> was successful.
-- Exit status: 0
------ Executing Task 15 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiquc 2>&1
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Installation of <SUNWiquc> was successful.
-- Exit status: 0
------ Executing Task 16 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqum 2>&1
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Installation of <SUNWiqum> was successful.
-- Exit status: 0
------ Executing Task 17 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqjx 2>&1
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Installation of <SUNWiqjx> was successful.
-- Exit status: 0
------ Executing Task 18 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqfs 2>&1
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Installation of <SUNWiqfs> was successful.
-- Exit status: 0
------ Executing Task 19 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqcrt 2>&1
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```

```
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Installation of <SUNWiqcrt> was successful.
-- Exit status: 0
------ Executing Task 20 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqcdv 2>&1
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Installation of <SUNWiqcdv> was successful.
-- Exit status: 0
------ Executing Task 21 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqlen 2>&1
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Installation of <SUNWiqlen> was successful.
-- Exit status: 0

============================================================
Installing Message Queue Localization 4.4...
------ Executing Task 22 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWfiqu 2>&1
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Installation of <SUNWfiqu> was successful.
-- Exit status: 0
------ Executing Task 23 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWfiquc 2>&1
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Installation of <SUNWfiquc> was successful.
-- Exit status: 0
------ Executing Task 24 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
```

```
-r /tmp/.response_MQ_L10N_20130507181559 SUNWdiqu 2>&1
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Installation of <SUNWdiqu> was successful.
-- Exit status: 0
------ Executing Task 25 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWdiquc 2>&1
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Installation of <SUNWdiquc> was successful.
-- Exit status: 0
------ Executing Task 26 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWjiqu 2>&1
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Installation of <SUNWjiqu> was successful.
-- Exit status: 0
------ Executing Task 27 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWjiquc 2>&1
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Installation of <SUNWjiquc> was successful.
-- Exit status: 0
------ Executing Task 28 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWeiqu 2>&1
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Installation of <SUNWeiqu> was successful.
-- Exit status: 0
------ Executing Task 29 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWeiquc 2>&1
```

```
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Installation of <SUNWeiquc> was successful.
-- Exit status: 0
------ Executing Task 30 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWkiqu 2>&1
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Installation of <SUNWkiqu> was successful.
-- Exit status: 0
------ Executing Task 31 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWkiquc 2>&1
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Installation of <SUNWkiquc> was successful.
-- Exit status: 0
------ Executing Task 32 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWciqu 2>&1
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Installation of <SUNWciqu> was successful.
-- Exit status: 0
------ Executing Task 33 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWciquc 2>&1
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Installation of <SUNWciquc> was successful.
-- Exit status: 0
------ Executing Task 34 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWhiqu 2>&1
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```

```
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Installation of <SUNWhiqu> was successful.
-- Exit status: 0
------ Executing Task 35 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWhiquc 2>&1
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Installation of <SUNWhiquc> was successful.
-- Exit status: 0

============================================================
Installing LDAPCSDK6 6.0...
------ Executing Task 36 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPCSDK6_20130507181559 SUNWldapcsdk-libs 2>&1
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Installation of <SUNWldapcsdk-libs> was successful.
-- Exit status: 0
------ Executing Task 37 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPCSDK6_20130507181559 SUNWldapcsdk-dev 2>&1
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Installation of <SUNWldapcsdk-dev> was successful.
-- Exit status: 0

============================================================
Installing Java Help Runtime 2.0...
------ Executing Task 38 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507181559 SUNWjhrt 2>&1
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1127 blocks

Installation of <SUNWjhrt> was successful.
-- Exit status: 0
------ Executing Task 39 of 58 ...
```

```
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507181559 SUNWjhdev 2>&1
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709 blocks

Installation of <SUNWjhdev> was successful.
-- Exit status: 0
------ Executing Task 40 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507181559 SUNWjhdem 2>&1
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6466 blocks

Installation of <SUNWjhdem> was successful.
-- Exit status: 0
------ Executing Task 41 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507181559 SUNWjhdoc 2>&1
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10385 blocks

Installation of <SUNWjhdoc> was successful.
-- Exit status: 0

============================================================
Installing Messaging Server (64bit) 7u5 (7.5-28.21)...
------ Executing Task 42 of 58 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MS64_20130507181559 SUNWmessaging-server-64 2>&1
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Installation of <SUNWmessaging-server-64> was successful.
-- Exit status: 0

============================================================
Installing Comms DSsetup 6.4 (6.4-24.03)...
------ Executing Task 43 of 58 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
```

```
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_DSSETUP_20130507181559 SUNWcomds 2>&1
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Installation of <SUNWcomds> was successful.
-- Exit status: 0

============================================================
Installing Calendar Server 7.0.3.10.0...
------ Executing Task 44 of 58 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_DAV_20130507181559 SUNWdavserver 2>&1
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Installation of <SUNWdavserver> was successful.
-- Exit status: 0

============================================================
Installing Instant Messaging 9.0.0.3.0...
------ Executing Task 45 of 58 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiim 2>&1
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Installation of <SUNWiim> was successful.
-- Exit status: 0
------ Executing Task 46 of 58 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiimin 2>&1
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Installation of <SUNWiimin> was successful.
-- Exit status: 0
------ Executing Task 47 of 58 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiimm 2>&1
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```

```
Installation of <SUNWiimm> was successful.
-- Exit status: 0
------ Executing Task 48 of 58 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiimjd 2>&1
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Installation of <SUNWiimjd> was successful.
-- Exit status: 0
------ Executing Task 49 of 58 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiimid 2>&1
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Installation of <SUNWiimid> was successful.
-- Exit status: 0
------ Executing Task 50 of 58 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiimgw 2>&1
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Installation of <SUNWiimgw> was successful.
-- Exit status: 0
------ Executing Task 51 of 58 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiimw 2>&1
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Installation of <SUNWiimw> was successful.
-- Exit status: 0
------ Executing Task 52 of 58 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiimfed 2>&1
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Installation of <SUNWiimfed> was successful.
```

```
-- Exit status: 0

============================================================
Installing Convergence 2 (2.0-6.01)...
------ Executing Task 53 of 58 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IWC_20130507181559 SUNWiwc 2>&1
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Installation of <SUNWiwc> was successful.
-- Exit status: 0

============================================================
Installing Indexing and Search Service 1.0.4.16.0...
------ Executing Task 54 of 58 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JISS_20130507181559 SUNWjiss 2>&1
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Installation of <SUNWjiss> was successful.
-- Exit status: 0

============================================================
Installing Comms Delegated Administrator 7 (7.0-7.00)...
------ Executing Task 55 of 58 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_DA_20130507181559 SUNWcommda 2>&1
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Installation of <SUNWcommda> was successful.
-- Exit status: 0

============================================================
Installing Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)...
------ Executing Task 56 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MS_SCHA_20130507181559 SUNWmessaging-server-scha 2>&1
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Installation of <SUNWmessaging-server-scha> was successful.
-- Exit status: 0
```

```
============================================================
Installing Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)...
------ Executing Task 57 of 58 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_SCHA_20130507181559 SUNWiimsc 2>&1
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PROPRIETARY/CONFIDENTIAL
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Installation of <SUNWiimsc> was successful.
-- Exit status: 0

============================================================
Installing CommsInstaller 7.0.4.0.0...
------ Executing Task 58 of 58 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_CI_20130507181559 SUNWcomms 2>&1
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reserved.
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Installation of <SUNWcomms> was successful.
-- Exit status: 0
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
SUMMARY:

PASSED: Task 1: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IMAPI_20130507181559 SUNWiimdv
PASSED: Task 2: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPJDK_20130507181559 SUNWljdk
PASSED: Task 3: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_ICU_20130507181559 SUNWicu
PASSED: Task 4: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_SASL_20130507181559 SUNWsasl
PASSED: Task 5: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
```

```
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPCSDK6_TOOLS_20130507181559 SUNWldapcsdk-tools
PASSED: Task 6: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_NSS_20130507181559 SUNWjss
PASSED: Task 7: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_NSS_20130507181559 SUNWpr
PASSED: Task 8: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_NSS_20130507181559 SUNWprd
PASSED: Task 9: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_NSS_20130507181559 SUNWtls
PASSED: Task 10: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_NSS_20130507181559 SUNWtlsd
PASSED: Task 11: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_NSS_20130507181559 SUNWtlsu
PASSED: Task 12: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqr
PASSED: Task 13: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqu
PASSED: Task 14: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqdoc
PASSED: Task 15: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiquc
PASSED: Task 16: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
```

```
-r /tmp/.response_MQ_20130507181559 SUNWiqum
PASSED: Task 17: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqjx
PASSED: Task 18: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqfs
PASSED: Task 19: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqcrt
PASSED: Task 20: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqcdv
PASSED: Task 21: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507181559 SUNWiqlen
PASSED: Task 22: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWfiqu
PASSED: Task 23: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWfiquc
PASSED: Task 24: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWdiqu
PASSED: Task 25: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWdiquc
PASSED: Task 26: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWjiqu
PASSED: Task 27: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWjiquc
```

```
PASSED: Task 28: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWeiqu
PASSED: Task 29: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWeiquc
PASSED: Task 30: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWkiqu
PASSED: Task 31: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWkiquc
PASSED: Task 32: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWciqu
PASSED: Task 33: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWciquc
PASSED: Task 34: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWhiqu
PASSED: Task 35: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507181559 SUNWhiquc
PASSED: Task 36: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPCSDK6_20130507181559 SUNWldapcsdk-libs
PASSED: Task 37: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPCSDK6_20130507181559 SUNWldapcsdk-dev
PASSED: Task 38: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507181559 SUNWjhrt
PASSED: Task 39: pkgadd -a
```

```
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507181559 SUNWjhdev
PASSED: Task 40: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507181559 SUNWjhdem
PASSED: Task 41: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507181559 SUNWjhdoc
PASSED: Task 42: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MS64_20130507181559 SUNWmessaging-server-64
PASSED: Task 43: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_DSSETUP_20130507181559 SUNWcomds
PASSED: Task 44: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_DAV_20130507181559 SUNWdavserver
PASSED: Task 45: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiim
PASSED: Task 46: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiimin
PASSED: Task 47: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiimm
PASSED: Task 48: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiimjd
PASSED: Task 49: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiimid
PASSED: Task 50: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
```

```
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiimgw
PASSED: Task 51: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiimw
PASSED: Task 52: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507181559 SUNWiimfed
PASSED: Task 53: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IWC_20130507181559 SUNWiwc
PASSED: Task 54: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JISS_20130507181559 SUNWjiss
PASSED: Task 55: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_DA_20130507181559 SUNWcommda
PASSED: Task 56: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MS_SCHA_20130507181559 SUNWmessaging-server-scha
PASSED: Task 57: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_SCHA_20130507181559 SUNWiimsc
PASSED: Task 58: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n -R /opt/altroot -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_CI_20130507181559 SUNWcomms

All tasks PASSED
Checking JES java symlink...
ls -l /usr/jdk /usr/java 2>&1
lrwxrwxrwx   1 root     other         15 May  7 17:34 /usr/java ->
jdk/jdk1.5.0_12

/usr/jdk:
total 9
drwxr-xr-x   4 root     bin            4 Jun 12  2012 instances
lrwxrwxrwx   1 root     other          7 Jun 12  2012 j2sdk1.4.2_32 ->
../j2se
lrwxrwxrwx   1 root     other         18 Feb 26 14:05 jdk1.5.0_12 ->
```

```
instances/jdk1.5.0
lrwxrwxrwx   1 root     other         11 May  7 17:34 latest ->
jdk1.5.0_12
drwxr-xr-x   8 root     bin            8 May  7 17:41 packages
-- Exit status: 0
ls -l /usr/jdk/entsys-j2se /usr/jdk/latest 2>&1
/usr/jdk/entsys-j2se: No such file or directory
lrwxrwxrwx   1 root     other         11 May  7 17:34 /usr/jdk/latest ->
jdk1.5.0_12
-- Exit status: 2
ls -lL /usr/jdk/entsys-j2se /usr/jdk/latest 2>&1
/usr/jdk/entsys-j2se: No such file or directory
/usr/jdk/latest:
total 34560
-rw-r--r--   1 root     bin         2487 May  2  2007 COPYRIGHT
-rw-r--r--   1 root     bin        11827 Oct  2  2011 README.html
-rw-r--r--   1 root     bin        67265 Oct  2  2011
THIRDPARTYLICENSEREADME.txt
drwxr-xr-x   3 root     bin           41 May  7 17:41 bin
drwxr-xr-x   9 root     bin           10 Jun 12  2012 demo
drwxr-xr-x   3 root     bin            9 Jun 12  2012 include
drwxr-xr-x   6 root     bin           12 Feb 26 14:05 jre
drwxr-xr-x   2 root     bin            9 Jun 12  2012 lib
drwxr-xr-x   6 root     bin            6 Jun 12  2012 man
-r--r--r--   1 root     other       5264 Feb 12 15:49 register.html
-r--r--r--   1 root     other       5702 Feb 12 15:49 register_ja.html
-r--r--r--   1 root     other       4862 Feb 12 15:49
register_zh_CN.html
drwxr-xr-x   4 root     bin            4 Jun 12  2012 sample
-rw-r--r--   1 root     bin      17483215 Oct  2  2011 src.zip
-- Exit status: 2
INFO: /etc/softlist.xml updated

Hit Return to Continue:
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
-- unlink /tmp/.response_IMAPI_20130507181559
-- unlink /tmp/.response_LDAPJDK_20130507181559
-- unlink /tmp/.response_ICU_20130507181559
-- unlink /tmp/.response_SASL_20130507181559
-- unlink /tmp/.response_LDAPCSDK6_TOOLS_20130507181559
-- unlink /tmp/.response_NSS_20130507181559
-- unlink /tmp/.response_MQ_20130507181559
-- unlink /tmp/.response_MQ_L10N_20130507181559
-- unlink /tmp/.response_LDAPCSDK6_20130507181559
-- unlink /tmp/.response_JHRT_20130507181559
-- unlink /tmp/.response_MS64_20130507181559
-- unlink /tmp/.response_DSSETUP_20130507181559
-- unlink /tmp/.response_DAV_20130507181559
-- unlink /tmp/.response_IM_20130507181559
-- unlink /tmp/.response_IWC_20130507181559
-- unlink /tmp/.response_JISS_20130507181559
-- unlink /tmp/.response_DA_20130507181559
-- unlink /tmp/.response_MS_SCHA_20130507181559
-- unlink /tmp/.response_IM_SCHA_20130507181559
-- unlink /tmp/.response_CI_20130507181559
-- unlink /tmp/.patchout_20130507181559.5784
```

```
-- unlink /tmp/.patchout_altroot_20130507181559.5784
mkdir -p /opt/altroot/var/opt/CommsInstaller/logs 2>&1
-- Exit status: 0

NOTICE: To undo the installation, run the commands in:

/opt/altroot/var/opt/CommsInstaller/logs/undoCommsInstall_20130507181559

NOTICE: silent file created in:

/opt/altroot/var/opt/CommsInstaller/logs/silent_CommsInstaller_201305071815
Closing the log at Tue May  7 18:17:07 2013
[950 Tue May 07 18:17:46 root@host1% /home/user/wspace/releases/ci74# ]
# ./commpkg info
-- LOGFILE: /tmp/CommsInstaller_20130507181750.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: It is highly recommended that you apply the
          latest OS Recommended Patch Cluster. commpkg will
          not do this automatically.
ALTROOT: /
  NAME: ""

=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: It is highly recommended that you apply the
          latest OS Recommended Patch Cluster. commpkg will
          not do this automatically.
ALTROOT: /opt/altroot
  NAME: <none>
  Product: Messaging Server (64bit) 7u5 64bit
           Oracle Version: Not Found
           Version: 7.5-28.21
           ALTROOT: /opt/altroot
           Basedir: /opt/altroot/messaging64
           Build Date: 20130408
  Product: Comms DSsetup 6.4
           Oracle Version: Not Found
           Version: 6.4-24.03
           ALTROOT: /opt/altroot
           Basedir: /opt/altroot/dssetup
           Build Date: 20120611
  Product: Calendar Server 7u3
           Oracle Version: 7.0.3.10.0
```

```
            Version: 7.3-10.10
            ALTROOT: /opt/altroot
            Basedir: /opt/altroot/davserver
            Build Date: 20130328
  Product: Instant Messaging 9
            Oracle Version: Not Found
            Version: 9.0-03.02
            ALTROOT: /opt/altroot
            Basedir: /opt/altroot/im
            Build Date: Not Found
  Product: Convergence 2
            Oracle Version: Not Found
            Version: 2.0-6.01
            ALTROOT: /opt/altroot
            Basedir: /opt/altroot/iwc
            Build Date: 20130402
  Product: Indexing and Search Service 1u4
            Oracle Version: 1.0.4.16.0
            Version: 1.4-16.9301
            ALTROOT: /opt/altroot
            Basedir: /opt/altroot/jiss
            Build Date: 20130320
  Product: Comms Delegated Administrator 7
            Oracle Version: Not Found
            Version: 7.0-7.00
            ALTROOT: /opt/altroot
            Basedir: /opt/altroot/da
            Build Date: Not Found
  Product: Messaging Server Sun Cluster HA agent 7.0
            Oracle Version: Not Found
            Version: 7.0-0.03
            ALTROOT: /opt/altroot
            Basedir: /opt/altroot/msg_scha
            Build Date: 20080519
  Product: Instant Messaging Sun Cluster HA agent 7.3
            Oracle Version: Not Found
            Version: 7.3-01
            ALTROOT: /opt/altroot
            Basedir: /opt/altroot/im_scha
            Build Date: Not Found

[951 Tue May 07 18:18:22 root@host1% /home/user/wspace/releases/ci74# ]
# ./commpkg info --verbose
-- LOGFILE: /tmp/CommsInstaller_20130507181910.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: It is highly recommended that you apply the
          latest OS Recommended Patch Cluster. commpkg will
          not do this automatically.
```

```
ALTROOT: /
  NAME: ""

=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: It is highly recommended that you apply the
          latest OS Recommended Patch Cluster. commpkg will
          not do this automatically.
ALTROOT: /opt/altroot
  NAME: <none>
  Product: Messaging Server (64bit) 7u5 64bit
           Oracle Version: Not Found
           Version: 7.5-28.21
           ALTROOT: /opt/altroot
           Basedir: /opt/altroot/messaging64
           Build Date: 20130408
           getVersion UNAME: SunOS
           getVersion ARCH: sparc
           getVersion BITS: 64
           Product Installation Status: PRESENT
           Package Status/Name/Version:
             PRESENT  SUNWmessaging-server-64 7.0,REV=2008.06.20
  Product: Comms DSsetup 6.4
           Oracle Version: Not Found
           Version: 6.4-24.03
           ALTROOT: /opt/altroot
           Basedir: /opt/altroot/dssetup
           Build Date: 20120611
           getVersion UNAME: SunOS
           getVersion ARCH: sparc
           getVersion BITS: 32
           Product Installation Status: PRESENT
           Package Status/Name/Version:
             PRESENT  SUNWcomds        6.3,REV=2004.08.12
  Product: Calendar Server 7u3
           Oracle Version: 7.0.3.10.0
           Version: 7.3-10.10
           ALTROOT: /opt/altroot
           Basedir: /opt/altroot/davserver
           Build Date: 20130328
           getVersion UNAME: SunOS
           getVersion ARCH: sparc
           getVersion BITS: 32
           Product Installation Status: PRESENT
           Package Status/Name/Version:
             PRESENT  SUNWdavserver    7.0,REV=2009.08.27
  Product: Instant Messaging 9
           Oracle Version: Not Found
           Version: 9.0-03.02
           ALTROOT: /opt/altroot
           Basedir: /opt/altroot/im
```

```
          Build Date: Not Found
          getVersion UNAME: Not Found
          getVersion ARCH: Not Found
          getVersion BITS: Not Found
          Product Installation Status: PRESENT
          Package Status/Name/Version:
            PRESENT  SUNWiim          9.0,REV=2011.09.05
            PRESENT  SUNWiimin        9.0,REV=2011.09.05
            PRESENT  SUNWiimm         9.0,REV=2011.09.05
            PRESENT  SUNWiimjd        9.0,REV=2011.09.05
            PRESENT  SUNWiimid        9.0,REV=2011.09.05
            PRESENT  SUNWiimgw        9.0,REV=2011.09.05
            PRESENT  SUNWiimw         9.0,REV=2011.09.05
            PRESENT  SUNWiimfed       9.0,REV=2011.09.05
Product: Convergence 2
          Oracle Version: Not Found
          Version: 2.0-6.01
          ALTROOT: /opt/altroot
          Basedir: /opt/altroot/iwc
          Build Date: 20130402
          getVersion UNAME: SunOS
          getVersion ARCH: sparc
          getVersion BITS: 32
          Product Installation Status: PRESENT
          Package Status/Name/Version:
            PRESENT  SUNWiwc          2.0,REV=2010.07.26
Product: Indexing and Search Service 1u4
          Oracle Version: 1.0.4.16.0
          Version: 1.4-16.9301
          ALTROOT: /opt/altroot
          Basedir: /opt/altroot/jiss
          Build Date: 20130320
          getVersion UNAME: SunOS
          getVersion ARCH: all
          getVersion BITS: 32
          Product Installation Status: PRESENT
          Package Status/Name/Version:
            PRESENT  SUNWjiss         1.0,REV=2009.09.09
Product: Comms Delegated Administrator 7
          Oracle Version: Not Found
          Version: 7.0-7.00
          ALTROOT: /opt/altroot
          Basedir: /opt/altroot/da
          Build Date: Not Found
          getVersion UNAME: SunOS
          getVersion ARCH: sparc
          getVersion BITS: 32
          Product Installation Status: PRESENT
          Package Status/Name/Version:
            PRESENT  SUNWcommda       7.0,REV=2009.03.31
Product: Messaging Server Sun Cluster HA agent 7.0
          Oracle Version: Not Found
          Version: 7.0-0.03
          ALTROOT: /opt/altroot
          Basedir: /opt/altroot/msg_scha
          Build Date: 20080519
```

```
            getVersion UNAME: SunOS
            getVersion ARCH: sparc
            getVersion BITS: 32
            Product Installation Status: PRESENT
            Package Status/Name/Version:
              PRESENT  SUNWmessaging-server-scha 7.0,REV=2008.05.19
  Product: Instant Messaging Sun Cluster HA agent 7.3
            Oracle Version: Not Found
            Version: 7.3-01
            ALTROOT: /opt/altroot
            Basedir: /opt/altroot/im_scha
            Build Date: Not Found
            getVersion UNAME: Not Found
            getVersion ARCH: Not Found
            getVersion BITS: Not Found
            Product Installation Status: PRESENT
            Package Status/Name/Version:
              PRESENT  SUNWiimsc        7.3,REV=2008.01.07.20.24.34

[952 Tue May 07 18:19:28 root@host1% /home/user/wspace/releases/ci74# ]
# ./commpkg uninstall /opt/altroot
-- LOGFILE: /tmp/CommsInstaller_20130507181939.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013
Detecting Installed Products...
Detecting Installed Patches...
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Product Selection:

Communication Products:

    Item  Description
    ----  -----------
       1  Messaging Server (64bit) 7u5 (7.5-28.21)
          Installed Version at /opt/altroot/messaging64
       2  Comms DSsetup 6.4 (6.4-24.03)
          Installed Version at /opt/altroot/dssetup
       3  Calendar Server 7.0.3.10.0
          Installed Version at /opt/altroot/davserver
       4  Instant Messaging 9 (9.0-03.02)
          Installed Version at /opt/altroot/im
       5  Convergence 2 (2.0-6.01)
          Installed Version at /opt/altroot/iwc
       6  Indexing and Search Service 1.0.4.16.0
          Installed Version at /opt/altroot/jiss
       7  Comms Delegated Administrator 7 (7.0-7.00)
          Installed Version at /opt/altroot/da
       8  Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
          Installed Version at /opt/altroot/msg_scha
       9  Instant Messaging Sun Cluster HA agent 7.3 (7.3-01)
          Installed Version at /opt/altroot/im_scha

Enter the items you wish to uninstall. Enter q to quit.
You can enter multiple items using commas to separate them.
For example: 1,2
```

```
Please select the products you wish to uninstall [1, 2, 3, 4, 5, 6, 7,
8, 9]:
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
  WILL UNINSTALL: Messaging Server (64bit) 7u5 (7.5-28.21)
                  at /opt/altroot/messaging64
  WILL UNINSTALL: Comms DSsetup 6.4 (6.4-24.03)
                  at /opt/altroot/dssetup
  WILL UNINSTALL: Calendar Server 7.0.3.10.0
                  at /opt/altroot/davserver
  WILL UNINSTALL: Instant Messaging 9 (9.0-03.02)
                  at /opt/altroot/im
  WILL UNINSTALL: Convergence 2 (2.0-6.01)
                  at /opt/altroot/iwc
  WILL UNINSTALL: Indexing and Search Service 1.0.4.16.0
                  at /opt/altroot/jiss
  WILL UNINSTALL: Comms Delegated Administrator 7 (7.0-7.00)
                  at /opt/altroot/da
  WILL UNINSTALL: Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
                  at /opt/altroot/msg_scha
  WILL UNINSTALL: Instant Messaging Sun Cluster HA agent 7.3 (7.3-01)
                  at /opt/altroot/im_scha
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Ready to uninstall

Do you want to continue ? [yes] :

============================================================
Uninstalling Messaging Server (64bit) 7u5 (7.5-28.21) at
/opt/altroot/messaging64)...
------ Executing Task 1 of 16 ...

============================================================
Uninstalling Comms DSsetup 6.4 (6.4-24.03) at /opt/altroot/dssetup)...
------ Executing Task 2 of 16 ...

============================================================
Uninstalling Calendar Server 7.0.3.10.0 at /opt/altroot/davserver)...
------ Executing Task 3 of 16 ...

============================================================
Uninstalling Instant Messaging 9 (9.0-03.02) at /opt/altroot/im)...
------ Executing Task 4 of 16 ...
------ Executing Task 5 of 16 ...
------ Executing Task 6 of 16 ...
------ Executing Task 7 of 16 ...
------ Executing Task 8 of 16 ...
------ Executing Task 9 of 16 ...
------ Executing Task 10 of 16 ...
------ Executing Task 11 of 16 ...

============================================================
Uninstalling Convergence 2 (2.0-6.01) at /opt/altroot/iwc)...
------ Executing Task 12 of 16 ...

============================================================
Uninstalling Indexing and Search Service 1.0.4.16.0 at
```

```
/opt/altroot/jiss)...
------ Executing Task 13 of 16 ...

============================================================
Uninstalling Comms Delegated Administrator 7 (7.0-7.00) at
/opt/altroot/da)...
------ Executing Task 14 of 16 ...

============================================================
Uninstalling Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03) at
/opt/altroot/msg_scha)...
------ Executing Task 15 of 16 ...

============================================================
Uninstalling Instant Messaging Sun Cluster HA agent 7.3 (7.3-01) at
/opt/altroot/im_scha)...
------ Executing Task 16 of 16 ...
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
SUMMARY:


All tasks PASSED
Checking JES java symlink...
INFO: no update to /etc/softlist.xml required

Hit Return to Continue:
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=

NOTICE: silent file created in:

/opt/altroot/var/opt/CommsInstaller/logs/silent_CommsInstaller_201305071819
LOGFILE  created in:

/opt/altroot/var/opt/CommsInstaller/logs/CommsInstaller_20130507181939.log
Tue May 07 18:20:02 root@host1% /home/user/wspace/releases/ci74# ]
# cat
/opt/altroot/var/opt/CommsInstaller/logs/silent_CommsInstaller_201305071819
Silent File for CommsInstaller 7.0.4.0.0 (7.4-0.05)
# Generated on 20130507181939
#

#
#
# verb used to create this silent file
VERB=uninstall

#
# root directory
#
ROOTDIR=/opt/altroot

#
# list of components (using mnemonics)
# WARNING: for verb=uninstall, when there are multiple
#          instances, the latest known version found is uninstalled
#
```

```
COMPONENTS=MS64 DSSETUP DAV IM IWC JISS DA MS_SCHA IM_SCHA
COMPONENT_VERSIONS= 7.5 6.4 7.3 9.0 2.0 1.4 7.0 7.0 7.3
[954 Tue May 07 18:20:12 root@host1% /home/user/wspace/releases/ci74# ]
# cat
/opt/altroot/var/opt/CommsInstaller/logs/CommsInstaller_20130507181939.log
LOGFILE started Tue May  7 18:19:39 2013 ==========
LOGFILE = /tmp/CommsInstaller_20130507181939.log
Running /usr/bin/perl ./commpkg
-- /usr/bin/perl ./commpkg uninstall /opt/altroot
-- ARGS:
   uninstall
   /opt/altroot
-- perl version: 5.008004 pid: 7771
-- basetime: 1367975979 Tue May  7 18:19:39 2013
-- scriptDir:
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74
-- LOGFILE: /tmp/CommsInstaller_20130507181939.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013
-- UNAME = SunOS ARCH = sparc OS_VERS = 5.10 BITS = 64
uname -a 2>&1
SunOS host1 5.10 Generic_147440-12 sun4v sparc sun4v
-- Exit status: 0
!!! ENV
$VAR1 = {
          'HOME' => '/',
          'PS1' => '[\\! \\d \\t \\u@\\h% \\w\\$ ]
\\$ ',
          'LC_COLLATE' => '',
          'LC_ALL' => '',
          'CDPATH' => ':..:/home/user',
          'LC_NUMERIC' => '',
          'MAIL' => '/var/mail/uadmin',
          'TZ' => 'PST8PDT',
          'PWD' => '/home/user/wspace/releases/ci74',
          'LC_TIME' => '',
          'LANG' => 'C',
          'LC_MESSAGES' => '',
          'LC_CTYPE' => '',
          'LOGNAME' => 'uadmin',
          'SHLVL' => '1',
          'OLDPWD' => '/home/user/wspace/releases',
          'LC_MONETARY' => '',
          '_' => './commpkg',
          'PATH' =>
'/bin:/usr/bin:/usr/sbin:/sbin:/usr/etc::~user/bin:/usr/sbin:/usr/bin',
          'SHELL' => '/bin/sh',
          'HZ' => '',
          'TERM' => 'dumb'
        };
cat /etc/release 2>&1
                   Oracle Solaris 10 8/11 s10s_u10wos_17b SPARC
  Copyright (c) 1983, 2011, Oracle and/or its affiliates. All rights
reserved.
                            Assembled 23 August 2011
-- Exit status: 0
```

```
-- Recognized OS_VERS
/usr/bin/pkgcond -n is_what 2>&1
can_add_driver=0
can_remove_driver=0
can_update_driver=0
is_alternative_root=0
is_boot_environment=0
is_diskless_client=0
is_global_zone=1
is_mounted_miniroot=0
is_netinstall_image=0
is_nonglobal_zone=0
is_path_writable=1
is_running_system=1
is_sparse_root_nonglobal_zone=0
is_whole_root_nonglobal_zone=0
-- Exit status: 1
/usr/bin/pkgcond -n is_global_zone 2>&1
-- Exit status: 1
/usr/bin/pkgcond -n is_sparse_root_nonglobal_zone 2>&1
-- Exit status: 0
Reading Product Files...
Reading
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
```

```
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
```

```
not found, skipping...
Reading OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
```

```
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
QQQ findGetVersion ======
!!! getVersion
$VAR1 = {
          'SASL' => 'none',
          'IWC' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunC
'MS64_L10N' => 'none',
          'MS' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunC
'DSSETUP' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunC
'MQ_L10N' => 'none',
          'ICU' => 'none',
          'MS64' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunC
'DAV' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunC
'LDAPCSDK6' => 'none',
          'CE' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunC
'JDK' => 'none',
          'MYSQL' => 'none',
          'PATCHUTILS' => 'none',
          'MQ' => 'none',
          'IMAPI' => 'none',
          'CI' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.ins
'LDAPCSDK6_TOOLS' => 'none',
          'JISS' =>
```

```
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'NSS' => 'none',
          'CS_L10N' => 'none',
          'IM' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'ST' => 'none',
          'RECOMMENDED' => 'none',
          'IM_L10N' => 'none',
          'CS_SCHA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'LDAPJDK' => 'none',
          'BZIP' => 'none',
          'MYSQL_MARKER' => 'none',
          'IM_SCHA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'MS_L10N' => 'none',
          'LIBCPLUSPLUS' => 'none',
          'MS_SCHA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'CS' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'JHRT' => 'none',
          'CE_L10N' => 'none',
          'DA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
};
!!! prod_getVers
$VAR1 = {
          'SASL' => 0,
          'IWC' => '2.0-6.01',
          'MS64_L10N' => 0,
          'MS' => '7.2-7.02',
          'DSSETUP' => '6.4-24.03',
          'MQ_L10N' => 0,
          'ICU' => 0,
          'MS64' => '7.5-28.21',
          'DAV' => '7.3-10.10',
          'LDAPCSDK6' => 0,
          'CE' => '6.3-13.01',
          'JDK' => 0,
          'MYSQL' => 0,
          'PATCHUTILS' => 0,
          'MQ' => 0,
          'IMAPI' => 0,
          'CI' => '7.4-0.05',
          'LDAPCSDK6_TOOLS' => 0,
          'JISS' => '1.4-16.9301',
          'NSS' => 0,
          'CS_L10N' => 0,
          'IM' => '9.0-03.02',
          'ST' => 0,
          'RECOMMENDED' => 0,
          'IM_L10N' => 0,
          'CS_SCHA' => '6.3-1.01',
          'LDAPJDK' => 0,
          'BZIP' => 0,
```

```
          'MYSQL_MARKER' => 0,
          'IM_SCHA' => '7.3-01.02',
          'MS_L10N' => 0,
          'LIBCPLUSPLUS' => 0,
          'MS_SCHA' => '7.0-0.03',
          'CS' => '6.3-32.01',
          'JHRT' => 0,
          'CE_L10N' => 0,
          'DA' => '7.0-7.00'
        };
!!! prod_orclVers
$VAR1 = {
          'SASL' => 0,
          'IWC' => '\'Unrecognized Parameter\'',
          'MS64_L10N' => 0,
          'MS' => '\'Unrecognized Parameter\'',
          'DSSETUP' => '\'Unrecognized Parameter\'',
          'MQ_L10N' => 0,
          'ICU' => 0,
          'MS64' => '\'Unrecognized Parameter\'',
          'DAV' => '7.0.3.10.0',
          'LDAPCSDK6' => 0,
          'CE' => '\'Unrecognized Parameter\'',
          'JDK' => 0,
          'MYSQL' => 0,
          'PATCHUTILS' => 0,
          'MQ' => 0,
          'IMAPI' => 0,
          'CI' => '7.0.4.0.0',
          'LDAPCSDK6_TOOLS' => 0,
          'JISS' => '1.0.4.16.0',
          'NSS' => 0,
          'CS_L10N' => 0,
          'IM' => '9.0.0.3.0',
          'ST' => 0,
          'RECOMMENDED' => 0,
          'IM_L10N' => 0,
          'CS_SCHA' => '\'Unrecognized Parameter\'',
          'LDAPJDK' => 0,
          'BZIP' => 0,
          'MYSQL_MARKER' => 0,
          'IM_SCHA' => '\'Unrecognized Parameter\'',
          'MS_L10N' => 0,
          'LIBCPLUSPLUS' => 0,
          'MS_SCHA' => '\'Unrecognized Parameter\'',
          'CS' => '\'Unrecognized Parameter\'',
          'JHRT' => 0,
          'CE_L10N' => 0,
          'DA' => '\'Unrecognized Parameter\''
        };
!!! prod_builddate
$VAR1 = {
          'SASL' => 'none',
          'IWC' => '20130402',
          'MS64_L10N' => 'none',
          'MS' => '20090416',
```

```
          'DSSETUP' => '20120611',
          'MQ_L10N' => 'none',
          'ICU' => 'none',
          'MS64' => '20130408',
          'DAV' => '20130328',
          'LDAPCSDK6' => 'none',
          'CE' => '20090327',
          'JDK' => 'none',
          'MYSQL' => 'none',
          'PATCHUTILS' => 'none',
          'MQ' => 'none',
          'IMAPI' => 'none',
          'CI' => '20130409',
          'LDAPCSDK6_TOOLS' => 'none',
          'JISS' => '20130320',
          'NSS' => 'none',
          'CS_L10N' => 'none',
          'IM' => '20130405',
          'ST' => 'none',
          'RECOMMENDED' => 'none',
          'IM_L10N' => 'none',
          'CS_SCHA' => '20080331',
          'LDAPJDK' => 'none',
          'BZIP' => 'none',
          'MYSQL_MARKER' => 'none',
          'IM_SCHA' => '20080403',
          'MS_L10N' => 'none',
          'LIBCPLUSPLUS' => 'none',
          'MS_SCHA' => '20080519',
          'CS' => '20120921',
          'JHRT' => 'none',
          'CE_L10N' => 'none',
          'DA' => '20130319'
        };
====== End QQQ findGetVersion ======
INFO: prod_mktVers{NSS} (no map) = 4.8.8
INFO: prod_mktVers{SASL} (no map) = 2.19
INFO: prod_mktVers{LDAPCSDK6} (no map) = 6.0
INFO: prod_mktVers{LDAPCSDK6_TOOLS} (no map) = 6.0
INFO: prod_mktVers{ICU} (no map) = ICU2,ICU3
INFO: prod_mktVers{JDK} (no map) = 1.6.0
INFO: prod_mktVers{JHRT} (no map) = 2.0
INFO: prod_mktVers{MQ} (no map) = 4.4
INFO: prod_mktVers{MQ_L10N} (no map) = 4.4
INFO: prod_mktVers{LDAPJDK} (no map) = 4.21
INFO: prod_mktVers{IMAPI} (w/ map) = 9
INFO: prod_mktVers{LIBCPLUSPLUS} (no map) = 5.9
INFO: prod_mktVers{PATCHUTILS} (no map) = Unknown
INFO: prod_mktVers{BZIP} (no map) = 11.10
INFO: prod_mktVers{RECOMMENDED} (no map) = 2013.02.19
INFO: prod_mktVers{MYSQL_MARKER} (w/ map) = 1.1
INFO: prod_mktVers{MYSQL} (w/ map) = 5.5.8
INFO: prod_mktVers{ST} (no map) = 1.1.4
INFO: prod_mktVers{CI} (w/ map) = 7u4
INFO: prod_mktVers{MS64} (w/ map) = 7u5
INFO: prod_mktVers{DSSETUP} (w/ map) = 6.4
```

```
INFO: prod_mktVers{DAV} (w/ map) = 7u3
INFO: prod_mktVers{IM} (w/ map) = 9
INFO: prod_mktVers{IWC} (w/ map) = 2
INFO: prod_mktVers{JISS} (w/ map) = 1u4
INFO: prod_mktVers{DA} (w/ map) = 7
INFO: prod_mktVers{MS_SCHA} (no map) = 7.0
INFO: prod_mktVers{IM_SCHA} (no map) = 7.3
Detecting Installed Products...
Checking LIBCPLUSPLUS 5.9 ...
  Checking pkg SUNWlibC... present.
  LIBCPLUSPLUS 5.9 is already present.
Checking PATCHUTILS Unknown ...
  Checking pkg SUNWpkgcmdsu... present.
  Checking pkg SUNWswmt... present.
  Checking pkg SUNWinstall-patch-utils-root... present.
  Checking pkg SUNWcsr... present.
  Checking pkg SUNWdtrc... present.
  Checking pkg SUNWzoneu... present.
  PATCHUTILS Unknown is already present.
Checking BZIP 11.10 ...
  Checking pkg SUNWbzip... present.
  BZIP 11.10 is already present.
Checking RECOMMENDED 2013.02.19 ...
  RECOMMENDED 2013.02.19 is not present.
Checking MYSQL_MARKER 1.1 ...
  Checking pkg SUNWcomms-mysql-marker... not present.
  MYSQL_MARKER 1.1 is not present.
Checking MYSQL_MARKER 1.0 ...
  Checking pkg SUNWcomms-mysql-marker... not present.
  MYSQL_MARKER 1.0 is not present.
Checking MYSQL 5.5.8 ...
  Checking pkg mysql... not present.
  MYSQL 5.5.8 is not present.
Checking MYSQL 5.1.36 ...
  Checking pkg mysql... not present.
  MYSQL 5.1.36 is not present.
Checking ST 1.1.4 ...
  Checking pkg SUNWservicetagr... present.
  Checking pkg SUNWservicetagu... present.
  Checking pkg SUNWstosreg... present.
  ST 1.1.4 is already present.
Checking NSS 4.8.8 ...
  Checking pkg SUNWjss... present.
  Checking pkg SUNWpr... present.
  Checking pkg SUNWprd... present.
  Checking pkg SUNWtls... present.
  Checking pkg SUNWtlsd... present.
  Checking pkg SUNWtlsu... present.
  NSS 4.8.8 is already present.
Checking SASL 2.19 ...
  Checking pkg SUNWsasl... present.
  SASL 2.19 is already present.
Checking LDAPCSDK6 6.0 ...
  Checking pkg SUNWldapcsdk-libs... present.
  Checking pkg SUNWldapcsdk-dev... present.
  LDAPCSDK6 6.0 is already present.
```

```
Checking LDAPCSDK6_TOOLS 6.0 ...
  Checking pkg SUNWldapcsdk-tools... present.
  LDAPCSDK6_TOOLS 6.0 is already present.
Checking ICU ICU2,ICU3 ...
  Checking pkg SUNWicu... present.
  ICU ICU2,ICU3 is already present.
Checking JDK 1.6.0 ...
  Checking pkg SUNWj6rt... not present.
  Checking pkg SUNWj6rtx... not present.
  Checking pkg SUNWj6dev... not present.
  Checking pkg SUNWj6dvx... not present.
  Checking pkg SUNWj6cfg... not present.
  JDK 1.6.0 is not present.
Checking JDK 1.5.0 ...
  Checking pkg SUNWj5rt... not present.
  Checking pkg SUNWj5rtx... not present.
  Checking pkg SUNWj5cfg... not present.
  JDK 1.5.0 is not present.
Checking JHRT 2.0 ...
  Checking pkg SUNWjhrt... present.
  Checking pkg SUNWjhdev... present.
  Checking pkg SUNWjhdem... present.
  Checking pkg SUNWjhdoc... present.
  JHRT 2.0 is already present.
Checking MQ 4.4 ...
  Checking pkg SUNWiqr... present.
  Checking pkg SUNWiqu... present.
  Checking pkg SUNWiqdoc... present.
  Checking pkg SUNWiquc... present.
  Checking pkg SUNWiqum... present.
  Checking pkg SUNWiqjx... present.
  Checking pkg SUNWiqfs... present.
  Checking pkg SUNWiqcrt... present.
  Checking pkg SUNWiqcdv... present.
  Checking pkg SUNWiqlen... present.
  MQ 4.4 is already present.
Checking MQ 3.7 ...
  Checking pkg SUNWiqr... present but with a different pkg VERSION.
    checking SUNWiqr 3.7,REV=2006.06.18.22.34
  Checking pkg SUNWiqu... present but with a different pkg VERSION.
    checking SUNWiqu 3.7,REV=2006.06.18.22.34
  Checking pkg SUNWiqlpl... not present.
  Checking pkg SUNWiqdoc... present but with a different pkg VERSION.
    checking SUNWiqdoc 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiquc... present but with a different pkg VERSION.
    checking SUNWiquc 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiqum... present but with a different pkg VERSION.
    checking SUNWiqum 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiqjx... present but with a different pkg VERSION.
    checking SUNWiqjx 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiqfs... present but with a different pkg VERSION.
    checking SUNWiqfs 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiqcrt... present but with a different pkg VERSION.
    checking SUNWiqcrt 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiqcdv... present but with a different pkg VERSION.
    checking SUNWiqcdv 3.7,REV=2006.06.18.22.35
```

```
  Checking pkg SUNWiqlen... present but with a different pkg VERSION.
    checking SUNWiqlen 3.7,REV=2006.06.18.22.35
  NOTICE: Message Queue is present with a different pkg VERSION.
Checking MQ 4.1 ...
  Checking pkg SUNWiqr... present but with a different pkg VERSION.
    checking SUNWiqr 4.1,REV=2007.07.26.10.58
  Checking pkg SUNWiqu... present but with a different pkg VERSION.
    checking SUNWiqu 4.1,REV=2007.07.26.10.58
  Checking pkg SUNWiqdoc... present but with a different pkg VERSION.
    checking SUNWiqdoc 4.1,REV=2007.07.26.10.58
  Checking pkg SUNWiquc... present but with a different pkg VERSION.
    checking SUNWiquc 4.1,REV=2007.07.26.10.59
  Checking pkg SUNWiqum... present but with a different pkg VERSION.
    checking SUNWiqum 4.1,REV=2007.07.26.10.59
  Checking pkg SUNWiqjx... present but with a different pkg VERSION.
    checking SUNWiqjx 4.1,REV=2007.07.26.10.59
  Checking pkg SUNWiqfs... present but with a different pkg VERSION.
    checking SUNWiqfs 4.1,REV=2007.07.26.10.59
  Checking pkg SUNWiqcrt... present but with a different pkg VERSION.
    checking SUNWiqcrt 4.1,REV=2007.07.26.10.59
  Checking pkg SUNWiqcdv... present but with a different pkg VERSION.
    checking SUNWiqcdv 4.1,REV=2007.07.26.10.59
  NOTICE: Message Queue is present with a different pkg VERSION.
Checking MQ 4.3 ...
  Checking pkg SUNWiqr... present but with a different pkg VERSION.
    checking SUNWiqr 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqu... present but with a different pkg VERSION.
    checking SUNWiqu 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqdoc... present but with a different pkg VERSION.
    checking SUNWiqdoc 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiquc... present but with a different pkg VERSION.
    checking SUNWiquc 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqum... present but with a different pkg VERSION.
    checking SUNWiqum 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqjx... present but with a different pkg VERSION.
    checking SUNWiqjx 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqfs... present but with a different pkg VERSION.
    checking SUNWiqfs 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqcrt... present but with a different pkg VERSION.
    checking SUNWiqcrt 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqcdv... present but with a different pkg VERSION.
    checking SUNWiqcdv 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqlen... present but with a different pkg VERSION.
    checking SUNWiqlen 4.3,REV=2008.11.07.18.45
  NOTICE: Message Queue is present with a different pkg VERSION.
Checking MQ_L10N 4.4 ...
  Checking pkg SUNWfiqu... present.
  Checking pkg SUNWfiquc... present.
  Checking pkg SUNWdiqu... present.
  Checking pkg SUNWdiquc... present.
  Checking pkg SUNWjiqu... present.
  Checking pkg SUNWjiquc... present.
  Checking pkg SUNWeiqu... present.
  Checking pkg SUNWeiquc... present.
  Checking pkg SUNWkiqu... present.
  Checking pkg SUNWkiquc... present.
```

```
  Checking pkg SUNWciqu... present.
  Checking pkg SUNWciquc... present.
  Checking pkg SUNWhiqu... present.
  Checking pkg SUNWhiquc... present.
  MQ_L10N 4.4 is already present.
Checking MQ_L10N 3.7 ...
  Checking pkg SUNWfiqu... present but with a different pkg VERSION.
    checking SUNWfiqu 3.7,REV=2006.09.28.02.20.49
  Checking pkg SUNWfiquc... present but with a different pkg VERSION.
    checking SUNWfiquc 3.7,REV=2006.09.28.02.21.13
  Checking pkg SUNWdiqu... present but with a different pkg VERSION.
    checking SUNWdiqu 3.7,REV=2006.09.28.02.20.38
  Checking pkg SUNWdiquc... present but with a different pkg VERSION.
    checking SUNWdiquc 3.7,REV=2006.09.28.02.21.09
  Checking pkg SUNWjiqu... present but with a different pkg VERSION.
    checking SUNWjiqu 3.7,REV=2006.09.02.02.06.39
  Checking pkg SUNWjiquc... present but with a different pkg VERSION.
    checking SUNWjiquc 3.7,REV=2006.09.02.02.07.00
  Checking pkg SUNWeiqu... present but with a different pkg VERSION.
    checking SUNWeiqu 3.7,REV=2006.09.28.02.20.43
  Checking pkg SUNWeiquc... present but with a different pkg VERSION.
    checking SUNWeiquc 3.7,REV=2006.09.28.02.21.11
  Checking pkg SUNWkiqu... present but with a different pkg VERSION.
    checking SUNWkiqu 3.7,REV=2006.09.28.02.20.59
  Checking pkg SUNWkiquc... present but with a different pkg VERSION.
    checking SUNWkiquc 3.7,REV=2006.09.28.02.21.19
  Checking pkg SUNWciqu... present but with a different pkg VERSION.
    checking SUNWciqu 3.7,REV=2006.09.02.02.06.49
  Checking pkg SUNWciquc... present but with a different pkg VERSION.
    checking SUNWciquc 3.7,REV=2006.09.02.02.07.03
  Checking pkg SUNWhiqu... present but with a different pkg VERSION.
    checking SUNWhiqu 3.7,REV=2006.10.28.02.59.24
  Checking pkg SUNWhiquc... present but with a different pkg VERSION.
    checking SUNWhiquc 3.7,REV=2006.10.28.02.59.36
  NOTICE: Message Queue Localization is present with a different pkg
VERSION.
Checking MQ_L10N 4.1 ...
  Checking pkg SUNWfiqu... present but with a different pkg VERSION.
    checking SUNWfiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWfiquc... present but with a different pkg VERSION.
    checking SUNWfiquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWdiqu... present but with a different pkg VERSION.
    checking SUNWdiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWdiquc... present but with a different pkg VERSION.
    checking SUNWdiquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWjiqu... present but with a different pkg VERSION.
    checking SUNWjiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWjiquc... present but with a different pkg VERSION.
    checking SUNWjiquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWeiqu... present but with a different pkg VERSION.
    checking SUNWeiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWeiquc... present but with a different pkg VERSION.
    checking SUNWeiquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWkiqu... present but with a different pkg VERSION.
    checking SUNWkiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWkiquc... present but with a different pkg VERSION.
```

```
    checking SUNWkiquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWciqu... present but with a different pkg VERSION.
    checking SUNWciqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWciquc... present but with a different pkg VERSION.
    checking SUNWciquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWhiqu... present but with a different pkg VERSION.
    checking SUNWhiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWhiquc... present but with a different pkg VERSION.
    checking SUNWhiquc 4.1,REV=2007.08.02.12.38
  NOTICE: Message Queue Localization is present with a different pkg
VERSION.
Checking MQ_L10N 4.3 ...
  Checking pkg SUNWfiqu... present but with a different pkg VERSION.
    checking SUNWfiqu 4.3,REV=2008.10.27.08.57.02
  Checking pkg SUNWfiquc... present but with a different pkg VERSION.
    checking SUNWfiquc 4.3,REV=2008.10.27.08.57.05
  Checking pkg SUNWdiqu... present but with a different pkg VERSION.
    checking SUNWdiqu 4.3,REV=2008.10.27.08.57.55
  Checking pkg SUNWdiquc... present but with a different pkg VERSION.
    checking SUNWdiquc 4.3,REV=2008.10.27.08.57.58
  Checking pkg SUNWjiqu... present but with a different pkg VERSION.
    checking SUNWjiqu 4.3,REV=2008.10.27.09.00.27
  Checking pkg SUNWjiquc... present but with a different pkg VERSION.
    checking SUNWjiquc 4.3,REV=2008.10.27.09.00.28
  Checking pkg SUNWeiqu... present but with a different pkg VERSION.
    checking SUNWeiqu 4.3,REV=2008.10.27.08.58.45
  Checking pkg SUNWeiquc... present but with a different pkg VERSION.
    checking SUNWeiquc 4.3,REV=2008.10.27.08.58.48
  Checking pkg SUNWkiqu... present but with a different pkg VERSION.
    checking SUNWkiqu 4.3,REV=2008.10.27.08.59.36
  Checking pkg SUNWkiquc... present but with a different pkg VERSION.
    checking SUNWkiquc 4.3,REV=2008.10.27.08.59.38
  Checking pkg SUNWciqu... present but with a different pkg VERSION.
    checking SUNWciqu 4.3,REV=2008.10.27.09.01.18
  Checking pkg SUNWciquc... present but with a different pkg VERSION.
    checking SUNWciquc 4.3,REV=2008.10.27.09.01.19
  Checking pkg SUNWhiqu... present but with a different pkg VERSION.
    checking SUNWhiqu 4.3,REV=2008.10.27.09.02.09
  Checking pkg SUNWhiquc... present but with a different pkg VERSION.
    checking SUNWhiquc 4.3,REV=2008.10.27.09.02.10
  NOTICE: Message Queue Localization is present with a different pkg
VERSION.
Checking LDAPJDK 4.21 ...
  Checking pkg SUNWljdk... present.
  LDAPJDK 4.21 is already present.
Checking IMAPI 9.0 ...
  Checking pkg SUNWiimdv... present.
  IMAPI 9.0 is already present.
Checking IMAPI 7.0 ...
  Checking pkg SUNWiimdv... present but with a different pkg VERSION.
    checking SUNWiimdv 7.0,REV=2004.11.24.05.24.36
  NOTICE: Instant Messaging API is present with a different pkg VERSION.
Checking IMAPI 7.3 ...
  Checking pkg SUNWiimdv... present but with a different pkg VERSION.
    checking SUNWiimdv 7.3,REV=2008.01.15
  NOTICE: Instant Messaging API is present with a different pkg VERSION.
```

```
Checking IMAPI 8.0 ...
  Checking pkg SUNWiimdv... present but with a different pkg VERSION.
    checking SUNWiimdv 8.0,REV=2008.12.04
  NOTICE: Instant Messaging API is present with a different pkg VERSION.
Checking CI 7.4 ...
  Checking pkg SUNWcomms...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-v --installed /opt/altroot/CommsInstaller 2>&1
VERSION='7.4-0.05'
BUILDDATE='20130409'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
ORCL_VERSION='7.0.4.0.0'
-- Exit status: 0

/opt/altroot/CommsInstaller/lib/getVersion -v 2>&1
VERSION='7.4-0.05'
BUILDDATE='20130409'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
ORCL_VERSION='7.0.4.0.0'
-- Exit status: 0
 present.
  CI 7.4 is already present.
Checking MS64 7.5 ...
  Checking pkg SUNWmessaging-server-64...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/altroot/messaging64 2>&1
VERSION='7.5-28.21'
BUILDDATE='20130408'
UNAME='SunOS'
ARCH='sparc'
BITS='64'
-- Exit status: 0

/opt/altroot/messaging64/lib/getVersion -v 2>&1
VERSION='7.5-28.21'
BUILDDATE='20130408'
UNAME='SunOS'
ARCH='sparc'
BITS='64'
-- Exit status: 0
 present.
  MS64 7.5 is already present.
Checking MS64 6.3 ...
  Checking pkg SUNWmessaging-server-64... present but with a different
pkg VERSION.
    checking SUNWmessaging-server-64 6.3,REV=2007.02.26
  NOTICE: Messaging Server (64bit) is present with a different pkg
VERSION.
Checking MS64 6.3_32 ...
  Checking pkg SUNWmsgin... not present.
  Checking pkg SUNWmsgen... not present.
  Checking pkg SUNWmsglb... not present.
```

```
  Checking pkg SUNWmsgco... not present.
  Checking pkg SUNWmsgmt... not present.
  Checking pkg SUNWmsgst... not present.
  Checking pkg SUNWmsgmp... not present.
  Checking pkg SUNWmsgwm... not present.
  Checking pkg SUNWmsgmf... not present.
  MS64 6.3_32 is not present.
Checking MS64 7.2_32 ...
  Checking pkg SUNWmessaging-server... not present.
  MS64 7.2_32 is not present.
Checking MS64 7.3_32 ...
  MS64 7.3_32 is not present.
Checking MS64 7.5_32 ...
  MS64 7.5_32 is not present.
Checking DSSETUP 6.4 ...
  Checking pkg SUNWcomds...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/altroot/dssetup 2>&1
VERSION='6.4-24.03'
BUILDDATE='20120611'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0

/opt/altroot/dssetup/lib/getVersion -v 2>&1
VERSION='6.4-24.03'
BUILDDATE='20120611'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0
 present.
  DSSETUP 6.4 is already present.
Checking DAV 7.3 ...
  Checking pkg SUNWdavserver...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/altroot/davserver 2>&1
VERSION='7.3-10.10'
BUILDDATE='20130328'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
ORCL_VERSION='7.0.3.10.0'
-- Exit status: 0

/opt/altroot/davserver/lib/getVersion -v 2>&1
VERSION='7.3-10.10'
BUILDDATE='20130328'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
ORCL_VERSION='7.0.3.10.0'
-- Exit status: 0
 present.
  DAV 7.3 is already present.
```

```
Checking IM 9.0 ...
  Checking pkg SUNWiim...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/altroot/im 2>&1
No code to determine installed version
-- Exit status: 2

INFO: IM
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/altroot/im : returned 2
No code to determine installed version

/opt/altroot/im/lib/getVersion -v 2>&1
VERSION='9.0-03.02'
BUILDDATE='20130405'
UNAME='SunOS'
ARCH='sparc'
BITS='64'
ORCL_VERSION='9.0.0.3.0'
-- Exit status: 0
 present.
  Checking pkg SUNWiimin... present.
  Checking pkg SUNWiimm... present.
  Checking pkg SUNWiimjd... present.
  Checking pkg SUNWiimid... present.
  Checking pkg SUNWiimgw... present.
  Checking pkg SUNWiimw... present.
  Checking pkg SUNWiimfed... present.
  IM 9.0 is already present.
Checking IM 7.0 ...
  Checking pkg SUNWiimin... present but with a different pkg VERSION.
    checking SUNWiimin 7.0,REV=2004.11.24.05.24.36
  Checking pkg SUNWiim... present but with a different pkg VERSION.
    checking SUNWiim 7.0,REV=2004.11.24.05.24.36
  Checking pkg SUNWiimm... present but with a different pkg VERSION.
    checking SUNWiimm 7.0,REV=2004.11.24.05.24.36
  Checking pkg SUNWiimjd... present but with a different pkg VERSION.
    checking SUNWiimjd 7.0,REV=2004.11.24.05.24.36
  Checking pkg SUNWiimid... present but with a different pkg VERSION.
    checking SUNWiimid 7.0,REV=2004.11.24.05.24.36
  Checking pkg SUNWiimc... not present.
  Checking pkg SUNWiimd... not present.
  NOTICE: Instant Messaging is present with a different pkg VERSION.
Checking IM 7.3 ...
  Checking pkg SUNWiim... present but with a different pkg VERSION.
    checking SUNWiim 7.3,REV=2008.01.15
  Checking pkg SUNWiimin... present but with a different pkg VERSION.
    checking SUNWiimin 7.3,REV=2008.01.15
  Checking pkg SUNWiimm... present but with a different pkg VERSION.
    checking SUNWiimm 7.3,REV=2008.01.15
  Checking pkg SUNWiimjd... present but with a different pkg VERSION.
    checking SUNWiimjd 7.3,REV=2008.01.15
  Checking pkg SUNWiimid... present but with a different pkg VERSION.
    checking SUNWiimid 7.3,REV=2008.01.15
  Checking pkg SUNWiimc... not present.
  Checking pkg SUNWiimd... not present.
```

```
  NOTICE: Instant Messaging is present with a different pkg VERSION.
Checking IM 8.3 ...
  Checking pkg SUNWiim... present but with a different pkg VERSION.
    checking SUNWiim 8.0,REV=2008.12.04
  Checking pkg SUNWiimin... present but with a different pkg VERSION.
    checking SUNWiimin 8.0,REV=2008.12.04
  Checking pkg SUNWiimm... present but with a different pkg VERSION.
    checking SUNWiimm 8.0,REV=2008.12.04
  Checking pkg SUNWiimjd... present but with a different pkg VERSION.
    checking SUNWiimjd 8.0,REV=2008.12.04
  Checking pkg SUNWiimid... present but with a different pkg VERSION.
    checking SUNWiimid 8.0,REV=2008.12.04
  Checking pkg SUNWiimc... not present.
  Checking pkg SUNWiimd... not present.
  Checking pkg SUNWiimgw... present but with a different pkg VERSION.
    checking SUNWiimgw 8.0,REV=2008.12.04
  NOTICE: Instant Messaging is present with a different pkg VERSION.
Checking IWC 2.0 ...
  Checking pkg SUNWiwc...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/altroot/iwc 2>&1
VERSION='2.0-6.01'
BUILDDATE='20130402'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0

/opt/altroot/iwc/lib/getVersion -v 2>&1
VERSION='2.0-6.01'
BUILDDATE='20130402'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0
 present.
  IWC 2.0 is already present.
Checking IWC 1.0 ...
  Checking pkg SUNWiwc... present but with a different pkg VERSION.
    checking SUNWiwc 1.0,REV=2008.07.07
  NOTICE: Convergence is present with a different pkg VERSION.
Checking JISS 1.4 ...
  Checking pkg SUNWjiss...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/altroot/jiss 2>&1
VERSION='1.4-16.9301'
BUILDDATE='20130320'
UNAME='SunOS'
ARCH='all'
BITS='32'
ORCL_VERSION='1.0.4.16.0'
-- Exit status: 0

/opt/altroot/jiss/lib/getVersion -v 2>&1
VERSION='1.4-16.9301'
BUILDDATE='20130320'
```

```
UNAME='SunOS'
ARCH='all'
BITS='32'
ORCL_VERSION='1.0.4.16.0'
-- Exit status: 0
 present.
  JISS 1.4 is already present.
Checking JISS 0.9 ...
  Checking pkg SUNWjiss-common... not present.
  Checking pkg SUNWjiss-conf... not present.
  Checking pkg SUNWjiss-extjars... not present.
  Checking pkg SUNWjiss-indexapi... not present.
  Checking pkg SUNWjiss-jmqc... not present.
  Checking pkg SUNWjiss-rest... not present.
  Checking pkg SUNWjiss-search... not present.
  Checking pkg SUNWjiss-searchui... not present.
  Checking pkg SUNWjiss-store... not present.
  Checking pkg SUNWjiss-storeui... not present.
  JISS 0.9 is not present.
Checking DA 7.0 ...
  Checking pkg SUNWcommda...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/altroot/da 2>&1
VERSION='Not Found'
BUILDDATE='Not Found'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0

/opt/altroot/da/lib/getVersion -v 2>&1
VERSION='7.0-7.00'
BUILDDATE='20130319'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0
 present.
  DA 7.0 is already present.
Checking DA 6.4 ...
  Checking pkg SUNWcomic... not present.
  Checking pkg SUNWcomis... not present.
  DA 6.4 is not present.
Checking MS_SCHA 7.0 ...
  Checking pkg SUNWmessaging-server-scha...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/altroot/msg_scha 2>&1
VERSION='7.0-0.03'
BUILDDATE='20080519'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0

/opt/altroot/msg_scha/lib/getVersion -v 2>&1
VERSION='7.0-0.03'
```

```
BUILDDATE='20080519'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0
 present.
  MS_SCHA 7.0 is already present.
Checking MS_SCHA 6.0 ...
  Checking pkg SUNWscims... not present.
  MS_SCHA 6.0 is not present.
Checking IM_SCHA 7.3 ...
  Checking pkg SUNWiimsc...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/altroot/im_scha 2>&1
No code to determine installed version
-- Exit status: 2

INFO: IM_SCHA
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/altroot/im_scha : returned 2
No code to determine installed version

/opt/altroot/im_scha/lib/getVersion -v 2>&1
VERSION='7.3-01.02'
BUILDDATE='20080403'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0
 present.
  IM_SCHA 7.3 is already present.
Checking IM_SCHA 7.0 ...
  Checking pkg SUNWiimsc... present but with a different pkg VERSION.
    checking SUNWiimsc 7.0,REV=2005.08.03.09.41.41
  NOTICE: Instant Messaging Sun Cluster HA agent is present with a
different pkg VERSION.
Checking MS 7.5_32 ...
  MS 7.5_32 is not present.
Checking MS 6.3_32 ...
  Checking pkg SUNWmsgin... not present.
  Checking pkg SUNWmsgen... not present.
  Checking pkg SUNWmsglb... not present.
  Checking pkg SUNWmsgco... not present.
  Checking pkg SUNWmsgmt... not present.
  Checking pkg SUNWmsgst... not present.
  Checking pkg SUNWmsgmp... not present.
  Checking pkg SUNWmsgwm... not present.
  Checking pkg SUNWmsgmf... not present.
  MS 6.3_32 is not present.
Checking MS 7.2_32 ...
  Checking pkg SUNWmessaging-server... not present.
  MS 7.2_32 is not present.
Checking MS 7.3_32 ...
  MS 7.3_32 is not present.
Checking MS_L10N 6.2 ...
  Checking pkg SUNWmsgde... not present.
```

```
  Checking pkg SUNWmsges... not present.
  Checking pkg SUNWmsgfr... not present.
  Checking pkg SUNWmsgja... not present.
  Checking pkg SUNWmsgko... not present.
  Checking pkg SUNWmsgzh... not present.
  Checking pkg SUNWmsgtw... not present.
  MS_L10N 6.2 is not present.
Checking MS_L10N 6.3 ...
  Checking pkg SUNWmsg-l10n... not present.
  MS_L10N 6.3 is not present.
Checking MS64_L10N 6.3 ...
  Checking pkg SUNWmessaging-server-l10n-64... not present.
  MS64_L10N 6.3 is not present.
Checking CS 6.3 ...
  Checking pkg SUNWics5... not present.
  Checking pkg SUNWica5... not present.
  CS 6.3 is not present.
Checking CS_L10N 6.2 ...
  Checking pkg SUNWdeics... not present.
  Checking pkg SUNWesics... not present.
  Checking pkg SUNWfrics... not present.
  Checking pkg SUNWjaics... not present.
  Checking pkg SUNWkoics... not present.
  Checking pkg SUNWzhics... not present.
  Checking pkg SUNWtwics... not present.
  CS_L10N 6.2 is not present.
Checking CS_L10N 6.3 ...
  Checking pkg SUNWics-l10n... not present.
  CS_L10N 6.3 is not present.
Checking IM_L10N 7.0 ...
  Checking pkg SUNWdiimc... not present.
  Checking pkg SUNWdiimd... not present.
  Checking pkg SUNWdimid... not present.
  Checking pkg SUNWeiimc... not present.
  Checking pkg SUNWeiimd... not present.
  Checking pkg SUNWeiimin... not present.
  Checking pkg SUNWeimid... not present.
  Checking pkg SUNWfiimc... not present.
  Checking pkg SUNWfiimd... not present.
  Checking pkg SUNWfiimin... not present.
  Checking pkg SUNWfimid... not present.
  Checking pkg SUNWjiimc... not present.
  Checking pkg SUNWjiimd... not present.
  Checking pkg SUNWjiimin... not present.
  Checking pkg SUNWjimid... not present.
  Checking pkg SUNWkiimc... not present.
  Checking pkg SUNWkiimd... not present.
  Checking pkg SUNWkiimin... not present.
  Checking pkg SUNWkimid... not present.
  Checking pkg SUNWciimc... not present.
  Checking pkg SUNWciimd... not present.
  Checking pkg SUNWciimin... not present.
  Checking pkg SUNWcimid... not present.
  Checking pkg SUNWhiimc... not present.
  Checking pkg SUNWhiimd... not present.
  Checking pkg SUNWhiimin... not present.
```

```
  Checking pkg SUNWhimid... not present.
  IM_L10N 7.0 is not present.
Checking IM_L10N 7.2 ...
  Checking pkg SUNWiimc-l10n... not present.
  Checking pkg SUNWiimd-l10n... not present.
  Checking pkg SUNWiimid-l10n... not present.
  Checking pkg SUNWiimin-l10n... not present.
  IM_L10N 7.2 is not present.
Checking CE 6.3 ...
  Checking pkg SUNWuwc... not present.
  CE 6.3 is not present.
Checking CE_L10N 6.2 ...
  Checking pkg SUNWduwc... not present.
  Checking pkg SUNWeuwc... not present.
  Checking pkg SUNWfuwc... not present.
  Checking pkg SUNWjuwc... not present.
  Checking pkg SUNWkuwc... not present.
  Checking pkg SUNWcuwc... not present.
  Checking pkg SUNWhuwc... not present.
  CE_L10N 6.2 is not present.
Checking CE_L10N 6.3 ...
  Checking pkg SUNWuwc-l10n... not present.
  CE_L10N 6.3 is not present.
Checking CS_SCHA 6.0 ...
  Checking pkg SUNWscics... not present.
  CS_SCHA 6.0 is not present.
Checking CS_SCHA 6.3 ...
  Checking pkg SUNWscics... not present.
  CS_SCHA 6.3 is not present.
Detecting Installed Patches...
-- chk4patch 119963-27 /tmp/.patchout_20130507181939.7771
-- Running patchadd  -p report...
--   Generating /tmp/.patchout_20130507181939.7771
patchadd  -p > /tmp/.patchout_20130507181939.7771 2>>
/tmp/CommsInstaller_20130507181939.log
-- Exit status: 0
--  older version at lineno 478 found 119963-24 - not acceptable
--  Exact match found at line 479
--  Final return status: 1
  LIBCPLUSPLUS patch 119963-27 is already present.
-- chk4patch 120900-04 /tmp/.patchout_20130507181939.7771
--  Exact match found at line 52
--  Final return status: 1
  PATCHUTILS patch 120900-04 is already present.
-- chk4patch 121133-02 /tmp/.patchout_20130507181939.7771
--  Exact match found at line 53
--  Final return status: 1
  PATCHUTILS patch 121133-02 is already present.
-- chk4patch 119254-88 /tmp/.patchout_20130507181939.7771
--  older version at lineno 227 found 119254-81 - not acceptable
--  Exact match found at line 230
--  Final return status: 1
  PATCHUTILS patch 119254-88 is already present.
-- chk4patch 126868-04 /tmp/.patchout_20130507181939.7771
--  Exact match found at line 555
--  Final return status: 1
```

```
  BZIP patch 126868-04 is already present.
-- chk4patch 137321-01 /tmp/.patchout_20130507181939.7771
--  Exact match found at line 556
--  Final return status: 1
  BZIP patch 137321-01 is already present.
-- chk4patch 119254-88 /tmp/.patchout_20130507181939.7771
--  older version at lineno 227 found 119254-81 - not acceptable
--  Exact match found at line 230
--  Final return status: 1
  RECOMMENDED patch 119254-88 is already present.
-- chk4patch 120272-28 /tmp/.patchout_20130507181939.7771
--  Newer version at line 297 found 120272-31
--  Final return status: 1
  RECOMMENDED patch 120272-28 is already present.
-- chk4patch 147147-26 /tmp/.patchout_20130507181939.7771
--  Final return status: 0
  RECOMMENDED patch 147147-26 is not present.
-- chk4patch 125358-15 /tmp/.patchout_altroot_20130507181939.7771
/opt/altroot -R /opt/altroot
-- Running patchadd -R /opt/altroot -p report...
--   Generating /tmp/.patchout_altroot_20130507181939.7771
patchadd -R /opt/altroot -p > /tmp/.patchout_altroot_20130507181939.7771
2>> /tmp/CommsInstaller_20130507181939.log
-- Exit status: 0
--  Exact match found at line 9
--  Final return status: 1
  NSS patch 125358-15 is already present.
-- chk4patch 119345-08 /tmp/.patchout_altroot_20130507181939.7771
/opt/altroot -R /opt/altroot
--  Exact match found at line 17
--  Final return status: 1
  SASL patch 119345-08 is already present.
-- chk4patch 136798-03 /tmp/.patchout_altroot_20130507181939.7771
/opt/altroot -R /opt/altroot
--  Exact match found at line 16
--  Final return status: 1
  LDAPCSDK6_TOOLS patch 136798-03 is already present.
-- chk4patch 119810-07 /tmp/.patchout_altroot_20130507181939.7771
/opt/altroot -R /opt/altroot
--  older version at lineno 5 found 119810-05 - not acceptable
--  Final return status: 0
  ICU patch 119810-07 is not present.
-- chk4patch 125136-35 /tmp/.patchout_altroot_20130507181939.7771
/opt/altroot -R /opt/altroot
--  Final return status: 0
  JDK patch 125136-35 is not present.
-- chk4patch 125137-35 /tmp/.patchout_altroot_20130507181939.7771
/opt/altroot -R /opt/altroot
--  Final return status: 0
  JDK patch 125137-35 is not present.
-- chk4patch 119725-06 /tmp/.patchout_altroot_20130507181939.7771
/opt/altroot -R /opt/altroot
--  Exact match found at line 12
--  Final return status: 1
  LDAPJDK patch 119725-06 is already present.
-- chk4patch 148582-03 /tmp/.patchout_altroot_20130507181939.7771
```

```
/opt/altroot -R /opt/altroot
--  Exact match found at line 8
--  Final return status: 1
  IMAPI patch 148582-03 is already present.
-- chk4patch 137204-28 /tmp/.patchout_altroot_20130507181939.7771
/opt/altroot -R /opt/altroot
--  Exact match found at line 3
--  Final return status: 1
  MS64 patch 137204-28 is already present.
-- chk4patch 118242-03 /tmp/.patchout_altroot_20130507181939.7771
/opt/altroot -R /opt/altroot
--  Exact match found at line 14
--  Final return status: 1
  DSSETUP patch 118242-03 is already present.
-- chk4patch 118245-24 /tmp/.patchout_altroot_20130507181939.7771
/opt/altroot -R /opt/altroot
--  Exact match found at line 13
--  Final return status: 1
  DSSETUP patch 118245-24 is already present.
-- chk4patch 142785-10 /tmp/.patchout_altroot_20130507181939.7771
/opt/altroot -R /opt/altroot
--  Exact match found at line 2
--  Final return status: 1
  DAV patch 142785-10 is already present.
-- chk4patch 148579-03 /tmp/.patchout_altroot_20130507181939.7771
/opt/altroot -R /opt/altroot
--  Exact match found at line 6
--  Final return status: 1
  IM patch 148579-03 is already present.
-- chk4patch 145711-06 /tmp/.patchout_altroot_20130507181939.7771
/opt/altroot -R /opt/altroot
--  Exact match found at line 7
--  Final return status: 1
  IWC patch 145711-06 is already present.
-- chk4patch 142824-16 /tmp/.patchout_altroot_20130507181939.7771
/opt/altroot -R /opt/altroot
--  Exact match found at line 20
--  Final return status: 1
  JISS patch 142824-16 is already present.
-- chk4patch 124581-07 /tmp/.patchout_altroot_20130507181939.7771
/opt/altroot -R /opt/altroot
--  Exact match found at line 18
--  Final return status: 1
  DA patch 124581-07 is already present.
-- chk4patch 137571-01 /tmp/.patchout_altroot_20130507181939.7771
/opt/altroot -R /opt/altroot
--  Exact match found at line 19
--  Final return status: 1
  IM_SCHA patch 137571-01 is already present.
====== QQQ detectProducts ======
QQQ Dumper
!!! present
$VAR1 = {
          '148579-03' => 'PRESENT',
          '142785-10' => 'PRESENT',
          'IWC' => {
```

```
                '2.0' => 'PRESENT',
                '1.0' => 'DIFF_VERSION'
              },
'SASL' => {
                '2.19' => 'PRESENT'
              },
'119345-08' => 'PRESENT',
'MS64_L10N' => {
                  '6.3' => 'NOT_PRESENT'
                },
'142824-16' => 'PRESENT',
'119725-06' => 'PRESENT',
'119810-07' => 'NOT_PRESENT',
'MS' => {
          '7.3_32' => 'NOT_PRESENT',
          '7.2_32' => 'NOT_PRESENT',
          '7.5_32' => 'NOT_PRESENT',
          '6.3_32' => 'NOT_PRESENT'
        },
'137571-01' => 'PRESENT',
'DSSETUP' => {
                '6.4' => 'PRESENT'
              },
'126868-04' => 'PRESENT',
'119254-88' => 'PRESENT',
'120900-04' => 'PRESENT',
'119963-27' => 'PRESENT',
'MQ_L10N' => {
                '4.3' => 'DIFF_VERSION',
                '3.7' => 'DIFF_VERSION',
                '4.1' => 'DIFF_VERSION',
                '4.4' => 'PRESENT'
              },
'ICU' => {
            'ICU2,ICU3' => 'PRESENT'
          },
'120272-28' => 'PRESENT',
'MS64' => {
            '7.5' => 'PRESENT',
            '7.3_32' => 'NOT_PRESENT',
            '7.5_32' => 'NOT_PRESENT',
            '7.2_32' => 'NOT_PRESENT',
            '6.3' => 'DIFF_VERSION',
            '6.3_32' => 'NOT_PRESENT'
          },
'DAV' => {
            '7.3' => 'PRESENT'
          },
'LDAPCSDK6' => {
                  '6.0' => 'PRESENT'
                },
'CE' => {
          '6.3' => 'NOT_PRESENT'
        },
'JDK' => {
            '1.6.0' => 'NOT_PRESENT',
```

```
                '1.5.0' => 'NOT_PRESENT'
              },
'125137-35' => 'NOT_PRESENT',
'MYSQL' => {
                '5.1.36' => 'NOT_PRESENT',
                '5.5.8' => 'NOT_PRESENT'
              },
'PATCHUTILS' => {
                    'Unknown' => 'PRESENT'
                  },
'MQ' => {
            '4.3' => 'DIFF_VERSION',
            '3.7' => 'DIFF_VERSION',
            '4.1' => 'DIFF_VERSION',
            '4.4' => 'PRESENT'
          },
'125358-15' => 'PRESENT',
'CI' => {
            '7.4' => 'PRESENT'
          },
'IMAPI' => {
                '8.0' => 'DIFF_VERSION',
                '7.0' => 'DIFF_VERSION',
                '9.0' => 'PRESENT',
                '7.3' => 'DIFF_VERSION'
              },
'137321-01' => 'PRESENT',
'LDAPCSDK6_TOOLS' => {
                        '6.0' => 'PRESENT'
                      },
'125136-35' => 'NOT_PRESENT',
'JISS' => {
              '0.9' => 'NOT_PRESENT',
              '1.4' => 'PRESENT'
            },
'NSS' => {
              '4.8.8' => 'PRESENT'
              },
'CS_L10N' => {
                  '6.2' => 'NOT_PRESENT',
                  '6.3' => 'NOT_PRESENT'
                },
'ST' => {
            '1.1.4' => 'PRESENT'
          },
'IM' => {
            '8.3' => 'DIFF_VERSION',
            '7.0' => 'DIFF_VERSION',
            '9.0' => 'PRESENT',
            '7.3' => 'DIFF_VERSION'
          },
'RECOMMENDED' => {
                    '2013.02.19' => 'NOT_PRESENT'
                  },
'IM_L10N' => {
                  '7.2' => 'NOT_PRESENT',
```

```
                        '7.0' => 'NOT_PRESENT'
                      },
          '136798-03' => 'PRESENT',
          'CS_SCHA' => {
                        '6.0' => 'NOT_PRESENT',
                        '6.3' => 'NOT_PRESENT'
                      },
          'LDAPJDK' => {
                        '4.21' => 'PRESENT'
                      },
          'MYSQL_MARKER' => {
                             '1.1' => 'NOT_PRESENT',
                             '1.0' => 'NOT_PRESENT'
                           },
          'BZIP' => {
                     '11.10' => 'PRESENT'
                    },
          '145711-06' => 'PRESENT',
          'IM_SCHA' => {
                        '7.0' => 'DIFF_VERSION',
                        '7.3' => 'PRESENT'
                      },
          '148582-03' => 'PRESENT',
          'MS_L10N' => {
                        '6.2' => 'NOT_PRESENT',
                        '6.3' => 'NOT_PRESENT'
                      },
          'LIBCPLUSPLUS' => {
                             '5.9' => 'PRESENT'
                           },
          '121133-02' => 'PRESENT',
          '118245-24' => 'PRESENT',
          '118242-03' => 'PRESENT',
          'MS_SCHA' => {
                        '6.0' => 'NOT_PRESENT',
                        '7.0' => 'PRESENT'
                      },
          '147147-26' => 'NOT_PRESENT',
          'CS' => {
                   '6.3' => 'NOT_PRESENT'
                  },
          '124581-07' => 'PRESENT',
          'JHRT' => {
                     '2.0' => 'PRESENT'
                    },
          'CE_L10N' => {
                        '6.2' => 'NOT_PRESENT',
                        '6.3' => 'NOT_PRESENT'
                      },
          'DA' => {
                   '6.4' => 'NOT_PRESENT',
                   '7.0' => 'PRESENT'
                  },
          '137204-28' => 'PRESENT'
        };
!!! pkgparams
```

```
$VAR1 = {
          'SUNWica5' => {},
          'SUNWmsgja' => {},
          'SUNWcomic' => {},
          'SUNWservicetagu' => {
                                  '1.1.4,REV=2008.03.21.07.54' => [

'SUNWservicetagu',
                                                                      '/',

'1.1.4.1',
                                                                      ''
                                                                    ]
                                 },
          'SUNWjimid' => {},
          'SUNWdiquc' => {
                            '4.4,REV=2009.10.01.09.43.03' => [

'SUNWdiquc',
                                                                  '/',
                                                                  '4.4.1.0',

'/opt/altroot'
                                                                ]
                         },
          'SUNWmsgko' => {},
          'SUNWics5' => {},
          'SUNWmessaging-server-l10n-64' => {},
          'SUNWiqlpl' => {},
          'SUNWmsgco' => {},
          'SUNWfiquc' => {
                            '4.4,REV=2009.10.01.09.42.16' => [

'SUNWfiquc',
                                                                  '/',
                                                                  '4.4.1.0',

'/opt/altroot'
                                                                ]
                         },
          'SUNWjiss-extjars' => {},
          'SUNWjhdem' => {
                            '2.0,REV=2006.10.04' => [
                                                       'SUNWjhdem',
                                                       '/usr',
                                                       '2.0/FCS',
                                                       '/opt/altroot'
                                                     ]
                         },
          'SUNWiqfs' => {
                             '4.4,REV=2009.08.27.08.33' => [
                                                            'SUNWiqfs',
                                                            '/',
                                                            '4.4.0.0',
                                                            '/opt/altroot'
                                                          ]
```

```
                        },
          'SUNWfimid' => {},
          'SUNWcomds' => {
                          '6.3,REV=2004.08.12' => [
                                                     'SUNWcomds',
                                                     '/dssetup',
                                                     '6.4-24.03',
                                                     '/opt/altroot'
                                                   ]
                        },
          'SUNWjhdev' => {
                          '2.0,REV=2006.10.04' => [
                                                     'SUNWjhdev',
                                                     '/usr',
                                                     '2.0/FCS',
                                                     '/opt/altroot'
                                                   ]
                        },
          'SUNWj6rtx' => {},
          'SUNWiqum' => {
                         '4.4,REV=2009.08.27.08.33' => [
                                                          'SUNWiqum',
                                                          '/',
                                                          '4.4.1.0',
                                                          '/opt/altroot'
                                                        ]
                        },
          'SUNWduwc' => {},
          'SUNWhiimin' => {},
          'SUNWkiimin' => {},
          'SUNWeiimd' => {},
          'SUNWj6rt' => {},
          'SUNWj5rt' => {},
          'SUNWiimc-l10n' => {},
          'SUNWhiimc' => {},
          'SUNWmsg-l10n' => {},
          'SUNWfrics' => {},
          'SUNWciqu' => {
                         '4.4,REV=2009.10.01.09.46.01' => [
                                                             'SUNWciqu',
                                                             '/',
                                                             '4.4.1.0',

'/opt/altroot'
                                                            ]
                        },
          'SUNWkoics' => {},
          'SUNWdimid' => {},
          'SUNWjiquc' => {
                          '4.4,REV=2009.10.01.09.45.18' => [

'SUNWjiquc',
                                                               '/',
                                                               '4.4.1.0',

'/opt/altroot'
```

```
                                                                ]
                          },
          'SUNWiimgw' => {
                            '9.0,REV=2011.09.05' => [
                                                       'SUNWiimgw',
                                                       '/im',
                                                       '9.0-03.02',
                                                       '/opt/altroot'
                                                     ]
                          },
          'SUNWiimd-l10n' => {},
          'SUNWhiquc' => {
                            '4.4,REV=2009.10.01.09.46.50' => [

'SUNWhiquc',
                                                                  '/',
                                                                  '4.4.1.0',

'/opt/altroot'
                                                                ]
                          },
          'SUNWzhics' => {},
          'SUNWkiimd' => {},
          'SUNWiimfed' => {
                              '9.0,REV=2011.09.05' => [
                                                         'SUNWiimfed',
                                                         '/im',
                                                         '9.0-03.02',
                                                         '/opt/altroot'
                                                       ]
                           },
          'SUNWmsgmp' => {},
          'SUNWuwc' => {},
          'SUNWscics' => {},
          'SUNWiimc' => {},
          'SUNWhiimd' => {},
          'SUNWmessaging-server-scha' => {
                                            '7.0,REV=2008.05.19' => [

'SUNWmessaging-server-scha',

'/msg_scha',

'7.0-0.03',

'/opt/altroot'
                                                                        ]
                                          },
          'SUNWmsglb' => {},
          'SUNWtls' => {
                          '3.11.4,REV=2006.11.16.20.40' => [
                                                              'SUNWtls',
                                                              '/',
                                                              '3.13.1',

'/opt/altroot'
```

```
                                                                ]
                        },
          'SUNWj6dvx' => {},
          'SUNWfuwc' => {},
          'SUNWlibC' => {
                          '5.10,REV=2004.12.22' => [
                                                      'SUNWlibC',
                                                      '/',
                                                      '5.10',
                                                      ''
                                                    ]
                         },
          'SUNWjiss-searchui' => {},
          'SUNWjiimin' => {},
          'SUNWcomms-mysql-marker' => {},
          'SUNWscims' => {},
          'SUNWiimjd' => {
                           '9.0,REV=2011.09.05' => [
                                                      'SUNWiimjd',
                                                      '/im',
                                                      '9.0-03.02',
                                                      '/opt/altroot'
                                                    ]
                         },
          'SUNWciimd' => {},
          'SUNWldapcsdk-dev' => {
                                  '6.00,REV=2006.12.11.00.08' => [

'SUNWldapcsdk-dev',
                                                                    '/',

'6.03',

'/opt/altroot'
                                                                  ]
                                 },
          'SUNWiqlen' => {
                           '4.4,REV=2009.08.27.08.33' => [
                                                            'SUNWiqlen',
                                                            '/',
                                                            '4.4.1.0',

'/opt/altroot'
                                                          ]
                         },
          'SUNWiimid-l10n' => {},
          'SUNWiqr' => {
                         '4.4,REV=2009.08.27.08.32' => [
                                                          'SUNWiqr',
                                                          '/',
                                                          '4.4.1.0',
                                                          '/opt/altroot'
                                                        ]
                        },
          'SUNWdiimc' => {},
          'SUNWmsgwm' => {},
```

```
          'SUNWiimw' => {
                          '9.0,REV=2011.09.05' => [
                                                    'SUNWiimw',
                                                    '/im',
                                                    '9.0-03.02',
                                                    '/opt/altroot'
                                                  ]
                        },
          'SUNWmessaging-server-64' => {
                                         '7.0,REV=2008.06.20' => [

'SUNWmessaging-server-64',

'/messaging64',

'7.5-28.21',

'/opt/altroot'
                                                                    ]
                                       },
          'SUNWeiquc' => {
                           '4.4,REV=2009.10.01.09.43.47' => [

'SUNWeiquc',
                                                               '/',
                                                               '4.4.1.0',

'/opt/altroot'
                                                                ]
                         },
          'SUNWj5cfg' => {},
          'SUNWhiqu' => {
                          '4.4,REV=2009.10.01.09.46.48' => [
                                                             'SUNWhiqu',
                                                             '/',
                                                             '4.4.1.0',

'/opt/altroot'
                                                              ]
                        },
          'SUNWjiss-search' => {},
          'SUNWiimdv' => {
                           '9.0,REV=2011.09.05' => [
                                                     'SUNWiimdv',
                                                     '/',
                                                     '9.0-03.02',
                                                     '/opt/altroot'
                                                   ]
                         },
          'SUNWfiimd' => {},
          'SUNWj5rtx' => {},
          'SUNWiquc' => {
                          '4.4,REV=2009.08.27.08.33' => [
                                                          'SUNWiquc',
                                                          '/',
                                                          '4.4.1.0',
```

```
                                                          '/opt/altroot'
                                                        ]
                        },
          'SUNWiimid' => {
                           '9.0,REV=2011.09.05' => [
                                                     'SUNWiimid',
                                                     '/im',
                                                     '9.0-03.02',
                                                     '/opt/altroot'
                                                   ]
                         },
          'SUNWmsgmt' => {},
          'SUNWljdk' => {
                          '1.0,REV=2004.10.11.06.02' => [
                                                          'SUNWljdk',
                                                          '/',
                                                          '4.21',
                                                          '/opt/altroot'
                                                        ]
                        },
          'SUNWcuwc' => {},
          'SUNWldapcsdk-libs' => {
                                   '6.00,REV=2006.12.11.00.08' => [

'SUNWldapcsdk-libs',
                                                                    '/',

'6.03',

'/opt/altroot'
                                                                  ]
                                 },
          'SUNWservicetagr' => {
                                 '1.1.4,REV=2008.03.21.07.54' => [

'SUNWservicetagr',
                                                                   '/',

'1.1.4.1',
                                                                   ''
                                                                 ]
                               },
          'SUNWciimc' => {},
          'SUNWjhrt' => {
                          '2.0,REV=2006.10.31' => [
                                                    'SUNWjhrt',
                                                    '/usr',
                                                    '2.0/FCS',
                                                    '/opt/altroot'
                                                  ]
                        },
          'SUNWtlsd' => {
                          '3.11.4,REV=2006.11.16.20.40' => [
                                                             'SUNWtlsd',
                                                             '/',
                                                             '3.13.1',
```

```
'/opt/altroot'
                                                                ]
                        },
          'SUNWmsgin' => {},
          'SUNWdtrc' => {
                          '11.10.0,REV=2005.01.21.15.53' => [

'SUNWdtrc',
                                                                  '/',

'5.10/Generic',
                                                                  ''
                                                                 ]
                        },
          'SUNWhuwc' => {},
          'mysql' => {},
          'SUNWiqdoc' => {
                            '4.4,REV=2009.08.27.08.32' => [
                                                                'SUNWiqdoc',
                                                                '/',
                                                                '4.4.0.0',

'/opt/altroot'
                                                              ]
                        },
          'SUNWjiimd' => {},
          'SUNWjuwc' => {},
          'SUNWiimd' => {},
          'SUNWiqcrt' => {
                            '4.4,REV=2009.08.27.08.33' => [
                                                                'SUNWiqcrt',
                                                                '/opt',
                                                                '4.4.1.0',

'/opt/altroot'
                                                              ]
                        },
          'SUNWmsgzh' => {},
          'SUNWprd' => {
                          '4.6.4,REV=2006.11.16.20.40' => [
                                                                'SUNWprd',
                                                                '/',
                                                                '4.8.9',

'/opt/altroot'
                                                              ]
                      },
          'SUNWjiss-conf' => {},
          'SUNWcommda' => {
                            '7.0,REV=2009.03.31' => [
                                                          'SUNWcommda',
                                                          '/da',
                                                          '7.0-7.00',
                                                          '/opt/altroot'
                                                        ]
```

```
                          },
          'SUNWmsgen' => {},
          'SUNWjiss-store' => {},
          'SUNWiwc' => {
                        '2.0,REV=2010.07.26' => [
                                                  'SUNWiwc',
                                                  '/iwc',
                                                  '2.0-6.01',
                                                  '/opt/altroot'
                                                ]
                      },
          'SUNWjiss-storeui' => {},
          'SUNWiimin-l10n' => {},
          'SUNWiimsc' => {
                          '7.3,REV=2008.01.07.20.24.34' => [

'SUNWiimsc',

'/im_scha',
                                                                '7.3-01',

'/opt/altroot'
                                                              ]
                        },
          'SUNWinstall-patch-utils-root' => {

'11.10,REV=2005.01.09.23.05' => [

'SUNWinstall-patch-utils-root',

'/',

'5.10',

''

]
                                            },
          'SUNWiimin' => {
                          '9.0,REV=2011.09.05' => [
                                                    'SUNWiimin',
                                                    '/im',
                                                    '9.0-03.02',
                                                    '/opt/altroot'
                                                  ]
                        },
          'SUNWuwc-l10n' => {},
          'SUNWmsgst' => {},
          'SUNWiqu' => {
                        '4.4,REV=2009.08.27.08.32' => [
                                                        'SUNWiqu',
                                                        '/',
                                                        '4.4.1.0',
                                                        '/opt/altroot'
                                                      ]
                      },
```

```
          'SUNWkiimc' => {},
          'SUNWiim' => {
                        '9.0,REV=2011.09.05' => [
                                                  'SUNWiim',
                                                  '/im',
                                                  '9.0-03.02',
                                                  '/opt/altroot'
                                                ]
                      },
          'SUNWeiimin' => {},
          'SUNWcimid' => {},
          'SUNWiqcdv' => {
                          '4.4,REV=2009.08.27.08.33' => [
                                                          'SUNWiqcdv',
                                                          '/opt',
                                                          '4.4.1.0',

'/opt/altroot'
                                                        ]
                        },
          'SUNWldapcsdk-tools' => {
                                   '6.00,REV=2006.12.11.00.08' => [

'SUNWldapcsdk-tools',

'/directory',

'6.03',

'/opt/altroot'
                                                                    ]
                                 },
          'SUNWjss' => {
                        '4.2.4,REV=2006.11.16.20.40' => [
                                                          'SUNWjss',
                                                          '/',
                                                          '4.3.2',

'/opt/altroot'
                                                        ]
                      },
          'SUNWdiqu' => {
                         '4.4,REV=2009.10.01.09.42.59' => [
                                                            'SUNWdiqu',
                                                            '/',
                                                            '4.4.1.0',

'/opt/altroot'
                                                          ]
                       },
          'SUNWjiss' => {
                         '1.0,REV=2009.09.09' => [
                                                  'SUNWjiss',
                                                  '/jiss',
                                                  '1.4-16.9301',
                                                  '/opt/altroot'
```

```
                                                        ]
                          },
          'SUNWj6cfg' => {},
          'SUNWhimid' => {},
          'SUNWciquc' => {
                            '4.4,REV=2009.10.01.09.46.03' => [

'SUNWciquc',
                                                                '/',
                                                                '4.4.1.0',

'/opt/altroot'
                                                                ]
                           },
          'SUNWcomms' => {
                            '7.4,REV=2013.04.09' => [
                                                        'SUNWcomms',
                                                        '/CommsInstaller',
                                                        '7.4-0.05',
                                                        '/opt/altroot'
                                                      ]
                           },
          'SUNWjiqu' => {
                           '4.4,REV=2009.10.01.09.45.16' => [
                                                              'SUNWjiqu',
                                                              '/',
                                                              '4.4.1.0',

'/opt/altroot'
                                                            ]
                          },
          'SUNWkiqu' => {
                           '4.4,REV=2009.10.01.09.44.30' => [
                                                              'SUNWkiqu',
                                                              '/',
                                                              '4.4.1.0',

'/opt/altroot'
                                                            ]
                          },
          'SUNWkuwc' => {},
          'SUNWics-l10n' => {},
          'SUNWeiqu' => {
                           '4.4,REV=2009.10.01.09.43.44' => [
                                                              'SUNWeiqu',
                                                              '/',
                                                              '4.4.1.0',

'/opt/altroot'
                                                            ]
                          },
          'SUNWmessaging-server' => {},
          'SUNWdavserver' => {
                                '7.0,REV=2009.08.27' => [

'SUNWdavserver',
```

```
                                                                '/davserver',
                                                                '7.3-10.10',
                                                                '/opt/altroot'
                                                              ]
                                 },
          'SUNWmsgtw' => {},
          'SUNWeiimc' => {},
          'SUNWjaics' => {},
          'SUNWpkgcmdsu' => {
                                  '11.11,REV=2005.01.09.23.05' => [

'SUNWpkgcmdsu',
                                                                      '/',
                                                                      '5.10',
                                                                      ''
                                                                    ]
                                 },
          'SUNWjiimc' => {},
          'SUNWeimid' => {},
          'SUNWiqjx' => {
                                '4.4,REV=2009.08.27.08.33' => [
                                                                 'SUNWiqjx',
                                                                 '/',
                                                                 '4.4.1.0',
                                                                 '/opt/altroot'
                                                               ]
                               },
          'SUNWjhdoc' => {
                                 '2.0,REV=2006.10.04' => [
                                                            'SUNWjhdoc',
                                                            '/usr',
                                                            '2.0/FCS',
                                                            '/opt/altroot'
                                                          ]
                               },
          'SUNWj6dev' => {},
          'SUNWmsges' => {},
          'SUNWpr' => {
                               '4.6.4,REV=2006.11.16.20.40' => [
                                                                 'SUNWpr',
                                                                 '/',
                                                                 '4.8.9',
                                                                 '/opt/altroot'
                                                               ]
                              },
          'SUNWmsgmf' => {},
          'SUNWkimid' => {},
          'SUNWicu' => {
                               '1.2,REV=2005.01.06.14.13' => [
                                                                'SUNWicu',
                                                                '/usr',
                                                                '10/Generic',
                                                                '/opt/altroot'
                                                              ]
                               },
          'SUNWjiss-rest' => {},
```

```
          'SUNWfiimin' => {},
          'SUNWswmt' => {
                         '11.10,REV=2005.01.10.17.19' => [
                                                           'SUNWswmt',
                                                           '/',
                                                           '5.10',
                                                           ''
                                                          ]
                        },
          'SUNWcomis' => {},
          'SUNWdeics' => {},
          'SUNWtwics' => {},
          'SUNWciimin' => {},
          'SUNWmsgfr' => {},
          'SUNWdiimd' => {},
          'SUNWjiss-common' => {},
          'SUNWeuwc' => {},
          'SUNWkiquc' => {
                          '4.4,REV=2009.10.01.09.44.32' => [

'SUNWkiquc',
                                                             '/',
                                                             '4.4.1.0',

'/opt/altroot'
                                                            ]
                         },
          'SUNWstosreg' => {
                            '1.1.4,REV=2008.03.21.07.54' => [

'SUNWstosreg',
                                                              '/',

'1.1.4.1',
                                                              ''
                                                             ]
                          },
          'SUNWmsgde' => {},
          'SUNWjiss-jmqc' => {},
          'SUNWjiss-indexapi' => {},
          'SUNWbzip' => {
                         '11.10.0,REV=2005.01.08.05.16' => [

'SUNWbzip',
                                                             '/',

'5.10/SunOS Development',
                                                             ''
                                                            ]
                        },
          'SUNWtlsu' => {
                         '3.11.4,REV=2006.11.16.20.40' => [
                                                            'SUNWtlsu',
                                                            '/',
                                                            '3.13.1',
```

```
'/opt/altroot'
                                                                ]
                        },
          'SUNWfiqu' => {
                          '4.4,REV=2009.10.01.09.42.14' => [
                                                                  'SUNWfiqu',
                                                                  '/',
                                                                  '4.4.1.0',

'/opt/altroot'
                                                                ]
                        },
          'SUNWsasl' => {
                          '2.17,REV=2004.04.06.15.24' => [
                                                                'SUNWsasl',
                                                                '/',
                                                                '2.19',

'/opt/altroot'
                                                              ]
                        },
          'SUNWfiimc' => {},
          'SUNWzoneu' => {
                           '11.10.0,REV=2005.01.21.15.53' => [

'SUNWzoneu',
                                                                    '/',

'5.10/Generic',
                                                                    ''
                                                                  ]
                         },
          'SUNWcsr' => {
                         '11.10.0,REV=2005.01.21.15.53' => [
                                                                  'SUNWcsr',
                                                                  '/',

'5.10/Generic',
                                                                  ''
                                                                ]
                       },
          'SUNWesics' => {},
          'SUNWiimm' => {
                          '9.0,REV=2011.09.05' => [
                                                     'SUNWiimm',
                                                     '/im',
                                                     '9.0-03.02',
                                                     '/opt/altroot'
                                                   ]
                        }
        };
!!! installedprod
$VAR1 = {
          'IWC' => {
                     '2.0' => [
                                '/opt/altroot/iwc',
```

```
                        '2.0-6.01',
                        '20130402',
                        '2',
                        'SunOS',
                        'sparc',
                        '32',
                        '/opt/altroot',
                        'Not Found'
                      ]
                },
        'IM' => {
                 '9.0' => [
                          '/opt/altroot/im',
                          '9.0-03.02',
                          'Not Found',
                          '9',
                          'Not Found',
                          'Not Found',
                          'Not Found',
                          '/opt/altroot',
                          'Not Found'
                        ]
                },
        'SASL' => {
                    '2.19' => [
                              '/opt/altroot/',
                              '2.19',
                              'Not Found',
                              '2.19',
                              'Not Found',
                              'Not Found',
                              'Not Found',
                              '/opt/altroot',
                              'Not Found'
                            ]
                 },
        'ST' => {
                 '1.1.4' => [
                             '/',
                             '1.1.4.1',
                             'Not Found',
                             '1.1.4',
                             'Not Found',
                             'Not Found',
                             'Not Found',
                             '',
                             'Not Found'
                           ]
                },
        'DSSETUP' => {
                      '6.4' => [
                                '/opt/altroot/dssetup',
                                '6.4-24.03',
                                '20120611',
                                '6.4',
                                'SunOS',
```

```
                                'sparc',
                                '32',
                                '/opt/altroot',
                                'Not Found'
                              ]
                    },
          'LDAPJDK' => {
                      '4.21' => [
                                  '/opt/altroot/',
                                  '4.21',
                                  'Not Found',
                                  '4.21',
                                  'Not Found',
                                  'Not Found',
                                  'Not Found',
                                  '/opt/altroot',
                                  'Not Found'
                                ]
                    },
          'MQ_L10N' => {
                      '4.4' => [
                                '/opt/altroot/',
                                '4.4.1.0',
                                'Not Found',
                                '4.4',
                                'Not Found',
                                'Not Found',
                                'Not Found',
                                '/opt/altroot',
                                'Not Found'
                              ]
                    },
          'BZIP' => {
                  '11.10' => [
                              '/',
                              '5.10/SunOS Development',
                              'Not Found',
                              '11.10',
                              'Not Found',
                              'Not Found',
                              'Not Found',
                              '',
                              'Not Found'
                            ]
                  },
          'IM_SCHA' => {
                      '7.3' => [
                                '/opt/altroot/im_scha',
                                '7.3-01',
                                'Not Found',
                                '7.3',
                                'Not Found',
                                'Not Found',
                                'Not Found',
                                '/opt/altroot',
                                'Not Found'
```

```
                                ]
                        },
          'ICU' => {
                     'ICU2,ICU3' => [
                                       '/opt/altroot/usr',
                                       '10/Generic',
                                       'Not Found',
                                       'ICU2,ICU3',
                                       'Not Found',
                                       'Not Found',
                                       'Not Found',
                                       '/opt/altroot',
                                       'Not Found'
                                     ]
                   },
          'MS64' => {
                      '7.5' => [
                                  '/opt/altroot/messaging64',
                                  '7.5-28.21',
                                  '20130408',
                                  '7u5',
                                  'SunOS',
                                  'sparc',
                                  '64',
                                  '/opt/altroot',
                                  'Not Found'
                                ]
                    },
          'DAV' => {
                     '7.3' => [
                                 '/opt/altroot/davserver',
                                 '7.3-10.10',
                                 '20130328',
                                 '7u3',
                                 'SunOS',
                                 'sparc',
                                 '32',
                                 '/opt/altroot',
                                 '7.0.3.10.0'
                               ]
                   },
          'LIBCPLUSPLUS' => {
                               '5.9' => [
                                           '/',
                                           '5.10',
                                           'Not Found',
                                           '5.9',
                                           'Not Found',
                                           'Not Found',
                                           'Not Found',
                                           '',
                                           'Not Found'
                                         ]
                             },
          'LDAPCSDK6' => {
                            '6.0' => [
```

```
                                '/opt/altroot/',
                                '6.03',
                                'Not Found',
                                '6.0',
                                'Not Found',
                                'Not Found',
                                'Not Found',
                                '/opt/altroot',
                                'Not Found'
                              ]
                    },
'MS_SCHA' => {
                    '7.0' => [
                              '/opt/altroot/msg_scha',
                              '7.0-0.03',
                              '20080519',
                              '7.0',
                              'SunOS',
                              'sparc',
                              '32',
                              '/opt/altroot',
                              'Not Found'
                            ]
                  },
'PATCHUTILS' => {
                     'Unknown' => [
                                   '/',
                                   '5.10',
                                   'Not Found',
                                   'Unknown',
                                   'Not Found',
                                   'Not Found',
                                   'Not Found',
                                   '',
                                   'Not Found'
                                 ]
                    },
'MQ' => {
          '4.4' => [
                      '/opt/altroot/',
                      '4.4.1.0',
                      'Not Found',
                      '4.4',
                      'Not Found',
                      'Not Found',
                      'Not Found',
                      '/opt/altroot',
                      'Not Found'
                    ]
        },
'JHRT' => {
            '2.0' => [
                        '/opt/altroot/usr',
                        '2.0/FCS',
                        'Not Found',
                        '2.0',
```

```
                                'Not Found',
                                'Not Found',
                                'Not Found',
                                '/opt/altroot',
                                'Not Found'
                              ]
                    },
          'IMAPI' => {
                      '9.0' => [
                                '/opt/altroot/',
                                '9.0-03.02',
                                'Not Found',
                                '9',
                                'Not Found',
                                'Not Found',
                                'Not Found',
                                '/opt/altroot',
                                'Not Found'
                               ]
                     },
          'CI' => {
                    '7.4' => [
                              '/opt/altroot/CommsInstaller',
                              '7.4-0.05',
                              '20130409',
                              '7u4',
                              'SunOS',
                              'sparc',
                              '32',
                              '/opt/altroot',
                              '7.0.4.0.0'
                            ]
                  },
          'DA' => {
                    '7.0' => [
                              '/opt/altroot/da',
                              '7.0-7.00',
                              'Not Found',
                              '7',
                              'SunOS',
                              'sparc',
                              '32',
                              '/opt/altroot',
                              'Not Found'
                            ]
                  },
          'LDAPCSDK6_TOOLS' => {
                                '6.0' => [
                                          '/opt/altroot/directory',
                                          '6.03',
                                          'Not Found',
                                          '6.0',
                                          'Not Found',
                                          'Not Found',
                                          'Not Found',
                                          '/opt/altroot',
```

```
                                        'Not Found'
                                      ]
                                 },
          'JISS' => {
                      '1.4' => [
                                  '/opt/altroot/jiss',
                                  '1.4-16.9301',
                                  '20130320',
                                  '1u4',
                                  'SunOS',
                                  'all',
                                  '32',
                                  '/opt/altroot',
                                  '1.0.4.16.0'
                                ]
                    },
          'NSS' => {
                     '4.8.8' => [
                                   '/opt/altroot/',
                                   '4.3.2',
                                   'Not Found',
                                   '4.8.8',
                                   'Not Found',
                                   'Not Found',
                                   'Not Found',
                                   '/opt/altroot',
                                   'Not Found'
                                 ]
                   }
        };
====== End QQQ detectProducts ======
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Product Selection:

Communication Products:

    Item  Description
    ----  -----------
       1  Messaging Server (64bit) 7u5 (7.5-28.21)
          Installed Version at /opt/altroot/messaging64
       2  Comms DSsetup 6.4 (6.4-24.03)
          Installed Version at /opt/altroot/dssetup
       3  Calendar Server 7.0.3.10.0
          Installed Version at /opt/altroot/davserver
       4  Instant Messaging 9 (9.0-03.02)
          Installed Version at /opt/altroot/im
       5  Convergence 2 (2.0-6.01)
          Installed Version at /opt/altroot/iwc
       6  Indexing and Search Service 1.0.4.16.0
          Installed Version at /opt/altroot/jiss
       7  Comms Delegated Administrator 7 (7.0-7.00)
          Installed Version at /opt/altroot/da
       8  Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
          Installed Version at /opt/altroot/msg_scha
       9  Instant Messaging Sun Cluster HA agent 7.3 (7.3-01)
          Installed Version at /opt/altroot/im_scha
```

```
Enter the items you wish to uninstall. Enter q to quit.
You can enter multiple items using commas to separate them.
For example: 1,2

Please select the products you wish to uninstall [1, 2, 3, 4, 5, 6, 7,
8, 9]: =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
QQQ selections: MS64 7.5 DSSETUP 6.4 DAV 7.3 IM 9.0 IWC 2.0 JISS 1.4 DA
7.0 MS_SCHA 7.0 IM_SCHA 7.3
  WILL UNINSTALL: Messaging Server (64bit) 7u5 (7.5-28.21)
                  at /opt/altroot/messaging64
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWmessaging-server-64
  WILL UNINSTALL: Comms DSsetup 6.4 (6.4-24.03)
                  at /opt/altroot/dssetup
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWcomds
  WILL UNINSTALL: Calendar Server 7.0.3.10.0
                  at /opt/altroot/davserver
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWdavserver
  WILL UNINSTALL: Instant Messaging 9 (9.0-03.02)
                  at /opt/altroot/im
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiimfed
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiimw
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiimgw
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiimid
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiimjd
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiimm
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiimin
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiim
  WILL UNINSTALL: Convergence 2 (2.0-6.01)
                  at /opt/altroot/iwc
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiwc
  WILL UNINSTALL: Indexing and Search Service 1.0.4.16.0
```

```
                  at /opt/altroot/jiss
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWjiss
  WILL UNINSTALL: Comms Delegated Administrator 7 (7.0-7.00)
                  at /opt/altroot/da
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWcommda
  WILL UNINSTALL: Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
                  at /opt/altroot/msg_scha
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWmessaging-server-scha
  WILL UNINSTALL: Instant Messaging Sun Cluster HA agent 7.3 (7.3-01)
                  at /opt/altroot/im_scha
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiimsc
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Ready to uninstall

Do you want to continue ? [yes] :

============================================================
Uninstalling Messaging Server (64bit) 7u5 (7.5-28.21) at
/opt/altroot/messaging64)...
------ Executing Task 1 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWmessaging-server-64 2>&1

Removal of <SUNWmessaging-server-64> was successful.
-- Exit status: 0

============================================================
Uninstalling Comms DSsetup 6.4 (6.4-24.03) at /opt/altroot/dssetup)...
------ Executing Task 2 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWcomds 2>&1

Removal of <SUNWcomds> was successful.
-- Exit status: 0

============================================================
Uninstalling Calendar Server 7.0.3.10.0 at /opt/altroot/davserver)...
------ Executing Task 3 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWdavserver 2>&1

Removal of <SUNWdavserver> was successful.
-- Exit status: 0

============================================================
```

```
Uninstalling Instant Messaging 9 (9.0-03.02) at /opt/altroot/im)...
------ Executing Task 4 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiimfed 2>&1

Removal of <SUNWiimfed> was successful.
-- Exit status: 0
------ Executing Task 5 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiimw 2>&1

Removal of <SUNWiimw> was successful.
-- Exit status: 0
------ Executing Task 6 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiimgw 2>&1

Removal of <SUNWiimgw> was successful.
-- Exit status: 0
------ Executing Task 7 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiimid 2>&1

Removal of <SUNWiimid> was successful.
-- Exit status: 0
------ Executing Task 8 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiimjd 2>&1

Removal of <SUNWiimjd> was successful.
-- Exit status: 0
------ Executing Task 9 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiimm 2>&1

Removal of <SUNWiimm> was successful.
-- Exit status: 0
------ Executing Task 10 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiimin 2>&1

Removal of <SUNWiimin> was successful.
-- Exit status: 0
------ Executing Task 11 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiim 2>&1
Configuration file /opt/altroot/im/sbin/../config/iim.conf is missing,
exiting
```

```
Shutting down IM services..
Configuration file /opt/altroot/im/sbin/../config/iim.conf is missing,
exiting

Removal of <SUNWiim> was successful.
-- Exit status: 0

============================================================
Uninstalling Convergence 2 (2.0-6.01) at /opt/altroot/iwc)...
------ Executing Task 12 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiwc 2>&1

Removal of <SUNWiwc> was successful.
-- Exit status: 0

============================================================
Uninstalling Indexing and Search Service 1.0.4.16.0 at
/opt/altroot/jiss)...
------ Executing Task 13 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWjiss 2>&1

Removal of <SUNWjiss> was successful.
-- Exit status: 0

============================================================
Uninstalling Comms Delegated Administrator 7 (7.0-7.00) at
/opt/altroot/da)...
------ Executing Task 14 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWcommda 2>&1

Removal of <SUNWcommda> was successful.
-- Exit status: 0

============================================================
Uninstalling Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03) at
/opt/altroot/msg_scha)...
------ Executing Task 15 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWmessaging-server-scha 2>&1

Removal of <SUNWmessaging-server-scha> was successful.
-- Exit status: 0

============================================================
Uninstalling Instant Messaging Sun Cluster HA agent 7.3 (7.3-01) at
/opt/altroot/im_scha)...
------ Executing Task 16 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
```

```
-R /opt/altroot SUNWiimsc 2>&1

Removal of <SUNWiimsc> was successful.
-- Exit status: 0
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
SUMMARY:

PASSED: Task 1: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWmessaging-server-64
PASSED: Task 2: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWcomds
PASSED: Task 3: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWdavserver
PASSED: Task 4: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiimfed
PASSED: Task 5: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiimw
PASSED: Task 6: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiimgw
PASSED: Task 7: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiimid
PASSED: Task 8: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiimjd
PASSED: Task 9: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiimm
PASSED: Task 10: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiimin
PASSED: Task 11: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiim
PASSED: Task 12: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiwc
PASSED: Task 13: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWjiss
PASSED: Task 14: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWcommda
PASSED: Task 15: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWmessaging-server-scha
PASSED: Task 16: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-R /opt/altroot SUNWiimsc
```

```
All tasks PASSED
Checking JES java symlink...
ls -l /usr/jdk /usr/java 2>&1
lrwxrwxrwx   1 root     other         15 May  7 17:34 /usr/java ->
jdk/jdk1.5.0_12

/usr/jdk:
total 9
drwxr-xr-x   4 root     bin            4 Jun 12  2012 instances
lrwxrwxrwx   1 root     other          7 Jun 12  2012 j2sdk1.4.2_32 ->
../j2se
lrwxrwxrwx   1 root     other         18 Feb 26 14:05 jdk1.5.0_12 ->
instances/jdk1.5.0
lrwxrwxrwx   1 root     other         11 May  7 17:34 latest ->
jdk1.5.0_12
drwxr-xr-x   8 root     bin            8 May  7 17:41 packages
-- Exit status: 0
ls -l /usr/jdk/entsys-j2se /usr/jdk/latest 2>&1
/usr/jdk/entsys-j2se: No such file or directory
lrwxrwxrwx   1 root     other         11 May  7 17:34 /usr/jdk/latest ->
jdk1.5.0_12
-- Exit status: 2
ls -lL /usr/jdk/entsys-j2se /usr/jdk/latest 2>&1
/usr/jdk/entsys-j2se: No such file or directory
/usr/jdk/latest:
total 34560
-rw-r--r--   1 root     bin         2487 May  2  2007 COPYRIGHT
-rw-r--r--   1 root     bin        11827 Oct  2  2011 README.html
-rw-r--r--   1 root     bin        67265 Oct  2  2011
THIRDPARTYLICENSEREADME.txt
drwxr-xr-x   3 root     bin           41 May  7 17:41 bin
drwxr-xr-x   9 root     bin           10 Jun 12  2012 demo
drwxr-xr-x   3 root     bin            9 Jun 12  2012 include
drwxr-xr-x   6 root     bin           12 Feb 26 14:05 jre
drwxr-xr-x   2 root     bin            9 Jun 12  2012 lib
drwxr-xr-x   6 root     bin            6 Jun 12  2012 man
-r--r--r--   1 root     other       5264 Feb 12 15:49 register.html
-r--r--r--   1 root     other       5702 Feb 12 15:49 register_ja.html
-r--r--r--   1 root     other       4862 Feb 12 15:49
register_zh_CN.html
drwxr-xr-x   4 root     bin            4 Jun 12  2012 sample
-rw-r--r--   1 root     bin      17483215 Oct  2  2011 src.zip
-- Exit status: 2
INFO: no update to /etc/softlist.xml required

Hit Return to Continue:
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
-- unlink /tmp/.patchout_20130507181939.7771
-- unlink /tmp/.patchout_altroot_20130507181939.7771
mkdir -p /opt/altroot/var/opt/CommsInstaller/logs 2>&1
-- Exit status: 0

NOTICE: silent file created in:

/opt/altroot/var/opt/CommsInstaller/logs/silent_CommsInstaller_201305071819
Closing the log at Tue May  7 18:20:02 2013
```

```
[955 Tue May 07 18:20:18 root@host1% /home/user/wspace/releases/ci74# ]
# ./commpkg info --verbose
-- LOGFILE: /tmp/CommsInstaller_20130507182024.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: It is highly recommended that you apply the
          latest OS Recommended Patch Cluster. commpkg will
          not do this automatically.
ALTROOT: /
  NAME: ""

=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: It is highly recommended that you apply the
          latest OS Recommended Patch Cluster. commpkg will
          not do this automatically.
ALTROOT: /opt/altroot
  NAME: <none>

[956 Tue May 07 18:20:38 root@host1% /home/user/wspace/releases/ci74# ]
# cat /etc/softlist.xml
<?xml version="1.0" encoding="utf-8"?>
<!-- Do not edit! This file is automatically generated. -->
<!-- Last Update: Tue May  7 18:16:40 PDT 2013 -->
<!-- By:
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74
./commpkg -->

<multi-inst-list>
  <install name="" root="/" suite="comms" />
  <install root="/opt/altroot" suite="comms" />
</multi-inst-list>
[957 Tue May 07 18:20:49 root@host1% /home/user/wspace/releases/ci74# ]
# ls /opt/altroot
total 45
   3 CommsInstaller/     3 im/                 3 opt/
   3 da/                 3 im_scha/            3 usr/
   3 davserver/          3 iwc/                3 var/
   3 directory/          3 jiss/
   3 dssetup/            3 messaging64/
   3 etc/                3 msg_scha/
[958 Tue May 07 18:20:52 root@host1% /home/user/wspace/releases/ci74# ]
# ls -l /opt/altroot
total 45
```

```
   3 drwxr-xr-x   6 root     root           6 May  7 18:16
CommsInstaller/
   3 drwxr-xr-x   3 root     root           3 May  7 18:19 da/
   3 drwxr-xr-x   2 root     root           2 May  7 18:19 davserver/
   3 drwxr-xr-x   3 root     root           3 May  7 18:16 directory/
   3 drwxr-xr-x   2 root     root           2 May  7 18:19 dssetup/
   3 drwxr-xr-x   9 root     sys            9 May  7 18:16 etc/
   3 drwxr-xr-x   3 root     root           3 May  7 18:19 im/
   3 drwxr-xr-x   4 root     root           4 May  7 18:19 im_scha/
   3 drwxr-xr-x   2 root     root           2 May  7 18:19 iwc/
   3 drwxr-xr-x   2 root     root           2 May  7 18:19 jiss/
   3 drwxr-xr-x   2 root     root           2 May  7 18:19 messaging64/
   3 drwxr-xr-x   2 root     root           2 May  7 18:19 msg_scha/
   3 drwxr-xr-x   3 root     root           3 May  7 18:16 opt/
   3 drwxr-xr-x   9 root     sys            9 May  7 18:16 usr/
   3 drwxr-xr-x   7 root     sys            7 May  7 18:17 var/
[959 Tue May 07 18:20:56 root@host1% /home/user/wspace/releases/ci74# ]
# \rm -rf /opt/altroot
[960 Tue May 07 18:21:04 root@host1% /home/user/wspace/releases/ci74# ]
# ./commpkg info
-- LOGFILE: /tmp/CommsInstaller_20130507182107.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: It is highly recommended that you apply the
          latest OS Recommended Patch Cluster. commpkg will
          not do this automatically.
ALTROOT: /
  NAME: ""

INFO: /opt/altroot does not exist
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
INFO: /etc/softlist.xml updated
[961 Tue May 07 18:21:16 root@host1% /home/user/wspace/releases/ci74# ]
# cat /etc/softlist.xml
<?xml version="1.0" encoding="utf-8"?>
<!-- Do not edit! This file is automatically generated. -->
<!-- Last Update: Tue May  7 18:21:16 PDT 2013 -->
<!-- By:
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74
./commpkg -->

<multi-inst-list>
  <install name="" root="/" suite="comms" />
```

```
</multi-inst-list>
[962 Tue May 07 18:21:24 root@host1% /home/user/wspace/releases/ci74# ]
```

Sample Session - Communications Suite Simple Install and Uninstall

Sample Session - Oracle Communications Unified Communications Suite Simple Install and Uninstall Version 7 Update 4

This sample session performs a "simple" install and uninstall of Communications Suite by running the Communications Suite installer, `commpkg`.

This document shows the use of `commpkg info` to check what is installed, `commpkg install` to install all the products, and `commpkg uninstall` to uninstall all the products. It contains the following topics:

- Summary of Commands Run
- Session

Summary of Commands Run

```
923  uname -a
  924  ./commpkg info
  925  ./commpkg install
  926  cat /var/opt/CommsInstaller/logs/undoCommsInstall_20130507174046
  927  cat
/var/opt/CommsInstaller/logs/silent_CommsInstaller_20130507174046
  928  cat
/var/opt/CommsInstaller/logs/CommsInstaller_20130507174046.log
  929  ./commpkg info
  930  ./commpkg info --verbose
  931  ls -l /opt/sun/comms
  932  ./commpkg uninstall
  933  cat
/var/opt/CommsInstaller/logs/silent_CommsInstaller_20130507174429
  934  cat
/var/opt/CommsInstaller/logs/CommsInstaller_20130507174429.log
```

Session

```
[923 Tue May 07 17:38:13 root@example.com%
/home/user/wspace/releases/ci74# ]
# uname -a
SunOS host1 5.10 Generic_147440-12 sun4v sparc sun4v
[924 Tue May 07 17:40:29 root@example.com%
/home/user/wspace/releases/ci74# ]
# ./commpkg info
-- LOGFILE: /tmp/CommsInstaller_20130507174033.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
```

```
Detecting Installed Products...
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: It is highly recommended that you apply the
          latest OS Recommended Patch Cluster. commpkg will
          not do this automatically.
ALTROOT: /
  NAME: ""

[925 Tue May 07 17:40:40 root@example.com%
/home/user/wspace/releases/ci74# ]
# ./commpkg install
-- LOGFILE: /tmp/CommsInstaller_20130507174046.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013

Welcome to the Oracle Communications Unified Communications Suite
Product Installer
This program will install selected components of the Communications
Suite
on your computer. Do note that the installer lays down the
bits, but does not do configuration. Separate configuration
steps for each individual product will be required.

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=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Specify Install Location

This program will extract the server files and install them
into a directory you specify. That directory is called the
INSTALLROOT in the product documentation and will contain
the server programs.

To accept the default shown in brackets, press the Enter key.


Install location [/opt/sun/comms]:
-- /opt/sun/comms already exists, existing data may be overwritten
Accept Anyway? [yes] :
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: You must apply the latest OS Recommended Patchset
          Some products will not work properly without it
Do you want to continue ? [no] : yes
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Product Selection:
```

```
Shared Components (not shown) will be installed as required.
  you will be prompted later if Shared Components need to be upgraded.
OS patches (not shown) will be installed as required.

Communication Products:

    Item  Description
    ----  -----------
       1  Messaging Server (64bit) 7u5 (7.5-28.21)
       2  Comms DSsetup 6.4 (6.4-24.03)
       3  Calendar Server 7.0.3.10.0
       4  Instant Messaging 9.0.0.3.0
       5  Convergence 2 (2.0-6.01)
       6  Indexing and Search Service 1.0.4.16.0
       7  Comms Delegated Administrator 7 (7.0-7.00)
       8  Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
       9  Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)


Enter the items you wish to install. Enter q to quit.
Prefix an item with ~ to indicate you only want
  to install shared component dependencies of that product
You can enter multiple items using commas to separate them.
For example: 1,2

Please select the products you wish to install [1, 2, 3, 4, 5, 6, 7, 8,
9]:
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Generating list of things to install...
Checking for Shared Component Upgrade Requirements...
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
  WILL INSTALL: Instant Messaging API 9
  WILL INSTALL: LDAPJDK 4.21
  WILL INSTALL: Service Tags 1.1.4
  WARNING: JDK is not in the distro, it will NOT be installed...
           Please obtain and install it separately
  WILL INSTALL: International Components for Unicode ICU2,ICU3
  WILL INSTALL: Simple Authentication and Security Layer 2.19
  WILL INSTALL: LDAPCSDK6 Tools 6.0
  WILL INSTALL: patch 125358-15 for NSS/NSPR/JSS
  WILL INSTALL: Message Queue 4.4
  WILL INSTALL: Message Queue Localization 4.4
  WILL INSTALL: LDAPCSDK6 6.0
  WILL INSTALL: Java Help Runtime 2.0
  WILL INSTALL: Messaging Server (64bit) 7u5 (7.5-28.21)
                to /opt/sun/comms/messaging64
  WILL INSTALL: Comms DSsetup 6.4 (6.4-24.03)
                to /opt/sun/comms/dssetup
  WILL INSTALL: Calendar Server 7.0.3.10.0
                to /opt/sun/comms/davserver
  WILL INSTALL: Instant Messaging 9.0.0.3.0
                to /opt/sun/comms/im
  WILL INSTALL: Convergence 2 (2.0-6.01)
                to /opt/sun/comms/iwc
  WILL INSTALL: Indexing and Search Service 1.0.4.16.0
```

```
                to /opt/sun/comms/jiss
  WILL INSTALL: Comms Delegated Administrator 7 (7.0-7.00)
                to /opt/sun/comms/da
  WILL INSTALL: Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
                to /opt/sun/comms/msg_scha
  WILL INSTALL: Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)
                to /opt/sun/comms/im_scha
  WILL INSTALL: CommsInstaller 7.0.4.0.0
                to /opt/sun/comms/CommsInstaller
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Ready to install

Do you want to continue ? [yes] :

============================================================
Installing Instant Messaging API 9...
------ Executing Task 1 of 56 ...

============================================================
Installing LDAPJDK 4.21...
------ Executing Task 2 of 56 ...

============================================================
Installing Service Tags 1.1.4...
------ Executing Task 3 of 56 ...
------ Executing Task 4 of 56 ...
------ Executing Task 5 of 56 ...

============================================================
Installing International Components for Unicode ICU2,ICU3...
------ Executing Task 6 of 56 ...

============================================================
Installing Simple Authentication and Security Layer 2.19...
------ Executing Task 7 of 56 ...

============================================================
Installing LDAPCSDK6 Tools 6.0...
------ Executing Task 8 of 56 ...

============================================================
Installing patch 125358-15 for NSS/NSPR/JSS...
------ Executing Task 9 of 56 ...

============================================================
Installing Message Queue 4.4...
------ Executing Task 10 of 56 ...
------ Executing Task 11 of 56 ...
------ Executing Task 12 of 56 ...
------ Executing Task 13 of 56 ...
------ Executing Task 14 of 56 ...
------ Executing Task 15 of 56 ...
------ Executing Task 16 of 56 ...
------ Executing Task 17 of 56 ...
------ Executing Task 18 of 56 ...
------ Executing Task 19 of 56 ...
```

```
============================================================
Installing Message Queue Localization 4.4...
------ Executing Task 20 of 56 ...
------ Executing Task 21 of 56 ...
------ Executing Task 22 of 56 ...
------ Executing Task 23 of 56 ...
------ Executing Task 24 of 56 ...
------ Executing Task 25 of 56 ...
------ Executing Task 26 of 56 ...
------ Executing Task 27 of 56 ...
------ Executing Task 28 of 56 ...
------ Executing Task 29 of 56 ...
------ Executing Task 30 of 56 ...
------ Executing Task 31 of 56 ...
------ Executing Task 32 of 56 ...
------ Executing Task 33 of 56 ...

============================================================
Installing LDAPCSDK6 6.0...
------ Executing Task 34 of 56 ...
------ Executing Task 35 of 56 ...

============================================================
Installing Java Help Runtime 2.0...
------ Executing Task 36 of 56 ...
------ Executing Task 37 of 56 ...
------ Executing Task 38 of 56 ...
------ Executing Task 39 of 56 ...

============================================================
Installing Messaging Server (64bit) 7u5 (7.5-28.21)...
------ Executing Task 40 of 56 ...

============================================================
Installing Comms DSsetup 6.4 (6.4-24.03)...
------ Executing Task 41 of 56 ...

============================================================
Installing Calendar Server 7.0.3.10.0...
------ Executing Task 42 of 56 ...

============================================================
Installing Instant Messaging 9.0.0.3.0...
------ Executing Task 43 of 56 ...
------ Executing Task 44 of 56 ...
------ Executing Task 45 of 56 ...
------ Executing Task 46 of 56 ...
------ Executing Task 47 of 56 ...
------ Executing Task 48 of 56 ...
------ Executing Task 49 of 56 ...
------ Executing Task 50 of 56 ...

============================================================
Installing Convergence 2 (2.0-6.01)...
------ Executing Task 51 of 56 ...
```

```
============================================================
Installing Indexing and Search Service 1.0.4.16.0...
------ Executing Task 52 of 56 ...

============================================================
Installing Comms Delegated Administrator 7 (7.0-7.00)...
------ Executing Task 53 of 56 ...

============================================================
Installing Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)...
------ Executing Task 54 of 56 ...

============================================================
Installing Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)...
------ Executing Task 55 of 56 ...

============================================================
Installing CommsInstaller 7.0.4.0.0...
------ Executing Task 56 of 56 ...
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
SUMMARY:


All tasks PASSED
Checking JES java symlink...
INFO: no update to /etc/softlist.xml required

Hit Return to Continue:
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=

NOTICE: To undo the installation, run the commands in:
        /var/opt/CommsInstaller/logs/undoCommsInstall_20130507174046

NOTICE: silent file created in:

/var/opt/CommsInstaller/logs/silent_CommsInstaller_20130507174046
NOTICE: LOGFILE  created in:
        /var/opt/CommsInstaller/logs/CommsInstaller_20130507174046.log
There were 1 Warning(s). Please consult the log file
[926 Tue May 07 17:42:48 root@example.com%
/home/user/wspace/releases/ci74# ]
# cat /var/opt/CommsInstaller/logs/undoCommsInstall_20130507174046
#! /bin/sh
# Note that only tasks that PASSED are undone
# For reference, tasks that FAILED or are irreversible are in comments
# WARNING WARNING WARNING
# Executing irreversible tasks may result in a non-functional system!!!
ADMIN=/var/opt/CommsInstaller/logs/admin.quiet
set -v
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWcomms
#######################################################
# Finished Undo of: Installing CommsInstaller 7.0.4.0.0...
#######################################################
pkgrm  -n -a $ADMIN SUNWiimsc
#######################################################
```

```
# Finished Undo of: Installing Instant Messaging Sun Cluster HA agent
7.3 (7.3-01.02)...
#####################################################
pkgrm  -n -a $ADMIN SUNWmessaging-server-scha
#####################################################
# Finished Undo of: Installing Messaging Server Sun Cluster HA agent 7.0
(7.0-0.03)...
#####################################################
pkgrm  -n -a $ADMIN SUNWcommda
#####################################################
# Finished Undo of: Installing Comms Delegated Administrator 7
(7.0-7.00)...
#####################################################
pkgrm  -n -a $ADMIN SUNWjiss
#####################################################
# Finished Undo of: Installing Indexing and Search Service 1.0.4.16.0...
#####################################################
pkgrm  -n -a $ADMIN SUNWiwc
#####################################################
# Finished Undo of: Installing Convergence 2 (2.0-6.01)...
#####################################################
pkgrm  -n -a $ADMIN SUNWiimfed
pkgrm  -n -a $ADMIN SUNWiimw
pkgrm  -n -a $ADMIN SUNWiimgw
pkgrm  -n -a $ADMIN SUNWiimid
pkgrm  -n -a $ADMIN SUNWiimjd
pkgrm  -n -a $ADMIN SUNWiimm
pkgrm  -n -a $ADMIN SUNWiimin
pkgrm  -n -a $ADMIN SUNWiim
#####################################################
# Finished Undo of: Installing Instant Messaging 9.0.0.3.0...
#####################################################
pkgrm  -n -a $ADMIN SUNWdavserver
#####################################################
# Finished Undo of: Installing Calendar Server 7.0.3.10.0...
#####################################################
pkgrm  -n -a $ADMIN SUNWcomds
#####################################################
# Finished Undo of: Installing Comms DSsetup 6.4 (6.4-24.03)...
#####################################################
pkgrm  -n -a $ADMIN SUNWmessaging-server-64
#####################################################
# Finished Undo of: Installing Messaging Server (64bit) 7u5
(7.5-28.21)...
#####################################################
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWjhdoc
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWjhdem
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWjhdev
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWjhrt
#####################################################
# Finished Undo of: Installing Java Help Runtime 2.0...
#####################################################
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWldapcsdk-dev
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWldapcsdk-libs
#####################################################
# Finished Undo of: Installing LDAPCSDK6 6.0...
```

```
#####################################################
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWhiquc
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWhiqu
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWciquc
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWciqu
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWkiquc
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWkiqu
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWeiquc
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWeiqu
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWjiquc
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWjiqu
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWdiquc
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWdiqu
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWfiquc
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWfiqu
#####################################################
# Finished Undo of: Installing Message Queue Localization 4.4...
#####################################################
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWiqlen
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWiqcdv
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWiqcrt
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWiqfs
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWiqjx
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWiqum
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWiquc
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWiqdoc
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWiqu
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWiqr
#####################################################
# Finished Undo of: Installing Message Queue 4.4...
#####################################################
patchrm  125358-15
#####################################################
# Finished Undo of: Installing patch 125358-15 for NSS/NSPR/JSS...
#####################################################
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWldapcsdk-tools
#####################################################
# Finished Undo of: Installing LDAPCSDK6 Tools 6.0...
#####################################################
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWsasl
#####################################################
# Finished Undo of: Installing Simple Authentication and Security Layer
2.19...
#####################################################
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWicu
#####################################################
# Finished Undo of: Installing International Components for Unicode
ICU2,ICU3...
#####################################################
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWstosreg
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWservicetagu
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWservicetagr
#####################################################
# Finished Undo of: Installing Service Tags 1.1.4...
#####################################################
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWljdk
```

```
#####################################################
# Finished Undo of: Installing LDAPJDK 4.21...
#####################################################
# IRREVERSIBLE: pkgrm  -n -a $ADMIN SUNWiimdv
#####################################################
# Finished Undo of: Installing Instant Messaging API 9...
#####################################################
[927 Tue May 07 17:43:05 root@example.com%
/home/user/wspace/releases/ci74# ]
# cat /var/opt/CommsInstaller/logs/silent_CommsInstaller_20130507174046
#
# Silent File for CommsInstaller 7.0.4.0.0 (7.4-0.05)
# Generated on 20130507174046
#

#
# verb used to create this silent file
#
VERB=install

#
# alternate distro path if not found where commpkg resides
#    and no --distro switch specified is
#
ALTDISTROPATH=/net/comms-nfs.example.com/export/megan/wspace/dl111122/relea
The installation root
#
INSTALLROOT=/opt/sun/comms

#
# flag to indicate whether to use alternate root install mode
#
ALTROOT=no

#
# flag to indicate whether to perform pkg overwrite if the pkg already
exists
#
PKGOVERWRITE=no

#
# flag to indicate whether to exclude OS patches
#
EXCLUDEOS=no

#
# flag to indicate whether to exclude shared components
#
EXCLUDESC=no

#
# flag to indicate that all SC should or should not be upgraded without
prompting
#
UPGRADESC=no
```

```
#
# INSTALLROOT friendly name
#
INSTALLNAME=

#
# flag to indicate whether to skip OS Level Check
#
SKIPOSLEVELCHECK=no

#
# list of components (using mnemonics)
# A ~ in front of the product indicates that only the shared
# components are installed
#
COMPONENTS=MS64 DSSETUP DAV IM IWC JISS DA MS_SCHA IM_SCHA
COMPONENT_VERSIONS=
[928 Tue May 07 17:43:16 root@example.com%
/home/user/wspace/releases/ci74# ]
# cat /var/opt/CommsInstaller/logs/CommsInstaller_20130507174046.log
============ LOGFILE started Tue May  7 17:40:46 2013 ==========
LOGFILE = /tmp/CommsInstaller_20130507174046.log
Running /usr/bin/perl ./commpkg
-- /usr/bin/perl ./commpkg install
-- ARGS:
   install
-- perl version: 5.008004 pid: 24935
-- basetime: 1367973646 Tue May  7 17:40:46 2013
-- scriptDir:
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74
-- LOGFILE: /tmp/CommsInstaller_20130507174046.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013
-- UNAME = SunOS ARCH = sparc OS_VERS = 5.10 BITS = 64
uname -a 2>&1
SunOS host1 5.10 Generic_147440-12 sun4v sparc sun4v
-- Exit status: 0
!!! ENV
$VAR1 = {
          'HOME' => '/',
          'PS1' => '[\\! \\d \\t \\u@\\h% \\w\\$ ]
\\$ ',
          'LC_COLLATE' => '',
          'LC_ALL' => '',
          'CDPATH' => ':..:/home/user',
          'LC_NUMERIC' => '',
          'MAIL' => '/var/mail/uadmin',
          'TZ' => 'PST8PDT',
          'PWD' => '/home/user/wspace/releases/ci74',
          'LC_TIME' => '',
          'LANG' => 'C',
          'LC_MESSAGES' => '',
          'LC_CTYPE' => '',
          'LOGNAME' => 'uadmin',
          'SHLVL' => '1',
          'OLDPWD' => '/home/user/wspace/releases',
```

```
          'LC_MONETARY' => '',
          '_' => './commpkg',
          'PATH' =>
'/bin:/usr/bin:/usr/sbin:/sbin:/usr/etc::~user/bin:/usr/sbin:/usr/bin',
          'SHELL' => '/bin/sh',
          'HZ' => '',
          'TERM' => 'dumb'
        };
cat /etc/release 2>&1
                    Oracle Solaris 10 8/11 s10s_u10wos_17b SPARC
  Copyright (c) 1983, 2011, Oracle and/or its affiliates. All rights
reserved.
                            Assembled 23 August 2011
-- Exit status: 0
-- Recognized OS_VERS
!!! comms products found in distro
$VAR1 = [
          'MS64',
          'DSSETUP',
          'DAV',
          'IM',
          'IWC',
          'JISS',
          'DA',
          'MS_SCHA',
          'IM_SCHA'
        ];
!!! products found in distro, distrProds
$VAR1 = {
          'ST' => {
                    'Packages' => 1
                  },
          'SASL' => {
                      'Packages' => 1,
                      'Patches' => 1
                    },
          'IWC' => {
                     'Packages' => 1,
                     'Patches' => 1
                   },
          'IM' => {
                    'Packages' => 1,
                    'Patches' => 1
                  },
          'DSSETUP' => {
                         'Packages' => 1,
                         'Patches' => 1
                       },
          'LDAPJDK' => {
                         'Packages' => 1,
                         'Patches' => 1
                       },
          'MQ_L10N' => {
                         'Packages' => 1
                       },
          'MYSQL_MARKER' => {
```

```
                    'Packages' => 1
                  },
'BZIP' => {
            'Patches' => 1
          },
'ICU' => {
           'Packages' => 1,
           'Patches' => 1
         },
'IM_SCHA' => {
               'Packages' => 1,
               'Patches' => 1
             },
'MS64' => {
            'Packages' => 1,
            'Patches' => 1
          },
'LIBCPLUSPLUS' => {
                    'Patches' => 1
                  },
'DAV' => {
           'Packages' => 1,
           'Patches' => 1
         },
'LDAPCSDK6' => {
                 'Packages' => 1
               },
'MS_SCHA' => {
               'Packages' => 1
             },
'MQ' => {
          'Packages' => 1
        },
'PATCHUTILS' => {
                  'Patches' => 1
                },
'JHRT' => {
            'Packages' => 1
          },
'CI' => {
          'Packages' => 1
        },
'IMAPI' => {
             'Packages' => 1,
             'Patches' => 1
           },
'DA' => {
          'Packages' => 1,
          'Patches' => 1
        },
'LDAPCSDK6_TOOLS' => {
                       'Packages' => 1,
                       'Patches' => 1
                     },
'JISS' => {
            'Packages' => 1,
```

```
                      'Patches' => 1
                    },
          'NSS' => {
                      'Packages' => 1,
                      'Patches' => 1
                    }
        };
/usr/bin/pkgcond -n is_what 2>&1
can_add_driver=0
can_remove_driver=0
can_update_driver=0
is_alternative_root=0
is_boot_environment=0
is_diskless_client=0
is_global_zone=1
is_mounted_miniroot=0
is_netinstall_image=0
is_nonglobal_zone=0
is_path_writable=1
is_running_system=1
is_sparse_root_nonglobal_zone=0
is_whole_root_nonglobal_zone=0
-- Exit status: 1
/usr/bin/pkgcond -n is_global_zone 2>&1
-- Exit status: 1
/usr/bin/pkgcond -n is_sparse_root_nonglobal_zone 2>&1
-- Exit status: 0
Reading Product Files...
Reading
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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no mapFile
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
Reading OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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OLD
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
QQQ findGetVersion ======
!!! getVersion
$VAR1 = {
          'SASL' => 'none',
          'IWC' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'MS64_L10N' => 'none',
          'MS' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'DSSETUP' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'MQ_L10N' => 'none',
          'ICU' => 'none',
          'MS64' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'DAV' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'LDAPCSDK6' => 'none',
          'CE' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'JDK' => 'none',
          'MYSQL' => 'none',
          'PATCHUTILS' => 'none',
```

```
          'MQ' => 'none',
          'IMAPI' => 'none',
          'CI' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.ins
'LDAPCSDK6_TOOLS' => 'none',
          'JISS' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunC
'NSS' => 'none',
          'CS_L10N' => 'none',
          'IM' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunC
'ST' => 'none',
          'RECOMMENDED' => 'none',
          'IM_L10N' => 'none',
          'CS_SCHA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunC
'LDAPJDK' => 'none',
          'BZIP' => 'none',
          'MYSQL_MARKER' => 'none',
          'IM_SCHA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunC
'MS_L10N' => 'none',
          'LIBCPLUSPLUS' => 'none',
          'MS_SCHA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunC
'CS' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunC
'JHRT' => 'none',
          'CE_L10N' => 'none',
          'DA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunC
};
!!! prod_getVers
$VAR1 = {
          'SASL' => 0,
          'IWC' => '2.0-6.01',
          'MS64_L10N' => 0,
          'MS' => '7.2-7.02',
          'DSSETUP' => '6.4-24.03',
          'MQ_L10N' => 0,
          'ICU' => 0,
          'MS64' => '7.5-28.21',
          'DAV' => '7.3-10.10',
          'LDAPCSDK6' => 0,
          'CE' => '6.3-13.01',
          'JDK' => 0,
          'MYSQL' => 0,
          'PATCHUTILS' => 0,
          'MQ' => 0,
          'IMAPI' => 0,
          'CI' => '7.4-0.05',
          'LDAPCSDK6_TOOLS' => 0,
          'JISS' => '1.4-16.9301',
          'NSS' => 0,
          'CS_L10N' => 0,
          'IM' => '9.0-03.02',
```

```
          'ST' => 0,
          'RECOMMENDED' => 0,
          'IM_L10N' => 0,
          'CS_SCHA' => '6.3-1.01',
          'LDAPJDK' => 0,
          'BZIP' => 0,
          'MYSQL_MARKER' => 0,
          'IM_SCHA' => '7.3-01.02',
          'MS_L10N' => 0,
          'LIBCPLUSPLUS' => 0,
          'MS_SCHA' => '7.0-0.03',
          'CS' => '6.3-32.01',
          'JHRT' => 0,
          'CE_L10N' => 0,
          'DA' => '7.0-7.00'
        };
!!! prod_orclVers
$VAR1 = {
          'SASL' => 0,
          'IWC' => '\'Unrecognized Parameter\'',
          'MS64_L10N' => 0,
          'MS' => '\'Unrecognized Parameter\'',
          'DSSETUP' => '\'Unrecognized Parameter\'',
          'MQ_L10N' => 0,
          'ICU' => 0,
          'MS64' => '\'Unrecognized Parameter\'',
          'DAV' => '7.0.3.10.0',
          'LDAPCSDK6' => 0,
          'CE' => '\'Unrecognized Parameter\'',
          'JDK' => 0,
          'MYSQL' => 0,
          'PATCHUTILS' => 0,
          'MQ' => 0,
          'IMAPI' => 0,
          'CI' => '7.0.4.0.0',
          'LDAPCSDK6_TOOLS' => 0,
          'JISS' => '1.0.4.16.0',
          'NSS' => 0,
          'CS_L10N' => 0,
          'IM' => '9.0.0.3.0',
          'ST' => 0,
          'RECOMMENDED' => 0,
          'IM_L10N' => 0,
          'CS_SCHA' => '\'Unrecognized Parameter\'',
          'LDAPJDK' => 0,
          'BZIP' => 0,
          'MYSQL_MARKER' => 0,
          'IM_SCHA' => '\'Unrecognized Parameter\'',
          'MS_L10N' => 0,
          'LIBCPLUSPLUS' => 0,
          'MS_SCHA' => '\'Unrecognized Parameter\'',
          'CS' => '\'Unrecognized Parameter\'',
          'JHRT' => 0,
          'CE_L10N' => 0,
          'DA' => '\'Unrecognized Parameter\''
        };
```

```
!!! prod_builddate
$VAR1 = {
          'SASL' => 'none',
          'IWC' => '20130402',
          'MS64_L10N' => 'none',
          'MS' => '20090416',
          'DSSETUP' => '20120611',
          'MQ_L10N' => 'none',
          'ICU' => 'none',
          'MS64' => '20130408',
          'DAV' => '20130328',
          'LDAPCSDK6' => 'none',
          'CE' => '20090327',
          'JDK' => 'none',
          'MYSQL' => 'none',
          'PATCHUTILS' => 'none',
          'MQ' => 'none',
          'IMAPI' => 'none',
          'CI' => '20130409',
          'LDAPCSDK6_TOOLS' => 'none',
          'JISS' => '20130320',
          'NSS' => 'none',
          'CS_L10N' => 'none',
          'IM' => '20130405',
          'ST' => 'none',
          'RECOMMENDED' => 'none',
          'IM_L10N' => 'none',
          'CS_SCHA' => '20080331',
          'LDAPJDK' => 'none',
          'BZIP' => 'none',
          'MYSQL_MARKER' => 'none',
          'IM_SCHA' => '20080403',
          'MS_L10N' => 'none',
          'LIBCPLUSPLUS' => 'none',
          'MS_SCHA' => '20080519',
          'CS' => '20120921',
          'JHRT' => 'none',
          'CE_L10N' => 'none',
          'DA' => '20130319'
        };
====== End QQQ findGetVersion ======
INFO: prod_mktVers{NSS} (no map) = 4.8.8
INFO: prod_mktVers{SASL} (no map) = 2.19
INFO: prod_mktVers{LDAPCSDK6} (no map) = 6.0
INFO: prod_mktVers{LDAPCSDK6_TOOLS} (no map) = 6.0
INFO: prod_mktVers{ICU} (no map) = ICU2,ICU3
INFO: prod_mktVers{JDK} (no map) = 1.6.0
INFO: prod_mktVers{JHRT} (no map) = 2.0
INFO: prod_mktVers{MQ} (no map) = 4.4
INFO: prod_mktVers{MQ_L10N} (no map) = 4.4
INFO: prod_mktVers{LDAPJDK} (no map) = 4.21
INFO: prod_mktVers{IMAPI} (w/ map) = 9
INFO: prod_mktVers{LIBCPLUSPLUS} (no map) = 5.9
INFO: prod_mktVers{PATCHUTILS} (no map) = Unknown
INFO: prod_mktVers{BZIP} (no map) = 11.10
INFO: prod_mktVers{RECOMMENDED} (no map) = 2013.02.19
```

```
INFO: prod_mktVers{MYSQL_MARKER} (w/ map) = 1.1
INFO: prod_mktVers{MYSQL} (w/ map) = 5.5.8
INFO: prod_mktVers{ST} (no map) = 1.1.4
INFO: prod_mktVers{CI} (w/ map) = 7u4
INFO: prod_mktVers{MS64} (w/ map) = 7u5
INFO: prod_mktVers{DSSETUP} (w/ map) = 6.4
INFO: prod_mktVers{DAV} (w/ map) = 7u3
INFO: prod_mktVers{IM} (w/ map) = 9
INFO: prod_mktVers{IWC} (w/ map) = 2
INFO: prod_mktVers{JISS} (w/ map) = 1u4
INFO: prod_mktVers{DA} (w/ map) = 7
INFO: prod_mktVers{MS_SCHA} (no map) = 7.0
INFO: prod_mktVers{IM_SCHA} (no map) = 7.3

Welcome to the Oracle Communications Unified Communications Suite
Product Installer
This program will install selected components of the Communications
Suite
on your computer. Do note that the installer lays down the
bits, but does not do configuration. Separate configuration
steps for each individual product will be required.

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=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Specify Install Location

This program will extract the server files and install them
into a directory you specify. That directory is called the
INSTALLROOT in the product documentation and will contain
the server programs.

To accept the default shown in brackets, press the Enter key.


Install location [/opt/sun/comms]: -- /opt/sun/comms already exists,
existing data may be overwritten
Accept Anyway? [yes] :
-- Setting owner:group for /opt/sun/comms to bin:bin
/bin/chown bin:bin /opt/sun/comms 2>&1
-- Exit status: 0
-- Setting permission for /opt/sun/comms to 755
/bin/chmod 755 /opt/sun/comms 2>&1
-- Exit status: 0
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Checking LIBCPLUSPLUS 5.9 ...
  Checking pkg SUNWlibC... present.
  LIBCPLUSPLUS 5.9 is already present.
Checking PATCHUTILS Unknown ...
  Checking pkg SUNWpkgcmdsu... present.
  Checking pkg SUNWswmt... present.
  Checking pkg SUNWinstall-patch-utils-root... present.
  Checking pkg SUNWcsr... present.
  Checking pkg SUNWdtrc... present.
```

```
  Checking pkg SUNWzoneu... present.
  PATCHUTILS Unknown is already present.
Checking BZIP 11.10 ...
  Checking pkg SUNWbzip... present.
  BZIP 11.10 is already present.
Checking RECOMMENDED 2013.02.19 ...
  RECOMMENDED 2013.02.19 is not present.
Checking MYSQL_MARKER 1.1 ...
  Checking pkg SUNWcomms-mysql-marker... not present.
  MYSQL_MARKER 1.1 is not present.
Checking MYSQL_MARKER 1.0 ...
  Checking pkg SUNWcomms-mysql-marker... not present.
  MYSQL_MARKER 1.0 is not present.
Checking MYSQL 5.5.8 ...
  Checking pkg mysql... not present.
  MYSQL 5.5.8 is not present.
Checking MYSQL 5.1.36 ...
  Checking pkg mysql... not present.
  MYSQL 5.1.36 is not present.
Checking ST 1.1.4 ...
  Checking pkg SUNWservicetagr... not present.
  Checking pkg SUNWservicetagu... not present.
  Checking pkg SUNWstosreg... not present.
  ST 1.1.4 is not present.
Checking NSS 4.8.8 ...
  Checking pkg SUNWjss... present.
  Checking pkg SUNWpr... present.
  Checking pkg SUNWprd... present.
  Checking pkg SUNWtls... present.
  Checking pkg SUNWtlsd... present.
  Checking pkg SUNWtlsu... present.
  NSS 4.8.8 is already present.
Checking SASL 2.19 ...
  Checking pkg SUNWsasl... not present.
  SASL 2.19 is not present.
Checking LDAPCSDK6 6.0 ...
  Checking pkg SUNWldapcsdk-libs... not present.
  Checking pkg SUNWldapcsdk-dev... not present.
  LDAPCSDK6 6.0 is not present.
Checking LDAPCSDK6_TOOLS 6.0 ...
  Checking pkg SUNWldapcsdk-tools... not present.
  LDAPCSDK6_TOOLS 6.0 is not present.
Checking ICU ICU2,ICU3 ...
  Checking pkg SUNWicu... not present.
  ICU ICU2,ICU3 is not present.
Checking JDK 1.6.0 ...
  Checking pkg SUNWj6rt... not present.
  Checking pkg SUNWj6rtx... not present.
  Checking pkg SUNWj6dev... not present.
  Checking pkg SUNWj6dvx... not present.
  Checking pkg SUNWj6cfg... not present.
  JDK 1.6.0 is not present.
Checking JDK 1.5.0 ...
  Checking pkg SUNWj5rt... present.
  Checking pkg SUNWj5rtx... present.
  Checking pkg SUNWj5cfg... present.
```

```
  JDK 1.5.0 is already present.
Checking JHRT 2.0 ...
  Checking pkg SUNWjhrt... not present.
  Checking pkg SUNWjhdev... not present.
  Checking pkg SUNWjhdem... not present.
  Checking pkg SUNWjhdoc... not present.
  JHRT 2.0 is not present.
Checking MQ 4.4 ...
  Checking pkg SUNWiqr... not present.
  Checking pkg SUNWiqu... not present.
  Checking pkg SUNWiqdoc... not present.
  Checking pkg SUNWiquc... not present.
  Checking pkg SUNWiqum... not present.
  Checking pkg SUNWiqjx... not present.
  Checking pkg SUNWiqfs... not present.
  Checking pkg SUNWiqcrt... not present.
  Checking pkg SUNWiqcdv... not present.
  Checking pkg SUNWiqlen... not present.
  MQ 4.4 is not present.
Checking MQ 3.7 ...
  Checking pkg SUNWiqr... not present.
  Checking pkg SUNWiqu... not present.
  Checking pkg SUNWiqlpl... not present.
  Checking pkg SUNWiqdoc... not present.
  Checking pkg SUNWiquc... not present.
  Checking pkg SUNWiqum... not present.
  Checking pkg SUNWiqjx... not present.
  Checking pkg SUNWiqfs... not present.
  Checking pkg SUNWiqcrt... not present.
  Checking pkg SUNWiqcdv... not present.
  Checking pkg SUNWiqlen... not present.
  MQ 3.7 is not present.
Checking MQ 4.1 ...
  Checking pkg SUNWiqr... not present.
  Checking pkg SUNWiqu... not present.
  Checking pkg SUNWiqdoc... not present.
  Checking pkg SUNWiquc... not present.
  Checking pkg SUNWiqum... not present.
  Checking pkg SUNWiqjx... not present.
  Checking pkg SUNWiqfs... not present.
  Checking pkg SUNWiqcrt... not present.
  Checking pkg SUNWiqcdv... not present.
  MQ 4.1 is not present.
Checking MQ 4.3 ...
  Checking pkg SUNWiqr... not present.
  Checking pkg SUNWiqu... not present.
  Checking pkg SUNWiqdoc... not present.
  Checking pkg SUNWiquc... not present.
  Checking pkg SUNWiqum... not present.
  Checking pkg SUNWiqjx... not present.
  Checking pkg SUNWiqfs... not present.
  Checking pkg SUNWiqcrt... not present.
  Checking pkg SUNWiqcdv... not present.
  Checking pkg SUNWiqlen... not present.
  MQ 4.3 is not present.
Checking MQ_L10N 4.4 ...
```

```
  Checking pkg SUNWfiqu... not present.
  Checking pkg SUNWfiquc... not present.
  Checking pkg SUNWdiqu... not present.
  Checking pkg SUNWdiquc... not present.
  Checking pkg SUNWjiqu... not present.
  Checking pkg SUNWjiquc... not present.
  Checking pkg SUNWeiqu... not present.
  Checking pkg SUNWeiquc... not present.
  Checking pkg SUNWkiqu... not present.
  Checking pkg SUNWkiquc... not present.
  Checking pkg SUNWciqu... not present.
  Checking pkg SUNWciquc... not present.
  Checking pkg SUNWhiqu... not present.
  Checking pkg SUNWhiquc... not present.
  MQ_L10N 4.4 is not present.
Checking MQ_L10N 3.7 ...
  Checking pkg SUNWfiqu... not present.
  Checking pkg SUNWfiquc... not present.
  Checking pkg SUNWdiqu... not present.
  Checking pkg SUNWdiquc... not present.
  Checking pkg SUNWjiqu... not present.
  Checking pkg SUNWjiquc... not present.
  Checking pkg SUNWeiqu... not present.
  Checking pkg SUNWeiquc... not present.
  Checking pkg SUNWkiqu... not present.
  Checking pkg SUNWkiquc... not present.
  Checking pkg SUNWciqu... not present.
  Checking pkg SUNWciquc... not present.
  Checking pkg SUNWhiqu... not present.
  Checking pkg SUNWhiquc... not present.
  MQ_L10N 3.7 is not present.
Checking MQ_L10N 4.1 ...
  Checking pkg SUNWfiqu... not present.
  Checking pkg SUNWfiquc... not present.
  Checking pkg SUNWdiqu... not present.
  Checking pkg SUNWdiquc... not present.
  Checking pkg SUNWjiqu... not present.
  Checking pkg SUNWjiquc... not present.
  Checking pkg SUNWeiqu... not present.
  Checking pkg SUNWeiquc... not present.
  Checking pkg SUNWkiqu... not present.
  Checking pkg SUNWkiquc... not present.
  Checking pkg SUNWciqu... not present.
  Checking pkg SUNWciquc... not present.
  Checking pkg SUNWhiqu... not present.
  Checking pkg SUNWhiquc... not present.
  MQ_L10N 4.1 is not present.
Checking MQ_L10N 4.3 ...
  Checking pkg SUNWfiqu... not present.
  Checking pkg SUNWfiquc... not present.
  Checking pkg SUNWdiqu... not present.
  Checking pkg SUNWdiquc... not present.
  Checking pkg SUNWjiqu... not present.
  Checking pkg SUNWjiquc... not present.
  Checking pkg SUNWeiqu... not present.
  Checking pkg SUNWeiquc... not present.
```

```
  Checking pkg SUNWkiqu... not present.
  Checking pkg SUNWkiquc... not present.
  Checking pkg SUNWciqu... not present.
  Checking pkg SUNWciquc... not present.
  Checking pkg SUNWhiqu... not present.
  Checking pkg SUNWhiquc... not present.
  MQ_L10N 4.3 is not present.
Checking LDAPJDK 4.21 ...
  Checking pkg SUNWljdk... not present.
  LDAPJDK 4.21 is not present.
Checking IMAPI 9.0 ...
  Checking pkg SUNWiimdv... not present.
  IMAPI 9.0 is not present.
Checking IMAPI 7.0 ...
  Checking pkg SUNWiimdv... not present.
  IMAPI 7.0 is not present.
Checking IMAPI 7.3 ...
  Checking pkg SUNWiimdv... not present.
  IMAPI 7.3 is not present.
Checking IMAPI 8.0 ...
  Checking pkg SUNWiimdv... not present.
  IMAPI 8.0 is not present.
Checking CI 7.4 ...
  Checking pkg SUNWcomms... not present.
  CI 7.4 is not present.
Checking MS64 7.5 ...
  Checking pkg SUNWmessaging-server-64... not present.
  MS64 7.5 is not present.
Checking MS64 6.3 ...
  Checking pkg SUNWmessaging-server-64... not present.
  MS64 6.3 is not present.
Checking MS64 6.3_32 ...
  Checking pkg SUNWmsgin... not present.
  Checking pkg SUNWmsgen... not present.
  Checking pkg SUNWmsglb... not present.
  Checking pkg SUNWmsgco... not present.
  Checking pkg SUNWmsgmt... not present.
  Checking pkg SUNWmsgst... not present.
  Checking pkg SUNWmsgmp... not present.
  Checking pkg SUNWmsgwm... not present.
  Checking pkg SUNWmsgmf... not present.
  MS64 6.3_32 is not present.
Checking MS64 7.2_32 ...
  Checking pkg SUNWmessaging-server... not present.
  MS64 7.2_32 is not present.
Checking MS64 7.3_32 ...
  MS64 7.3_32 is not present.
Checking MS64 7.5_32 ...
  MS64 7.5_32 is not present.
Checking DSSETUP 6.4 ...
  Checking pkg SUNWcomds... not present.
  DSSETUP 6.4 is not present.
Checking DAV 7.3 ...
  Checking pkg SUNWdavserver... not present.
  DAV 7.3 is not present.
Checking IM 9.0 ...
```

```
  Checking pkg SUNWiim... not present.
  Checking pkg SUNWiimin... not present.
  Checking pkg SUNWiimm... not present.
  Checking pkg SUNWiimjd... not present.
  Checking pkg SUNWiimid... not present.
  Checking pkg SUNWiimgw... not present.
  Checking pkg SUNWiimw... not present.
  Checking pkg SUNWiimfed... not present.
  IM 9.0 is not present.
Checking IM 7.0 ...
  Checking pkg SUNWiimin... not present.
  Checking pkg SUNWiim... not present.
  Checking pkg SUNWiimm... not present.
  Checking pkg SUNWiimjd... not present.
  Checking pkg SUNWiimid... not present.
  Checking pkg SUNWiimc... not present.
  Checking pkg SUNWiimd... not present.
  IM 7.0 is not present.
Checking IM 7.3 ...
  Checking pkg SUNWiim... not present.
  Checking pkg SUNWiimin... not present.
  Checking pkg SUNWiimm... not present.
  Checking pkg SUNWiimjd... not present.
  Checking pkg SUNWiimid... not present.
  Checking pkg SUNWiimc... not present.
  Checking pkg SUNWiimd... not present.
  IM 7.3 is not present.
Checking IM 8.3 ...
  Checking pkg SUNWiim... not present.
  Checking pkg SUNWiimin... not present.
  Checking pkg SUNWiimm... not present.
  Checking pkg SUNWiimjd... not present.
  Checking pkg SUNWiimid... not present.
  Checking pkg SUNWiimc... not present.
  Checking pkg SUNWiimd... not present.
  Checking pkg SUNWiimgw... not present.
  IM 8.3 is not present.
Checking IWC 2.0 ...
  Checking pkg SUNWiwc... not present.
  IWC 2.0 is not present.
Checking IWC 1.0 ...
  Checking pkg SUNWiwc... not present.
  IWC 1.0 is not present.
Checking JISS 1.4 ...
  Checking pkg SUNWjiss... not present.
  JISS 1.4 is not present.
Checking JISS 0.9 ...
  Checking pkg SUNWjiss-common... not present.
  Checking pkg SUNWjiss-conf... not present.
  Checking pkg SUNWjiss-extjars... not present.
  Checking pkg SUNWjiss-indexapi... not present.
  Checking pkg SUNWjiss-jmqc... not present.
  Checking pkg SUNWjiss-rest... not present.
  Checking pkg SUNWjiss-search... not present.
  Checking pkg SUNWjiss-searchui... not present.
  Checking pkg SUNWjiss-store... not present.
```

```
  Checking pkg SUNWjiss-storeui... not present.
  JISS 0.9 is not present.
Checking DA 7.0 ...
  Checking pkg SUNWcommda... not present.
  DA 7.0 is not present.
Checking DA 6.4 ...
  Checking pkg SUNWcomic... not present.
  Checking pkg SUNWcomis... not present.
  DA 6.4 is not present.
Checking MS_SCHA 7.0 ...
  Checking pkg SUNWmessaging-server-scha... not present.
  MS_SCHA 7.0 is not present.
Checking MS_SCHA 6.0 ...
  Checking pkg SUNWscims... not present.
  MS_SCHA 6.0 is not present.
Checking IM_SCHA 7.3 ...
  Checking pkg SUNWiimsc... not present.
  IM_SCHA 7.3 is not present.
Checking IM_SCHA 7.0 ...
  Checking pkg SUNWiimsc... not present.
  IM_SCHA 7.0 is not present.
Checking MS 7.5_32 ...
  MS 7.5_32 is not present.
Checking MS 6.3_32 ...
  Checking pkg SUNWmsgin... not present.
  Checking pkg SUNWmsgen... not present.
  Checking pkg SUNWmsglb... not present.
  Checking pkg SUNWmsgco... not present.
  Checking pkg SUNWmsgmt... not present.
  Checking pkg SUNWmsgst... not present.
  Checking pkg SUNWmsgmp... not present.
  Checking pkg SUNWmsgwm... not present.
  Checking pkg SUNWmsgmf... not present.
  MS 6.3_32 is not present.
Checking MS 7.2_32 ...
  Checking pkg SUNWmessaging-server... not present.
  MS 7.2_32 is not present.
Checking MS 7.3_32 ...
  MS 7.3_32 is not present.
Checking MS_L10N 6.2 ...
  Checking pkg SUNWmsgde... not present.
  Checking pkg SUNWmsges... not present.
  Checking pkg SUNWmsgfr... not present.
  Checking pkg SUNWmsgja... not present.
  Checking pkg SUNWmsgko... not present.
  Checking pkg SUNWmsgzh... not present.
  Checking pkg SUNWmsgtw... not present.
  MS_L10N 6.2 is not present.
Checking MS_L10N 6.3 ...
  Checking pkg SUNWmsg-l10n... not present.
  MS_L10N 6.3 is not present.
Checking MS64_L10N 6.3 ...
  Checking pkg SUNWmessaging-server-l10n-64... not present.
  MS64_L10N 6.3 is not present.
Checking CS 6.3 ...
  Checking pkg SUNWics5... not present.
```

```
  Checking pkg SUNWica5... not present.
  CS 6.3 is not present.
Checking CS_L10N 6.2 ...
  Checking pkg SUNWdeics... not present.
  Checking pkg SUNWesics... not present.
  Checking pkg SUNWfrics... not present.
  Checking pkg SUNWjaics... not present.
  Checking pkg SUNWkoics... not present.
  Checking pkg SUNWzhics... not present.
  Checking pkg SUNWtwics... not present.
  CS_L10N 6.2 is not present.
Checking CS_L10N 6.3 ...
  Checking pkg SUNWics-l10n... not present.
  CS_L10N 6.3 is not present.
Checking IM_L10N 7.0 ...
  Checking pkg SUNWdiimc... not present.
  Checking pkg SUNWdiimd... not present.
  Checking pkg SUNWdimid... not present.
  Checking pkg SUNWeiimc... not present.
  Checking pkg SUNWeiimd... not present.
  Checking pkg SUNWeiimin... not present.
  Checking pkg SUNWeimid... not present.
  Checking pkg SUNWfiimc... not present.
  Checking pkg SUNWfiimd... not present.
  Checking pkg SUNWfiimin... not present.
  Checking pkg SUNWfimid... not present.
  Checking pkg SUNWjiimc... not present.
  Checking pkg SUNWjiimd... not present.
  Checking pkg SUNWjiimin... not present.
  Checking pkg SUNWjimid... not present.
  Checking pkg SUNWkiimc... not present.
  Checking pkg SUNWkiimd... not present.
  Checking pkg SUNWkiimin... not present.
  Checking pkg SUNWkimid... not present.
  Checking pkg SUNWciimc... not present.
  Checking pkg SUNWciimd... not present.
  Checking pkg SUNWciimin... not present.
  Checking pkg SUNWcimid... not present.
  Checking pkg SUNWhiimc... not present.
  Checking pkg SUNWhiimd... not present.
  Checking pkg SUNWhiimin... not present.
  Checking pkg SUNWhimid... not present.
  IM_L10N 7.0 is not present.
Checking IM_L10N 7.2 ...
  Checking pkg SUNWiimc-l10n... not present.
  Checking pkg SUNWiimd-l10n... not present.
  Checking pkg SUNWiimid-l10n... not present.
  Checking pkg SUNWiimin-l10n... not present.
  IM_L10N 7.2 is not present.
Checking CE 6.3 ...
  Checking pkg SUNWuwc... not present.
  CE 6.3 is not present.
Checking CE_L10N 6.2 ...
  Checking pkg SUNWduwc... not present.
  Checking pkg SUNWeuwc... not present.
  Checking pkg SUNWfuwc... not present.
```

```
  Checking pkg SUNWjuwc... not present.
  Checking pkg SUNWkuwc... not present.
  Checking pkg SUNWcuwc... not present.
  Checking pkg SUNWhuwc... not present.
  CE_L10N 6.2 is not present.
Checking CE_L10N 6.3 ...
  Checking pkg SUNWuwc-l10n... not present.
  CE_L10N 6.3 is not present.
Checking CS_SCHA 6.0 ...
  Checking pkg SUNWscics... not present.
  CS_SCHA 6.0 is not present.
Checking CS_SCHA 6.3 ...
  Checking pkg SUNWscics... not present.
  CS_SCHA 6.3 is not present.
Detecting Installed Patches...
-- chk4patch 119963-27 /tmp/.patchout_20130507174046.24935
-- Running patchadd  -p report...
--   Generating /tmp/.patchout_20130507174046.24935
patchadd  -p > /tmp/.patchout_20130507174046.24935 2>>
/tmp/CommsInstaller_20130507174046.log
-- Exit status: 0
--  older version at lineno 471 found 119963-24 - not acceptable
--  Exact match found at line 472
--  Final return status: 1
  LIBCPLUSPLUS patch 119963-27 is already present.
-- chk4patch 120900-04 /tmp/.patchout_20130507174046.24935
--  Exact match found at line 52
--  Final return status: 1
  PATCHUTILS patch 120900-04 is already present.
-- chk4patch 121133-02 /tmp/.patchout_20130507174046.24935
--  Exact match found at line 53
--  Final return status: 1
  PATCHUTILS patch 121133-02 is already present.
-- chk4patch 119254-88 /tmp/.patchout_20130507174046.24935
--  older version at lineno 227 found 119254-81 - not acceptable
--  Exact match found at line 230
--  Final return status: 1
  PATCHUTILS patch 119254-88 is already present.
-- chk4patch 126868-04 /tmp/.patchout_20130507174046.24935
--  Exact match found at line 547
--  Final return status: 1
  BZIP patch 126868-04 is already present.
-- chk4patch 137321-01 /tmp/.patchout_20130507174046.24935
--  Exact match found at line 548
--  Final return status: 1
  BZIP patch 137321-01 is already present.
-- chk4patch 119254-88 /tmp/.patchout_20130507174046.24935
--  older version at lineno 227 found 119254-81 - not acceptable
--  Exact match found at line 230
--  Final return status: 1
  RECOMMENDED patch 119254-88 is already present.
-- chk4patch 120272-28 /tmp/.patchout_20130507174046.24935
--  Newer version at line 295 found 120272-31
--  Final return status: 1
  RECOMMENDED patch 120272-28 is already present.
-- chk4patch 147147-26 /tmp/.patchout_20130507174046.24935
```

```
--  Final return status: 0
  RECOMMENDED patch 147147-26 is not present.
-- chk4patch 125358-15 /tmp/.patchout_20130507174046.24935
--  older version at lineno 439 found 125358-14 - not acceptable
--  Final return status: 0
  NSS patch 125358-15 is not present.
-- chk4patch 119345-08 /tmp/.patchout_20130507174046.24935
--  Final return status: 0
  SASL patch 119345-08 is not present.
-- chk4patch 136798-03 /tmp/.patchout_20130507174046.24935
--  Final return status: 0
  LDAPCSDK6_TOOLS patch 136798-03 is not present.
-- chk4patch 119810-07 /tmp/.patchout_20130507174046.24935
--  older version at lineno 722 found 119810-06 - not acceptable
--  Exact match found at line 723
--  Final return status: 1
  ICU patch 119810-07 is already present.
-- chk4patch 125136-35 /tmp/.patchout_20130507174046.24935
--  older version at lineno 578 found 125136-19 - not acceptable
--  older version at lineno 579 found 125136-28 - not acceptable
--  older version at lineno 580 found 125136-31 - not acceptable
--  Final return status: 0
  JDK patch 125136-35 is not present.
-- chk4patch 125137-35 /tmp/.patchout_20130507174046.24935
--  older version at lineno 781 found 125137-19 - not acceptable
--  older version at lineno 782 found 125137-28 - not acceptable
--  older version at lineno 783 found 125137-31 - not acceptable
--  Final return status: 0
  JDK patch 125137-35 is not present.
-- chk4patch 119725-06 /tmp/.patchout_20130507174046.24935
--  Final return status: 0
  LDAPJDK patch 119725-06 is not present.
-- chk4patch 148582-03 /tmp/.patchout_20130507174046.24935
--  Final return status: 0
  IMAPI patch 148582-03 is not present.
-- chk4patch 137204-28 /tmp/.patchout_20130507174046.24935
--  Final return status: 0
  MS64 patch 137204-28 is not present.
-- chk4patch 118242-03 /tmp/.patchout_20130507174046.24935
--  Final return status: 0
  DSSETUP patch 118242-03 is not present.
-- chk4patch 118245-24 /tmp/.patchout_20130507174046.24935
--  Final return status: 0
  DSSETUP patch 118245-24 is not present.
-- chk4patch 142785-10 /tmp/.patchout_20130507174046.24935
--  Final return status: 0
  DAV patch 142785-10 is not present.
-- chk4patch 148579-03 /tmp/.patchout_20130507174046.24935
--  Final return status: 0
  IM patch 148579-03 is not present.
-- chk4patch 145711-06 /tmp/.patchout_20130507174046.24935
--  Final return status: 0
  IWC patch 145711-06 is not present.
-- chk4patch 142824-16 /tmp/.patchout_20130507174046.24935
--  Final return status: 0
  JISS patch 142824-16 is not present.
```

```
-- chk4patch 124581-07 /tmp/.patchout_20130507174046.24935
--  Final return status: 0
  DA patch 124581-07 is not present.
-- chk4patch 137571-01 /tmp/.patchout_20130507174046.24935
--  Final return status: 0
  IM_SCHA patch 137571-01 is not present.
====== QQQ detectProducts ======
QQQ Dumper
!!! present
$VAR1 = {
          '148579-03' => 'NOT_PRESENT',
          '142785-10' => 'NOT_PRESENT',
          'IWC' => {
                     '2.0' => 'NOT_PRESENT',
                     '1.0' => 'NOT_PRESENT'
                   },
          'SASL' => {
                      '2.19' => 'NOT_PRESENT'
                    },
          '119345-08' => 'NOT_PRESENT',
          'MS64_L10N' => {
                           '6.3' => 'NOT_PRESENT'
                         },
          '142824-16' => 'NOT_PRESENT',
          '119725-06' => 'NOT_PRESENT',
          '119810-07' => 'PRESENT',
          'MS' => {
                    '7.3_32' => 'NOT_PRESENT',
                    '7.2_32' => 'NOT_PRESENT',
                    '7.5_32' => 'NOT_PRESENT',
                    '6.3_32' => 'NOT_PRESENT'
                  },
          '137571-01' => 'NOT_PRESENT',
          'DSSETUP' => {
                         '6.4' => 'NOT_PRESENT'
                       },
          '126868-04' => 'PRESENT',
          '119254-88' => 'PRESENT',
          '120900-04' => 'PRESENT',
          '119963-27' => 'PRESENT',
          'MQ_L10N' => {
                         '4.3' => 'NOT_PRESENT',
                         '3.7' => 'NOT_PRESENT',
                         '4.1' => 'NOT_PRESENT',
                         '4.4' => 'NOT_PRESENT'
                       },
          'ICU' => {
                     'ICU2,ICU3' => 'NOT_PRESENT'
                   },
          '120272-28' => 'PRESENT',
          'MS64' => {
                      '7.5' => 'NOT_PRESENT',
                      '7.3_32' => 'NOT_PRESENT',
                      '7.5_32' => 'NOT_PRESENT',
                      '7.2_32' => 'NOT_PRESENT',
                      '6.3' => 'NOT_PRESENT',
```

```
            '6.3_32' => 'NOT_PRESENT'
          },
'DAV' => {
           '7.3' => 'NOT_PRESENT'
         },
'LDAPCSDK6' => {
                 '6.0' => 'NOT_PRESENT'
               },
'CE' => {
          '6.3' => 'NOT_PRESENT'
        },
'JDK' => {
           '1.6.0' => 'NOT_PRESENT',
           '1.5.0' => 'PRESENT'
         },
'125137-35' => 'NOT_PRESENT',
'MYSQL' => {
             '5.1.36' => 'NOT_PRESENT',
             '5.5.8' => 'NOT_PRESENT'
           },
'PATCHUTILS' => {
                  'Unknown' => 'PRESENT'
                },
'MQ' => {
          '4.3' => 'NOT_PRESENT',
          '3.7' => 'NOT_PRESENT',
          '4.1' => 'NOT_PRESENT',
          '4.4' => 'NOT_PRESENT'
        },
'125358-15' => 'NOT_PRESENT',
'CI' => {
          '7.4' => 'NOT_PRESENT'
        },
'IMAPI' => {
             '8.0' => 'NOT_PRESENT',
             '7.0' => 'NOT_PRESENT',
             '9.0' => 'NOT_PRESENT',
             '7.3' => 'NOT_PRESENT'
           },
'137321-01' => 'PRESENT',
'LDAPCSDK6_TOOLS' => {
                       '6.0' => 'NOT_PRESENT'
                     },
'125136-35' => 'NOT_PRESENT',
'JISS' => {
            '0.9' => 'NOT_PRESENT',
            '1.4' => 'NOT_PRESENT'
          },
'NSS' => {
           '4.8.8' => 'PRESENT'
         },
'CS_L10N' => {
               '6.2' => 'NOT_PRESENT',
               '6.3' => 'NOT_PRESENT'
             },
'ST' => {
```

```
          '1.1.4' => 'NOT_PRESENT'
        },
'IM' => {
          '8.3' => 'NOT_PRESENT',
          '7.0' => 'NOT_PRESENT',
          '9.0' => 'NOT_PRESENT',
          '7.3' => 'NOT_PRESENT'
        },
'RECOMMENDED' => {
                   '2013.02.19' => 'NOT_PRESENT'
                 },
'IM_L10N' => {
               '7.2' => 'NOT_PRESENT',
               '7.0' => 'NOT_PRESENT'
             },
'136798-03' => 'NOT_PRESENT',
'CS_SCHA' => {
               '6.0' => 'NOT_PRESENT',
               '6.3' => 'NOT_PRESENT'
             },
'LDAPJDK' => {
               '4.21' => 'NOT_PRESENT'
             },
'MYSQL_MARKER' => {
                    '1.1' => 'NOT_PRESENT',
                    '1.0' => 'NOT_PRESENT'
                  },
'BZIP' => {
            '11.10' => 'PRESENT'
          },
'145711-06' => 'NOT_PRESENT',
'IM_SCHA' => {
               '7.0' => 'NOT_PRESENT',
               '7.3' => 'NOT_PRESENT'
             },
'148582-03' => 'NOT_PRESENT',
'MS_L10N' => {
               '6.2' => 'NOT_PRESENT',
               '6.3' => 'NOT_PRESENT'
             },
'LIBCPLUSPLUS' => {
                    '5.9' => 'PRESENT'
                  },
'121133-02' => 'PRESENT',
'118245-24' => 'NOT_PRESENT',
'118242-03' => 'NOT_PRESENT',
'MS_SCHA' => {
               '6.0' => 'NOT_PRESENT',
               '7.0' => 'NOT_PRESENT'
             },
'147147-26' => 'NOT_PRESENT',
'CS' => {
          '6.3' => 'NOT_PRESENT'
        },
'124581-07' => 'NOT_PRESENT',
'JHRT' => {
```

```
                      '2.0' => 'NOT_PRESENT'
                    },
          'CE_L10N' => {
                         '6.2' => 'NOT_PRESENT',
                         '6.3' => 'NOT_PRESENT'
                       },
          'DA' => {
                    '6.4' => 'NOT_PRESENT',
                    '7.0' => 'NOT_PRESENT'
                  },
          '137204-28' => 'NOT_PRESENT'
        };
!!! pkgparams
$VAR1 = {
          'SUNWica5' => {},
          'SUNWmsgja' => {},
          'SUNWcomic' => {},
          'SUNWservicetagu' => {},
          'SUNWjimid' => {},
          'SUNWdiquc' => {},
          'SUNWmsgko' => {},
          'SUNWics5' => {},
          'SUNWmessaging-server-l10n-64' => {},
          'SUNWiqlpl' => {},
          'SUNWmsgco' => {},
          'SUNWfiquc' => {},
          'SUNWjiss-extjars' => {},
          'SUNWjhdem' => {},
          'SUNWiqfs' => {},
          'SUNWfimid' => {},
          'SUNWcomds' => {},
          'SUNWjhdev' => {},
          'SUNWj6rtx' => {},
          'SUNWiqum' => {},
          'SUNWduwc' => {},
          'SUNWhiimin' => {},
          'SUNWkiimin' => {},
          'SUNWeiimd' => {},
          'SUNWj6rt' => {},
          'SUNWj5rt' => {
                         '1.5.0,REV=2004.12.07.00.07' => [
                                                            'SUNWj5rt',
                                                            '/usr',

'1.5.0_12/1.5.0_12-b04',
                                                            ''
                                                          ]
                       },
          'SUNWiimc-l10n' => {},
          'SUNWhiimc' => {},
          'SUNWmsg-l10n' => {},
          'SUNWfrics' => {},
          'SUNWciqu' => {},
          'SUNWkoics' => {},
          'SUNWdimid' => {},
          'SUNWjiquc' => {},
```

```
          'SUNWiimgw' => {},
          'SUNWiimd-l10n' => {},
          'SUNWhiquc' => {},
          'SUNWzhics' => {},
          'SUNWkiimd' => {},
          'SUNWiimfed' => {},
          'SUNWmsgmp' => {},
          'SUNWuwc' => {},
          'SUNWscics' => {},
          'SUNWiimc' => {},
          'SUNWhiimd' => {},
          'SUNWmessaging-server-scha' => {},
          'SUNWmsglb' => {},
          'SUNWtls' => {
                        '3.11.4,REV=2006.11.16.20.40' => [
                                                            'SUNWtls',
                                                            '/',
                                                            '3.12.10',
                                                            ''
                                                          ]
                      },
          'SUNWj6dvx' => {},
          'SUNWfuwc' => {},
          'SUNWlibC' => {
                         '5.10,REV=2004.12.22' => [
                                                    'SUNWlibC',
                                                    '/',
                                                    '5.10',
                                                    ''
                                                   ]
                       },
          'SUNWjiss-searchui' => {},
          'SUNWjiimin' => {},
          'SUNWcomms-mysql-marker' => {},
          'SUNWscims' => {},
          'SUNWiimjd' => {},
          'SUNWciimd' => {},
          'SUNWldapcsdk-dev' => {},
          'SUNWiqlen' => {},
          'SUNWiimid-l10n' => {},
          'SUNWiqr' => {},
          'SUNWdiimc' => {},
          'SUNWmsgwm' => {},
          'SUNWiimw' => {},
          'SUNWmessaging-server-64' => {},
          'SUNWeiquc' => {},
          'SUNWj5cfg' => {
                          '1.5.0,REV=2004.12.07.00.07' => [

'SUNWj5cfg',
                                                             '/',

'1.5.0_12/1.5.0_12-b04',
                                                             ''
                                                            ]
                        },
```

```
          'SUNWhiqu' => {},
          'SUNWjiss-search' => {},
          'SUNWiimdv' => {},
          'SUNWfiimd' => {},
          'SUNWj5rtx' => {
                          '1.5.0,REV=2004.12.06.22.09' => [

'SUNWj5rtx',
                                                            '/usr',

'1.5.0_12/1.5.0_12-b04',
                                                            ''
                                                          ]
                        },
          'SUNWiquc' => {},
          'SUNWiimid' => {},
          'SUNWmsgmt' => {},
          'SUNWljdk' => {},
          'SUNWcuwc' => {},
          'SUNWldapcsdk-libs' => {},
          'SUNWservicetagr' => {},
          'SUNWciimc' => {},
          'SUNWjhrt' => {},
          'SUNWtlsd' => {
                         '3.11.4,REV=2006.11.16.20.40' => [
                                                            'SUNWtlsd',
                                                            '/',
                                                            '3.12.10',
                                                            ''
                                                          ]
                       },
          'SUNWmsgin' => {},
          'SUNWdtrc' => {
                         '11.10.0,REV=2005.01.21.15.53' => [

'SUNWdtrc',
                                                             '/',

'5.10/Generic',
                                                             ''
                                                           ]
                       },
          'SUNWhuwc' => {},
          'mysql' => {},
          'SUNWiqdoc' => {},
          'SUNWjiimd' => {},
          'SUNWjuwc' => {},
          'SUNWiimd' => {},
          'SUNWiqcrt' => {},
          'SUNWmsgzh' => {},
          'SUNWprd' => {
                        '4.6.4,REV=2006.11.16.20.40' => [
                                                          'SUNWprd',
                                                          '/',
                                                          '4.8.8',
                                                          ''
```

```
                                                                ]
                        },
          'SUNWjiss-conf' => {},
          'SUNWcommda' => {},
          'SUNWmsgen' => {},
          'SUNWjiss-store' => {},
          'SUNWiwc' => {},
          'SUNWjiss-storeui' => {},
          'SUNWiimin-l10n' => {},
          'SUNWiimsc' => {},
          'SUNWinstall-patch-utils-root' => {

'11.10,REV=2005.01.09.23.05' => [

'SUNWinstall-patch-utils-root',

'/',

'5.10',

''

]
                                                  },
          'SUNWiimin' => {},
          'SUNWuwc-l10n' => {},
          'SUNWmsgst' => {},
          'SUNWiqu' => {},
          'SUNWkiimc' => {},
          'SUNWiim' => {},
          'SUNWeiimin' => {},
          'SUNWcimid' => {},
          'SUNWiqcdv' => {},
          'SUNWldapcsdk-tools' => {},
          'SUNWjss' => {
                        '4.2.4,REV=2006.11.16.20.40' => [
                                                                  'SUNWjss',
                                                                  '/',
                                                                  '4.3.2',
                                                                  ''
                                                                ]
                        },
          'SUNWdiqu' => {},
          'SUNWjiss' => {},
          'SUNWj6cfg' => {},
          'SUNWhimid' => {},
          'SUNWciquc' => {},
          'SUNWcomms' => {},
          'SUNWjiqu' => {},
          'SUNWkiqu' => {},
          'SUNWkuwc' => {},
          'SUNWics-l10n' => {},
          'SUNWeiqu' => {},
          'SUNWmessaging-server' => {},
          'SUNWdavserver' => {},
          'SUNWmsgtw' => {},
```

```
          'SUNWeiimc' => {},
          'SUNWjaics' => {},
          'SUNWpkgcmdsu' => {
                              '11.11,REV=2005.01.09.23.05' => [

'SUNWpkgcmdsu',
                                                                  '/',
                                                                  '5.10',
                                                                  ''
                                                                ]
                            },
          'SUNWjiimc' => {},
          'SUNWeimid' => {},
          'SUNWiqjx' => {},
          'SUNWjhdoc' => {},
          'SUNWj6dev' => {},
          'SUNWmsges' => {},
          'SUNWpr' => {
                        '4.6.4,REV=2006.11.16.20.40' => [
                                                           'SUNWpr',
                                                           '/',
                                                           '4.8.8',
                                                           ''
                                                         ]
                      },
          'SUNWmsgmf' => {},
          'SUNWkimid' => {},
          'SUNWicu' => {},
          'SUNWjiss-rest' => {},
          'SUNWfiimin' => {},
          'SUNWswmt' => {
                          '11.10,REV=2005.01.10.17.19' => [
                                                             'SUNWswmt',
                                                             '/',
                                                             '5.10',
                                                             ''
                                                           ]
                        },
          'SUNWcomis' => {},
          'SUNWdeics' => {},
          'SUNWtwics' => {},
          'SUNWciimin' => {},
          'SUNWmsgfr' => {},
          'SUNWdiimd' => {},
          'SUNWjiss-common' => {},
          'SUNWeuwc' => {},
          'SUNWkiquc' => {},
          'SUNWstosreg' => {},
          'SUNWmsgde' => {},
          'SUNWjiss-jmqc' => {},
          'SUNWjiss-indexapi' => {},
          'SUNWbzip' => {
                          '11.10.0,REV=2005.01.08.05.16' => [

'SUNWbzip',
                                                                '/',
```

```
'5.10/SunOS Development',
                                                                  ''
                                                                ]
                        },
          'SUNWtlsu' => {
                          '3.11.4,REV=2006.11.16.20.40' => [
                                                                'SUNWtlsu',
                                                                '/',
                                                                '3.12.10',
                                                                ''
                                                              ]
                        },
          'SUNWfiqu' => {},
          'SUNWsasl' => {},
          'SUNWfiimc' => {},
          'SUNWzoneu' => {
                           '11.10.0,REV=2005.01.21.15.53' => [

'SUNWzoneu',
                                                                  '/',

'5.10/Generic',
                                                                  ''
                                                                ]
                         },
          'SUNWcsr' => {
                          '11.10.0,REV=2005.01.21.15.53' => [
                                                                'SUNWcsr',
                                                                '/',

'5.10/Generic',
                                                                ''
                                                              ]
                       },
          'SUNWesics' => {},
          'SUNWiimm' => {}
        };
!!! installedprod
$VAR1 = {
          'PATCHUTILS' => {
                            'Unknown' => [
                                            '/',
                                            '5.10',
                                            'Not Found',
                                            'Unknown',
                                            'Not Found',
                                            'Not Found',
                                            'Not Found',
                                            '',
                                            'Not Found'
                                          ]
                          },
          'LIBCPLUSPLUS' => {
                              '5.9' => [
                                          '/',
```

```
                                        '5.10',
                                        'Not Found',
                                        '5.9',
                                        'Not Found',
                                        'Not Found',
                                        'Not Found',
                                        '',
                                        'Not Found'
                                      ]
                              },
            'BZIP' => {
                        '11.10' => [
                                     '/',
                                     '5.10/SunOS Development',
                                     'Not Found',
                                     '11.10',
                                     'Not Found',
                                     'Not Found',
                                     'Not Found',
                                     '',
                                     'Not Found'
                                   ]
                      },
            'JDK' => {
                        '1.5.0' => [
                                     '/usr',
                                     '1.5.0_12/1.5.0_12-b04',
                                     'Not Found',
                                     '1.5.0',
                                     'Not Found',
                                     'Not Found',
                                     'Not Found',
                                     '',
                                     'Not Found'
                                   ]
                      },
            'NSS' => {
                        '4.8.8' => [
                                     '/',
                                     '4.3.2',
                                     'Not Found',
                                     '4.8.8',
                                     'Not Found',
                                     'Not Found',
                                     'Not Found',
                                     '',
                                     'Not Found'
                                   ]
                      }
          };
====== End QQQ detectProducts ======
-- Checking for RECOMMENDED patch 119254-88
   patch is PRESENT
-- Checking for RECOMMENDED patch 120272-28
   patch is PRESENT
-- Checking for RECOMMENDED patch 147147-26
```

```
   patch 147147-26: NOT_PRESENT
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: You must apply the latest OS Recommended Patchset
          Some products will not work properly without it
Do you want to continue ? [no] : yes
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
====== QQQ ======
QQQ Dumper
!!! isUpgradable
$VAR1 = {};
!!! usePkgUpgradeFlag
$VAR1 = {};
Product Selection:

Shared Components (not shown) will be installed as required.
  you will be prompted later if Shared Components need to be upgraded.
OS patches (not shown) will be installed as required.

Communication Products:

    Item  Description
    ----  -----------
       1  Messaging Server (64bit) 7u5 (7.5-28.21)
       2  Comms DSsetup 6.4 (6.4-24.03)
       3  Calendar Server 7.0.3.10.0
       4  Instant Messaging 9.0.0.3.0
       5  Convergence 2 (2.0-6.01)
       6  Indexing and Search Service 1.0.4.16.0
       7  Comms Delegated Administrator 7 (7.0-7.00)
       8  Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
       9  Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)


Enter the items you wish to install. Enter q to quit.
Prefix an item with ~ to indicate you only want
  to install shared component dependencies of that product
You can enter multiple items using commas to separate them.
For example: 1,2

Please select the products you wish to install [1, 2, 3, 4, 5, 6, 7, 8,
9]: =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
QQQ selections: 0 MS64 0 DSSETUP 0 DAV 0 IM 0 IWC 0 JISS 0 DA 0 MS_SCHA
0 IM_SCHA
Generating list of things to install...
NOTICE: toInstall - PATCHUTILS IMAPI LDAPJDK ST JDK ICU SASL
LDAPCSDK6_TOOLS NSS MQ MQ_L10N LDAPCSDK6 BZIP JHRT LIBCPLUSPLUS MS64
DSSETUP DAV IM IWC JISS DA MS_SCHA IM_SCHA CI
Checking for Shared Component Upgrade Requirements...
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
  WILL INSTALL: Instant Messaging API 9
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
```

```
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IMAPI_20130507174046 SUNWiimdv
  WILL INSTALL: LDAPJDK 4.21
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPJDK_20130507174046 SUNWljdk
  WILL INSTALL: Service Tags 1.1.4
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_ST_20130507174046 SUNWservicetagr
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_ST_20130507174046 SUNWservicetagu
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_ST_20130507174046 SUNWstosreg
  WARNING: JDK is not in the distro, it will NOT be installed...
           Please obtain and install it separately
  WILL INSTALL: International Components for Unicode ICU2,ICU3
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_ICU_20130507174046 SUNWicu
  WILL INSTALL: Simple Authentication and Security Layer 2.19
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_SASL_20130507174046 SUNWsasl
  WILL INSTALL: LDAPCSDK6 Tools 6.0
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPCSDK6_TOOLS_20130507174046 SUNWldapcsdk-tools
  WILL INSTALL: patch 125358-15 for NSS/NSPR/JSS
  Task: patchadd
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
WILL INSTALL: Message Queue 4.4
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqr
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
```

```
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqu
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqdoc
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiquc
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqum
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqjx
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqfs
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqcrt
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqcdv
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqlen
  WILL INSTALL: Message Queue Localization 4.4
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWfiqu
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWfiquc
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
```

```
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWdiqu
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWdiquc
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWjiqu
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWjiquc
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWeiqu
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWeiquc
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWkiqu
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWkiquc
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWciqu
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWciquc
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWhiqu
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
```

```
-r /tmp/.response_MQ_L10N_20130507174046 SUNWhiquc
  WILL INSTALL: LDAPCSDK6 6.0
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPCSDK6_20130507174046 SUNWldapcsdk-libs
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPCSDK6_20130507174046 SUNWldapcsdk-dev
  WILL INSTALL: Java Help Runtime 2.0
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507174046 SUNWjhrt
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507174046 SUNWjhdev
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507174046 SUNWjhdem
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507174046 SUNWjhdoc
  WILL INSTALL: Messaging Server (64bit) 7u5 (7.5-28.21)
                to /opt/sun/comms/messaging64
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MS64_20130507174046 SUNWmessaging-server-64
  WILL INSTALL: Comms DSsetup 6.4 (6.4-24.03)
                to /opt/sun/comms/dssetup
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_DSSETUP_20130507174046 SUNWcomds
  WILL INSTALL: Calendar Server 7.0.3.10.0
                to /opt/sun/comms/davserver
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_DAV_20130507174046 SUNWdavserver
  WILL INSTALL: Instant Messaging 9.0.0.3.0
                to /opt/sun/comms/im
```

```
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiim
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiimin
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiimm
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiimjd
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiimid
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiimgw
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiimw
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiimfed
  WILL INSTALL: Convergence 2 (2.0-6.01)
                to /opt/sun/comms/iwc
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IWC_20130507174046 SUNWiwc
  WILL INSTALL: Indexing and Search Service 1.0.4.16.0
                to /opt/sun/comms/jiss
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JISS_20130507174046 SUNWjiss
  WILL INSTALL: Comms Delegated Administrator 7 (7.0-7.00)
                to /opt/sun/comms/da
```

```
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_DA_20130507174046 SUNWcommda
  WILL INSTALL: Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
                to /opt/sun/comms/msg_scha
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MS_SCHA_20130507174046 SUNWmessaging-server-scha
  WILL INSTALL: Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)
                to /opt/sun/comms/im_scha
  Task: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_SCHA_20130507174046 SUNWiimsc
  WILL INSTALL: CommsInstaller 7.0.4.0.0
                to /opt/sun/comms/CommsInstaller
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_CI_20130507174046 SUNWcomms
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Ready to install

Do you want to continue ? [yes] :

============================================================
Installing Instant Messaging API 9...
------ Executing Task 1 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IMAPI_20130507174046 SUNWiimdv 2>&1
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Installation of <SUNWiimdv> was successful.
-- Exit status: 0

============================================================
Installing LDAPJDK 4.21...
------ Executing Task 2 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPJDK_20130507174046 SUNWljdk 2>&1

Installation of <SUNWljdk> was successful.
-- Exit status: 0
```

```
============================================================
Installing Service Tags 1.1.4...
------ Executing Task 3 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_ST_20130507174046 SUNWservicetagr 2>&1
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Installation of <SUNWservicetagr> was successful.
-- Exit status: 0
------ Executing Task 4 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_ST_20130507174046 SUNWservicetagu 2>&1
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Installation of <SUNWservicetagu> was successful.
-- Exit status: 0
------ Executing Task 5 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_ST_20130507174046 SUNWstosreg 2>&1
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Installation of <SUNWstosreg> was successful.
-- Exit status: 0

============================================================
Installing International Components for Unicode ICU2,ICU3...
------ Executing Task 6 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_ICU_20130507174046 SUNWicu 2>&1
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ICU License - ICU 1.8.1 and later

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```
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------------------------------------------------------------------------------
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of
their respective owners.
96793 blocks

Installation of <SUNWicu> was successful.
-- Exit status: 0

============================================================
Installing Simple Authentication and Security Layer 2.19...
------ Executing Task 7 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_SASL_20130507174046 SUNWsasl 2>&1
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Installation of <SUNWsasl> was successful.
-- Exit status: 0

============================================================
Installing LDAPCSDK6 Tools 6.0...
------ Executing Task 8 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPCSDK6_TOOLS_20130507174046 SUNWldapcsdk-tools 2>&1
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```

```
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Installation of <SUNWldapcsdk-tools> was successful.
-- Exit status: 0

============================================================
Installing patch 125358-15 for NSS/NSPR/JSS...
------ Executing Task 9 of 56 ...
patchadd
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
2>&1
Validating patches...

Loading patches installed on the system...

Done!

Loading patches requested to install.

Done!

Checking patches that you specified for installation.

Done!


Approved patches will be installed in this order:

125358-15


Checking installed patches...
Executing prepatch script...
Installing patch packages...

Patch 125358-15 has been successfully installed.
See /var/sadm/patch/125358-15/log for details
Executing postpatch script...

Patch packages installed:
  SUNWjss
  SUNWpr
  SUNWprd
  SUNWtls
  SUNWtlsd
  SUNWtlsu

-- Exit status: 0

============================================================
Installing Message Queue 4.4...
------ Executing Task 10 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
```

```
-r /tmp/.response_MQ_20130507174046 SUNWiqr 2>&1
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Installation of <SUNWiqr> was successful.
-- Exit status: 0
------ Executing Task 11 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqu 2>&1
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Installation of <SUNWiqu> was successful.
-- Exit status: 0
------ Executing Task 12 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqdoc 2>&1
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Installation of <SUNWiqdoc> was successful.
-- Exit status: 0
------ Executing Task 13 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiquc 2>&1
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Installation of <SUNWiquc> was successful.
-- Exit status: 0
------ Executing Task 14 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqum 2>&1
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Installation of <SUNWiqum> was successful.
-- Exit status: 0
------ Executing Task 15 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqjx 2>&1
```

```
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Installation of <SUNWiqjx> was successful.
-- Exit status: 0
------ Executing Task 16 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqfs 2>&1
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Installation of <SUNWiqfs> was successful.
-- Exit status: 0
------ Executing Task 17 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqcrt 2>&1
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Installation of <SUNWiqcrt> was successful.
-- Exit status: 0
------ Executing Task 18 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqcdv 2>&1
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Installation of <SUNWiqcdv> was successful.
-- Exit status: 0
------ Executing Task 19 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqlen 2>&1
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Installation of <SUNWiqlen> was successful.
-- Exit status: 0

============================================================
Installing Message Queue Localization 4.4...
------ Executing Task 20 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
```

```
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWfiqu 2>&1
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Installation of <SUNWfiqu> was successful.
-- Exit status: 0
------ Executing Task 21 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWfiquc 2>&1
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Installation of <SUNWfiquc> was successful.
-- Exit status: 0
------ Executing Task 22 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWdiqu 2>&1
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Installation of <SUNWdiqu> was successful.
-- Exit status: 0
------ Executing Task 23 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWdiquc 2>&1
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Installation of <SUNWdiquc> was successful.
-- Exit status: 0
------ Executing Task 24 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWjiqu 2>&1
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Installation of <SUNWjiqu> was successful.
-- Exit status: 0
------ Executing Task 25 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
```

```
-r /tmp/.response_MQ_L10N_20130507174046 SUNWjiquc 2>&1
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Installation of <SUNWjiquc> was successful.
-- Exit status: 0
------ Executing Task 26 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWeiqu 2>&1
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Installation of <SUNWeiqu> was successful.
-- Exit status: 0
------ Executing Task 27 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWeiquc 2>&1
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Installation of <SUNWeiquc> was successful.
-- Exit status: 0
------ Executing Task 28 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWkiqu 2>&1
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Installation of <SUNWkiqu> was successful.
-- Exit status: 0
------ Executing Task 29 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWkiquc 2>&1
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Installation of <SUNWkiquc> was successful.
-- Exit status: 0
------ Executing Task 30 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWciqu 2>&1
```

```
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Installation of <SUNWciqu> was successful.
-- Exit status: 0
------ Executing Task 31 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWciquc 2>&1
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Installation of <SUNWciquc> was successful.
-- Exit status: 0
------ Executing Task 32 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWhiqu 2>&1
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Installation of <SUNWhiqu> was successful.
-- Exit status: 0
------ Executing Task 33 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWhiquc 2>&1
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Installation of <SUNWhiquc> was successful.
-- Exit status: 0

============================================================
Installing LDAPCSDK6 6.0...
------ Executing Task 34 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPCSDK6_20130507174046 SUNWldapcsdk-libs 2>&1
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Installation of <SUNWldapcsdk-libs> was successful.
-- Exit status: 0
------ Executing Task 35 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
```

```
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPCSDK6_20130507174046 SUNWldapcsdk-dev 2>&1
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Installation of <SUNWldapcsdk-dev> was successful.
-- Exit status: 0

============================================================
Installing Java Help Runtime 2.0...
------ Executing Task 36 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507174046 SUNWjhrt 2>&1
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1127 blocks

Installation of <SUNWjhrt> was successful.
-- Exit status: 0
------ Executing Task 37 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507174046 SUNWjhdev 2>&1
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709 blocks

Installation of <SUNWjhdev> was successful.
-- Exit status: 0
------ Executing Task 38 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507174046 SUNWjhdem 2>&1
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6466 blocks

Installation of <SUNWjhdem> was successful.
-- Exit status: 0
------ Executing Task 39 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507174046 SUNWjhdoc 2>&1
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10385 blocks
```

```
Installation of <SUNWjhdoc> was successful.
-- Exit status: 0

============================================================
Installing Messaging Server (64bit) 7u5 (7.5-28.21)...
------ Executing Task 40 of 56 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MS64_20130507174046 SUNWmessaging-server-64 2>&1
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Installation of <SUNWmessaging-server-64> was successful.
-- Exit status: 0

============================================================
Installing Comms DSsetup 6.4 (6.4-24.03)...
------ Executing Task 41 of 56 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_DSSETUP_20130507174046 SUNWcomds 2>&1
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Installation of <SUNWcomds> was successful.
-- Exit status: 0

============================================================
Installing Calendar Server 7.0.3.10.0...
------ Executing Task 42 of 56 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_DAV_20130507174046 SUNWdavserver 2>&1
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Installation of <SUNWdavserver> was successful.
-- Exit status: 0

============================================================
Installing Instant Messaging 9.0.0.3.0...
------ Executing Task 43 of 56 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiim 2>&1
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```

```
Installation of <SUNWiim> was successful.
-- Exit status: 0
------ Executing Task 44 of 56 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiimin 2>&1
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Installation of <SUNWiimin> was successful.
-- Exit status: 0
------ Executing Task 45 of 56 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiimm 2>&1
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Installation of <SUNWiimm> was successful.
-- Exit status: 0
------ Executing Task 46 of 56 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiimjd 2>&1
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Installation of <SUNWiimjd> was successful.
-- Exit status: 0
------ Executing Task 47 of 56 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiimid 2>&1
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Installation of <SUNWiimid> was successful.
-- Exit status: 0
------ Executing Task 48 of 56 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiimgw 2>&1
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```

```
Installation of <SUNWiimgw> was successful.
-- Exit status: 0
------ Executing Task 49 of 56 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiimw 2>&1
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Installation of <SUNWiimw> was successful.
-- Exit status: 0
------ Executing Task 50 of 56 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiimfed 2>&1
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Installation of <SUNWiimfed> was successful.
-- Exit status: 0

============================================================
Installing Convergence 2 (2.0-6.01)...
------ Executing Task 51 of 56 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IWC_20130507174046 SUNWiwc 2>&1
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Installation of <SUNWiwc> was successful.
-- Exit status: 0

============================================================
Installing Indexing and Search Service 1.0.4.16.0...
------ Executing Task 52 of 56 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JISS_20130507174046 SUNWjiss 2>&1
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Installation of <SUNWjiss> was successful.
-- Exit status: 0

============================================================
Installing Comms Delegated Administrator 7 (7.0-7.00)...
------ Executing Task 53 of 56 ...
pkgadd -G -a
```

```
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_DA_20130507174046 SUNWcommda 2>&1
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Installation of <SUNWcommda> was successful.
-- Exit status: 0

============================================================
Installing Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)...
------ Executing Task 54 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MS_SCHA_20130507174046 SUNWmessaging-server-scha 2>&1
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Installation of <SUNWmessaging-server-scha> was successful.
-- Exit status: 0

============================================================
Installing Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)...
------ Executing Task 55 of 56 ...
pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_SCHA_20130507174046 SUNWiimsc 2>&1
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Installation of <SUNWiimsc> was successful.
-- Exit status: 0

============================================================
Installing CommsInstaller 7.0.4.0.0...
------ Executing Task 56 of 56 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_CI_20130507174046 SUNWcomms 2>&1
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reserved.
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Installation of <SUNWcomms> was successful.
-- Exit status: 0
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
SUMMARY:
```

```
PASSED: Task 1: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IMAPI_20130507174046 SUNWiimdv
PASSED: Task 2: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPJDK_20130507174046 SUNWljdk
PASSED: Task 3: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_ST_20130507174046 SUNWservicetagr
PASSED: Task 4: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_ST_20130507174046 SUNWservicetagu
PASSED: Task 5: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_ST_20130507174046 SUNWstosreg
PASSED: Task 6: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_ICU_20130507174046 SUNWicu
PASSED: Task 7: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_SASL_20130507174046 SUNWsasl
PASSED: Task 8: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPCSDK6_TOOLS_20130507174046 SUNWldapcsdk-tools
PASSED: Task 9: patchadd
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
Task 10: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqr
PASSED: Task 11: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqu
PASSED: Task 12: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
```

```
-r /tmp/.response_MQ_20130507174046 SUNWiqdoc
PASSED: Task 13: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiquc
PASSED: Task 14: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqum
PASSED: Task 15: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqjx
PASSED: Task 16: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqfs
PASSED: Task 17: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqcrt
PASSED: Task 18: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqcdv
PASSED: Task 19: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_20130507174046 SUNWiqlen
PASSED: Task 20: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWfiqu
PASSED: Task 21: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWfiquc
PASSED: Task 22: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWdiqu
PASSED: Task 23: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWdiquc
```

```
PASSED: Task 24: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWjiqu
PASSED: Task 25: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWjiquc
PASSED: Task 26: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWeiqu
PASSED: Task 27: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWeiquc
PASSED: Task 28: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWkiqu
PASSED: Task 29: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWkiquc
PASSED: Task 30: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWciqu
PASSED: Task 31: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWciquc
PASSED: Task 32: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWhiqu
PASSED: Task 33: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MQ_L10N_20130507174046 SUNWhiquc
PASSED: Task 34: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPCSDK6_20130507174046 SUNWldapcsdk-libs
PASSED: Task 35: pkgadd -a
```

```
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_LDAPCSDK6_20130507174046 SUNWldapcsdk-dev
PASSED: Task 36: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507174046 SUNWjhrt
PASSED: Task 37: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507174046 SUNWjhdev
PASSED: Task 38: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507174046 SUNWjhdem
PASSED: Task 39: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JHRT_20130507174046 SUNWjhdoc
PASSED: Task 40: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MS64_20130507174046 SUNWmessaging-server-64
PASSED: Task 41: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_DSSETUP_20130507174046 SUNWcomds
PASSED: Task 42: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_DAV_20130507174046 SUNWdavserver
PASSED: Task 43: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiim
PASSED: Task 44: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiimin
PASSED: Task 45: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiimm
PASSED: Task 46: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
```

```
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiimjd
PASSED: Task 47: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiimid
PASSED: Task 48: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiimgw
PASSED: Task 49: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiimw
PASSED: Task 50: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_20130507174046 SUNWiimfed
PASSED: Task 51: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IWC_20130507174046 SUNWiwc
PASSED: Task 52: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_JISS_20130507174046 SUNWjiss
PASSED: Task 53: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_DA_20130507174046 SUNWcommda
PASSED: Task 54: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_MS_SCHA_20130507174046 SUNWmessaging-server-scha
PASSED: Task 55: pkgadd -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_IM_SCHA_20130507174046 SUNWiimsc
PASSED: Task 56: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_CI_20130507174046 SUNWcomms

All tasks PASSED
Checking JES java symlink...
```

```
ls -l /usr/jdk /usr/java 2>&1
lrwxrwxrwx   1 root     other         15 May  7 17:34 /usr/java ->
jdk/jdk1.5.0_12

/usr/jdk:
total 9
drwxr-xr-x   4 root     bin            4 Jun 12  2012 instances
lrwxrwxrwx   1 root     other          7 Jun 12  2012 j2sdk1.4.2_32 ->
../j2se
lrwxrwxrwx   1 root     other         18 Feb 26 14:05 jdk1.5.0_12 ->
instances/jdk1.5.0
lrwxrwxrwx   1 root     other         11 May  7 17:34 latest ->
jdk1.5.0_12
drwxr-xr-x   8 root     bin            8 May  7 17:41 packages
-- Exit status: 0
ls -l /usr/jdk/entsys-j2se /usr/jdk/latest 2>&1
/usr/jdk/entsys-j2se: No such file or directory
lrwxrwxrwx   1 root     other         11 May  7 17:34 /usr/jdk/latest ->
jdk1.5.0_12
-- Exit status: 2
ls -lL /usr/jdk/entsys-j2se /usr/jdk/latest 2>&1
/usr/jdk/entsys-j2se: No such file or directory
/usr/jdk/latest:
total 34560
-rw-r--r--   1 root     bin         2487 May  2  2007 COPYRIGHT
-rw-r--r--   1 root     bin        11827 Oct  2  2011 README.html
-rw-r--r--   1 root     bin        67265 Oct  2  2011
THIRDPARTYLICENSEREADME.txt
drwxr-xr-x   3 root     bin           41 May  7 17:41 bin
drwxr-xr-x   9 root     bin           10 Jun 12  2012 demo
drwxr-xr-x   3 root     bin            9 Jun 12  2012 include
drwxr-xr-x   6 root     bin           12 Feb 26 14:05 jre
drwxr-xr-x   2 root     bin            9 Jun 12  2012 lib
drwxr-xr-x   6 root     bin            6 Jun 12  2012 man
-r--r--r--   1 root     other       5264 Feb 12 15:49 register.html
-r--r--r--   1 root     other       5702 Feb 12 15:49 register_ja.html
-r--r--r--   1 root     other       4862 Feb 12 15:49
register_zh_CN.html
drwxr-xr-x   4 root     bin            4 Jun 12  2012 sample
-rw-r--r--   1 root     bin      17483215 Oct  2  2011 src.zip
-- Exit status: 2
INFO: no update to /etc/softlist.xml required

Hit Return to Continue:
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
-- unlink /tmp/.response_IMAPI_20130507174046
-- unlink /tmp/.response_LDAPJDK_20130507174046
-- unlink /tmp/.response_ST_20130507174046
-- unlink /tmp/.response_ICU_20130507174046
-- unlink /tmp/.response_SASL_20130507174046
-- unlink /tmp/.response_LDAPCSDK6_TOOLS_20130507174046
-- unlink /tmp/.response_MQ_20130507174046
-- unlink /tmp/.response_MQ_L10N_20130507174046
-- unlink /tmp/.response_LDAPCSDK6_20130507174046
-- unlink /tmp/.response_JHRT_20130507174046
-- unlink /tmp/.response_MS64_20130507174046
```

```
-- unlink /tmp/.response_DSSETUP_20130507174046
-- unlink /tmp/.response_DAV_20130507174046
-- unlink /tmp/.response_IM_20130507174046
-- unlink /tmp/.response_IWC_20130507174046
-- unlink /tmp/.response_JISS_20130507174046
-- unlink /tmp/.response_DA_20130507174046
-- unlink /tmp/.response_MS_SCHA_20130507174046
-- unlink /tmp/.response_IM_SCHA_20130507174046
-- unlink /tmp/.response_CI_20130507174046
-- unlink /tmp/.patchout_20130507174046.24935
mkdir -p /var/opt/CommsInstaller/logs 2>&1
-- Exit status: 0

NOTICE: To undo the installation, run the commands in:
        /var/opt/CommsInstaller/logs/undoCommsInstall_20130507174046

NOTICE: silent file created in:

/var/opt/CommsInstaller/logs/silent_CommsInstaller_20130507174046
-- Closing the log at Tue May  7 17:42:48 2013
[929 Tue May 07 17:43:23 root@example.com%
/home/user/wspace/releases/ci74# ]
# ./commpkg info
-- LOGFILE: /tmp/CommsInstaller_20130507174330.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: It is highly recommended that you apply the
          latest OS Recommended Patch Cluster. commpkg will
          not do this automatically.
ALTROOT: /
  NAME: ""
  Product: Messaging Server (64bit) 7u5 64bit
           Oracle Version: Not Found
           Version: 7.5-28.21
           ALTROOT: /
           Basedir: /opt/sun/comms/messaging64
           Build Date: 20130408
  Product: Comms DSsetup 6.4
           Oracle Version: Not Found
           Version: 6.4-24.03
           ALTROOT: /
           Basedir: /opt/sun/comms/dssetup
           Build Date: 20120611
  Product: Calendar Server 7u3
           Oracle Version: 7.0.3.10.0
           Version: 7.3-10.10
           ALTROOT: /
           Basedir: /opt/sun/comms/davserver
           Build Date: 20130328
```

```
  Product: Instant Messaging 9
           Oracle Version: Not Found
           Version: 9.0-03.02
           ALTROOT: /
           Basedir: /opt/sun/comms/im
           Build Date: Not Found
  Product: Convergence 2
           Oracle Version: Not Found
           Version: 2.0-6.01
           ALTROOT: /
           Basedir: /opt/sun/comms/iwc
           Build Date: 20130402
  Product: Indexing and Search Service 1u4
           Oracle Version: 1.0.4.16.0
           Version: 1.4-16.9301
           ALTROOT: /
           Basedir: /opt/sun/comms/jiss
           Build Date: 20130320
  Product: Comms Delegated Administrator 7
           Oracle Version: Not Found
           Version: 7.0-7.00
           ALTROOT: /
           Basedir: /opt/sun/comms/da
           Build Date: Not Found
  Product: Messaging Server Sun Cluster HA agent 7.0
           Oracle Version: Not Found
           Version: 7.0-0.03
           ALTROOT: /
           Basedir: /opt/sun/comms/msg_scha
           Build Date: 20080519
  Product: Instant Messaging Sun Cluster HA agent 7.3
           Oracle Version: Not Found
           Version: 7.3-01
           ALTROOT: /
           Basedir: /opt/sun/comms/im_scha
           Build Date: Not Found

[930 Tue May 07 17:43:56 root@example.com%
/home/user/wspace/releases/ci74# ]
# ./commpkg info --verbose
-- LOGFILE: /tmp/CommsInstaller_20130507174358.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: It is highly recommended that you apply the
          latest OS Recommended Patch Cluster. commpkg will
          not do this automatically.
ALTROOT: /
  NAME: ""
  Product: Messaging Server (64bit) 7u5 64bit
```

```
          Oracle Version: Not Found
          Version: 7.5-28.21
          ALTROOT: /
          Basedir: /opt/sun/comms/messaging64
          Build Date: 20130408
          getVersion UNAME: SunOS
          getVersion ARCH: sparc
          getVersion BITS: 64
          Product Installation Status: PRESENT
          Package Status/Name/Version:
            PRESENT  SUNWmessaging-server-64 7.0,REV=2008.06.20
Product: Comms DSsetup 6.4
          Oracle Version: Not Found
          Version: 6.4-24.03
          ALTROOT: /
          Basedir: /opt/sun/comms/dssetup
          Build Date: 20120611
          getVersion UNAME: SunOS
          getVersion ARCH: sparc
          getVersion BITS: 32
          Product Installation Status: PRESENT
          Package Status/Name/Version:
            PRESENT  SUNWcomds        6.3,REV=2004.08.12
Product: Calendar Server 7u3
          Oracle Version: 7.0.3.10.0
          Version: 7.3-10.10
          ALTROOT: /
          Basedir: /opt/sun/comms/davserver
          Build Date: 20130328
          getVersion UNAME: SunOS
          getVersion ARCH: sparc
          getVersion BITS: 32
          Product Installation Status: PRESENT
          Package Status/Name/Version:
            PRESENT  SUNWdavserver    7.0,REV=2009.08.27
Product: Instant Messaging 9
          Oracle Version: Not Found
          Version: 9.0-03.02
          ALTROOT: /
          Basedir: /opt/sun/comms/im
          Build Date: Not Found
          getVersion UNAME: Not Found
          getVersion ARCH: Not Found
          getVersion BITS: Not Found
          Product Installation Status: PRESENT
          Package Status/Name/Version:
            PRESENT  SUNWiim          9.0,REV=2011.09.05
            PRESENT  SUNWiimin        9.0,REV=2011.09.05
            PRESENT  SUNWiimm         9.0,REV=2011.09.05
            PRESENT  SUNWiimjd        9.0,REV=2011.09.05
            PRESENT  SUNWiimid        9.0,REV=2011.09.05
            PRESENT  SUNWiimgw        9.0,REV=2011.09.05
            PRESENT  SUNWiimw         9.0,REV=2011.09.05
            PRESENT  SUNWiimfed       9.0,REV=2011.09.05
Product: Convergence 2
          Oracle Version: Not Found
```

```
          Version: 2.0-6.01
          ALTROOT: /
          Basedir: /opt/sun/comms/iwc
          Build Date: 20130402
          getVersion UNAME: SunOS
          getVersion ARCH: sparc
          getVersion BITS: 32
          Product Installation Status: PRESENT
          Package Status/Name/Version:
            PRESENT  SUNWiwc          2.0,REV=2010.07.26
Product: Indexing and Search Service 1u4
          Oracle Version: 1.0.4.16.0
          Version: 1.4-16.9301
          ALTROOT: /
          Basedir: /opt/sun/comms/jiss
          Build Date: 20130320
          getVersion UNAME: SunOS
          getVersion ARCH: all
          getVersion BITS: 32
          Product Installation Status: PRESENT
          Package Status/Name/Version:
            PRESENT  SUNWjiss         1.0,REV=2009.09.09
Product: Comms Delegated Administrator 7
          Oracle Version: Not Found
          Version: 7.0-7.00
          ALTROOT: /
          Basedir: /opt/sun/comms/da
          Build Date: Not Found
          getVersion UNAME: SunOS
          getVersion ARCH: sparc
          getVersion BITS: 32
          Product Installation Status: PRESENT
          Package Status/Name/Version:
            PRESENT  SUNWcommda       7.0,REV=2009.03.31
Product: Messaging Server Sun Cluster HA agent 7.0
          Oracle Version: Not Found
          Version: 7.0-0.03
          ALTROOT: /
          Basedir: /opt/sun/comms/msg_scha
          Build Date: 20080519
          getVersion UNAME: SunOS
          getVersion ARCH: sparc
          getVersion BITS: 32
          Product Installation Status: PRESENT
          Package Status/Name/Version:
            PRESENT  SUNWmessaging-server-scha 7.0,REV=2008.05.19
Product: Instant Messaging Sun Cluster HA agent 7.3
          Oracle Version: Not Found
          Version: 7.3-01
          ALTROOT: /
          Basedir: /opt/sun/comms/im_scha
          Build Date: Not Found
          getVersion UNAME: Not Found
          getVersion ARCH: Not Found
          getVersion BITS: Not Found
          Product Installation Status: PRESENT
```

```
            Package Status/Name/Version:
              PRESENT  SUNWiimsc        7.3,REV=2008.01.07.20.24.34

[931 Tue May 07 17:44:09 root@example.com%
/home/user/wspace/releases/ci74# ]
# ls -l /opt/sun/comms
total 33
   3 drwxr-xr-x   6 root     root           6 May  7 17:42
CommsInstaller/
   3 drwxr-xr-x   6 root     root           6 May  7 17:42 da/
   3 drwxr-xr-x   8 root     root           8 May  7 17:41 davserver/
   3 drwxr-xr-x   5 root     root           5 May  7 17:41 dssetup/
   3 drwxr-xr-x   7 root     root           7 May  7 17:41 im/
   3 drwxr-xr-x   5 root     root           5 May  7 17:42 im_scha/
   3 drwxr-xr-x   6 root     root           6 May  7 17:42 iwc/
   3 drwxr-xr-x  20 root     root          21 May  7 17:42 jiss/
   3 drwxr-xr-x   4 root     root           7 May  7 17:18 messaging/
   3 drwxr-xr-x   9 root     root          14 May  7 17:41 messaging64/
   3 drwxr-xr-x   4 root     root           4 May  7 17:42 msg_scha/
[932 Tue May 07 17:44:20 root@example.com%
/home/user/wspace/releases/ci74# ]
# ./commpkg uninstall
-- LOGFILE: /tmp/CommsInstaller_20130507174429.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013
Detecting Installed Products...
Detecting Installed Patches...
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Product Selection:

Communication Products:

    Item  Description
    ----  -----------
       1  Messaging Server (64bit) 7u5 (7.5-28.21)
          Installed Version at /opt/sun/comms/messaging64
       2  Comms DSsetup 6.4 (6.4-24.03)
          Installed Version at /opt/sun/comms/dssetup
       3  Calendar Server 7.0.3.10.0
          Installed Version at /opt/sun/comms/davserver
       4  Instant Messaging 9 (9.0-03.02)
          Installed Version at /opt/sun/comms/im
       5  Convergence 2 (2.0-6.01)
          Installed Version at /opt/sun/comms/iwc
       6  Indexing and Search Service 1.0.4.16.0
          Installed Version at /opt/sun/comms/jiss
       7  Comms Delegated Administrator 7 (7.0-7.00)
          Installed Version at /opt/sun/comms/da
       8  Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
          Installed Version at /opt/sun/comms/msg_scha
       9  Instant Messaging Sun Cluster HA agent 7.3 (7.3-01)
          Installed Version at /opt/sun/comms/im_scha

Enter the items you wish to uninstall. Enter q to quit.
You can enter multiple items using commas to separate them.
For example: 1,2
```

```
Please select the products you wish to uninstall [1, 2, 3, 4, 5, 6, 7,
8, 9]:
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
  WILL UNINSTALL: Messaging Server (64bit) 7u5 (7.5-28.21)
                  at /opt/sun/comms/messaging64
  WILL UNINSTALL: Comms DSsetup 6.4 (6.4-24.03)
                  at /opt/sun/comms/dssetup
  WILL UNINSTALL: Calendar Server 7.0.3.10.0
                  at /opt/sun/comms/davserver
  WILL UNINSTALL: Instant Messaging 9 (9.0-03.02)
                  at /opt/sun/comms/im
  WILL UNINSTALL: Convergence 2 (2.0-6.01)
                  at /opt/sun/comms/iwc
  WILL UNINSTALL: Indexing and Search Service 1.0.4.16.0
                  at /opt/sun/comms/jiss
  WILL UNINSTALL: Comms Delegated Administrator 7 (7.0-7.00)
                  at /opt/sun/comms/da
  WILL UNINSTALL: Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
                  at /opt/sun/comms/msg_scha
  WILL UNINSTALL: Instant Messaging Sun Cluster HA agent 7.3 (7.3-01)
                  at /opt/sun/comms/im_scha
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Ready to uninstall

Do you want to continue ? [yes] :

============================================================
Uninstalling Messaging Server (64bit) 7u5 (7.5-28.21) at
/opt/sun/comms/messaging64)...
------ Executing Task 1 of 16 ...

============================================================
Uninstalling Comms DSsetup 6.4 (6.4-24.03) at /opt/sun/comms/dssetup)...
------ Executing Task 2 of 16 ...

============================================================
Uninstalling Calendar Server 7.0.3.10.0 at /opt/sun/comms/davserver)...
------ Executing Task 3 of 16 ...

============================================================
Uninstalling Instant Messaging 9 (9.0-03.02) at /opt/sun/comms/im)...
------ Executing Task 4 of 16 ...
------ Executing Task 5 of 16 ...
------ Executing Task 6 of 16 ...
------ Executing Task 7 of 16 ...
------ Executing Task 8 of 16 ...
------ Executing Task 9 of 16 ...
------ Executing Task 10 of 16 ...
------ Executing Task 11 of 16 ...

============================================================
Uninstalling Convergence 2 (2.0-6.01) at /opt/sun/comms/iwc)...
------ Executing Task 12 of 16 ...

============================================================
```

```
Uninstalling Indexing and Search Service 1.0.4.16.0 at
/opt/sun/comms/jiss)...
------ Executing Task 13 of 16 ...

============================================================
Uninstalling Comms Delegated Administrator 7 (7.0-7.00) at
/opt/sun/comms/da)...
------ Executing Task 14 of 16 ...

============================================================
Uninstalling Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03) at
/opt/sun/comms/msg_scha)...
------ Executing Task 15 of 16 ...

============================================================
Uninstalling Instant Messaging Sun Cluster HA agent 7.3 (7.3-01) at
/opt/sun/comms/im_scha)...
------ Executing Task 16 of 16 ...
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
SUMMARY:


All tasks PASSED
Checking JES java symlink...
INFO: no update to /etc/softlist.xml required

Hit Return to Continue:
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=

NOTICE: silent file created in:

/var/opt/CommsInstaller/logs/silent_CommsInstaller_20130507174429
NOTICE: LOGFILE  created in:
        /var/opt/CommsInstaller/logs/CommsInstaller_20130507174429.log
[933 Tue May 07 17:47:12 root@example.com%
/home/user/wspace/releases/ci74# ]
# cat /var/opt/CommsInstaller/logs/silent_CommsInstaller_20130507174429
#
# Silent File for CommsInstaller 7.0.4.0.0 (7.4-0.05)
# Generated on 20130507174429
#

#
#
# verb used to create this silent file
VERB=uninstall

#
# root directory
#
ROOTDIR=/

#
# list of components (using mnemonics)
# WARNING: for verb=uninstall, when there are multiple
#          instances, the latest known version found is uninstalled
```

```
#
COMPONENTS=MS64 DSSETUP DAV IM IWC JISS DA MS_SCHA IM_SCHA
COMPONENT_VERSIONS= 7.5 6.4 7.3 9.0 2.0 1.4 7.0 7.0 7.3
[934 Tue May 07 17:47:21 root@example.com%
/home/user/wspace/releases/ci74# ]
# cat /var/opt/CommsInstaller/logs/CommsInstaller_20130507174429.log
============ LOGFILE started Tue May  7 17:44:29 2013 ==========
LOGFILE = /tmp/CommsInstaller_20130507174429.log
Running /usr/bin/perl ./commpkg
-- /usr/bin/perl ./commpkg uninstall
-- ARGS:
   uninstall
-- perl version: 5.008004 pid: 2050
-- basetime: 1367973869 Tue May  7 17:44:29 2013
-- scriptDir:
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74
-- LOGFILE: /tmp/CommsInstaller_20130507174429.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013
-- UNAME = SunOS ARCH = sparc OS_VERS = 5.10 BITS = 64
uname -a 2>&1
SunOS host1 5.10 Generic_147440-12 sun4v sparc sun4v
-- Exit status: 0
!!! ENV
$VAR1 = {
          'HOME' => '/',
          'PS1' => '[\\! \\d \\t \\u@\\h% \\w\\$ ]
\\$ ',
          'LC_COLLATE' => '',
          'LC_ALL' => '',
          'CDPATH' => ':..:/home/user',
          'LC_NUMERIC' => '',
          'MAIL' => '/var/mail/uadmin',
          'TZ' => 'PST8PDT',
          'PWD' => '/home/user/wspace/releases/ci74',
          'LC_TIME' => '',
          'LANG' => 'C',
          'LC_MESSAGES' => '',
          'LC_CTYPE' => '',
          'LOGNAME' => 'uadmin',
          'SHLVL' => '1',
          'OLDPWD' => '/home/user/wspace/releases',
          'LC_MONETARY' => '',
          '_' => './commpkg',
          'PATH' =>
'/bin:/usr/bin:/usr/sbin:/sbin:/usr/etc::~user/bin:/usr/sbin:/usr/bin',
          'SHELL' => '/bin/sh',
          'HZ' => '',
          'TERM' => 'dumb'
        };
cat /etc/release 2>&1
                    Oracle Solaris 10 8/11 s10s_u10wos_17b SPARC
  Copyright (c) 1983, 2011, Oracle and/or its affiliates. All rights
reserved.
                             Assembled 23 August 2011
-- Exit status: 0
```

```
-- Recognized OS_VERS
/usr/bin/pkgcond -n is_what 2>&1
can_add_driver=0
can_remove_driver=0
can_update_driver=0
is_alternative_root=0
is_boot_environment=0
is_diskless_client=0
is_global_zone=1
is_mounted_miniroot=0
is_netinstall_image=0
is_nonglobal_zone=0
is_path_writable=1
is_running_system=1
is_sparse_root_nonglobal_zone=0
is_whole_root_nonglobal_zone=0
-- Exit status: 1
/usr/bin/pkgcond -n is_global_zone 2>&1
-- Exit status: 1
/usr/bin/pkgcond -n is_sparse_root_nonglobal_zone 2>&1
-- Exit status: 0
Reading Product Files...
Reading
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
```

```
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
```

```
not found, skipping...
Reading OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
QQQ findGetVersion ======
!!! getVersion
$VAR1 = {
          'SASL' => 'none',
          'IWC' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'MS64_L10N' => 'none',
          'MS' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'DSSETUP' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'MQ_L10N' => 'none',
          'ICU' => 'none',
          'MS64' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'DAV' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'LDAPCSDK6' => 'none',
          'CE' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'JDK' => 'none',
          'MYSQL' => 'none',
          'PATCHUTILS' => 'none',
          'MQ' => 'none',
          'IMAPI' => 'none',
          'CI' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.ins
'LDAPCSDK6_TOOLS' => 'none',
          'JISS' =>
```

```
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'NSS' => 'none',
          'CS_L10N' => 'none',
          'IM' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'ST' => 'none',
          'RECOMMENDED' => 'none',
          'IM_L10N' => 'none',
          'CS_SCHA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'LDAPJDK' => 'none',
          'BZIP' => 'none',
          'MYSQL_MARKER' => 'none',
          'IM_SCHA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'MS_L10N' => 'none',
          'LIBCPLUSPLUS' => 'none',
          'MS_SCHA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'CS' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'JHRT' => 'none',
          'CE_L10N' => 'none',
          'DA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
};
!!! prod_getVers
$VAR1 = {
          'SASL' => 0,
          'IWC' => '2.0-6.01',
          'MS64_L10N' => 0,
          'MS' => '7.2-7.02',
          'DSSETUP' => '6.4-24.03',
          'MQ_L10N' => 0,
          'ICU' => 0,
          'MS64' => '7.5-28.21',
          'DAV' => '7.3-10.10',
          'LDAPCSDK6' => 0,
          'CE' => '6.3-13.01',
          'JDK' => 0,
          'MYSQL' => 0,
          'PATCHUTILS' => 0,
          'MQ' => 0,
          'IMAPI' => 0,
          'CI' => '7.4-0.05',
          'LDAPCSDK6_TOOLS' => 0,
          'JISS' => '1.4-16.9301',
          'NSS' => 0,
          'CS_L10N' => 0,
          'IM' => '9.0-03.02',
          'ST' => 0,
          'RECOMMENDED' => 0,
          'IM_L10N' => 0,
          'CS_SCHA' => '6.3-1.01',
          'LDAPJDK' => 0,
          'BZIP' => 0,
```

```
          'MYSQL_MARKER' => 0,
          'IM_SCHA' => '7.3-01.02',
          'MS_L10N' => 0,
          'LIBCPLUSPLUS' => 0,
          'MS_SCHA' => '7.0-0.03',
          'CS' => '6.3-32.01',
          'JHRT' => 0,
          'CE_L10N' => 0,
          'DA' => '7.0-7.00'
        };
!!! prod_orclVers
$VAR1 = {
          'SASL' => 0,
          'IWC' => '\'Unrecognized Parameter\'',
          'MS64_L10N' => 0,
          'MS' => '\'Unrecognized Parameter\'',
          'DSSETUP' => '\'Unrecognized Parameter\'',
          'MQ_L10N' => 0,
          'ICU' => 0,
          'MS64' => '\'Unrecognized Parameter\'',
          'DAV' => '7.0.3.10.0',
          'LDAPCSDK6' => 0,
          'CE' => '\'Unrecognized Parameter\'',
          'JDK' => 0,
          'MYSQL' => 0,
          'PATCHUTILS' => 0,
          'MQ' => 0,
          'IMAPI' => 0,
          'CI' => '7.0.4.0.0',
          'LDAPCSDK6_TOOLS' => 0,
          'JISS' => '1.0.4.16.0',
          'NSS' => 0,
          'CS_L10N' => 0,
          'IM' => '9.0.0.3.0',
          'ST' => 0,
          'RECOMMENDED' => 0,
          'IM_L10N' => 0,
          'CS_SCHA' => '\'Unrecognized Parameter\'',
          'LDAPJDK' => 0,
          'BZIP' => 0,
          'MYSQL_MARKER' => 0,
          'IM_SCHA' => '\'Unrecognized Parameter\'',
          'MS_L10N' => 0,
          'LIBCPLUSPLUS' => 0,
          'MS_SCHA' => '\'Unrecognized Parameter\'',
          'CS' => '\'Unrecognized Parameter\'',
          'JHRT' => 0,
          'CE_L10N' => 0,
          'DA' => '\'Unrecognized Parameter\''
        };
!!! prod_builddate
$VAR1 = {
          'SASL' => 'none',
          'IWC' => '20130402',
          'MS64_L10N' => 'none',
          'MS' => '20090416',
```

```
          'DSSETUP' => '20120611',
          'MQ_L10N' => 'none',
          'ICU' => 'none',
          'MS64' => '20130408',
          'DAV' => '20130328',
          'LDAPCSDK6' => 'none',
          'CE' => '20090327',
          'JDK' => 'none',
          'MYSQL' => 'none',
          'PATCHUTILS' => 'none',
          'MQ' => 'none',
          'IMAPI' => 'none',
          'CI' => '20130409',
          'LDAPCSDK6_TOOLS' => 'none',
          'JISS' => '20130320',
          'NSS' => 'none',
          'CS_L10N' => 'none',
          'IM' => '20130405',
          'ST' => 'none',
          'RECOMMENDED' => 'none',
          'IM_L10N' => 'none',
          'CS_SCHA' => '20080331',
          'LDAPJDK' => 'none',
          'BZIP' => 'none',
          'MYSQL_MARKER' => 'none',
          'IM_SCHA' => '20080403',
          'MS_L10N' => 'none',
          'LIBCPLUSPLUS' => 'none',
          'MS_SCHA' => '20080519',
          'CS' => '20120921',
          'JHRT' => 'none',
          'CE_L10N' => 'none',
          'DA' => '20130319'
        };
====== End QQQ findGetVersion ======
INFO: prod_mktVers{NSS} (no map) = 4.8.8
INFO: prod_mktVers{SASL} (no map) = 2.19
INFO: prod_mktVers{LDAPCSDK6} (no map) = 6.0
INFO: prod_mktVers{LDAPCSDK6_TOOLS} (no map) = 6.0
INFO: prod_mktVers{ICU} (no map) = ICU2,ICU3
INFO: prod_mktVers{JDK} (no map) = 1.6.0
INFO: prod_mktVers{JHRT} (no map) = 2.0
INFO: prod_mktVers{MQ} (no map) = 4.4
INFO: prod_mktVers{MQ_L10N} (no map) = 4.4
INFO: prod_mktVers{LDAPJDK} (no map) = 4.21
INFO: prod_mktVers{IMAPI} (w/ map) = 9
INFO: prod_mktVers{LIBCPLUSPLUS} (no map) = 5.9
INFO: prod_mktVers{PATCHUTILS} (no map) = Unknown
INFO: prod_mktVers{BZIP} (no map) = 11.10
INFO: prod_mktVers{RECOMMENDED} (no map) = 2013.02.19
INFO: prod_mktVers{MYSQL_MARKER} (w/ map) = 1.1
INFO: prod_mktVers{MYSQL} (w/ map) = 5.5.8
INFO: prod_mktVers{ST} (no map) = 1.1.4
INFO: prod_mktVers{CI} (w/ map) = 7u4
INFO: prod_mktVers{MS64} (w/ map) = 7u5
INFO: prod_mktVers{DSSETUP} (w/ map) = 6.4
```

```
INFO: prod_mktVers{DAV} (w/ map) = 7u3
INFO: prod_mktVers{IM} (w/ map) = 9
INFO: prod_mktVers{IWC} (w/ map) = 2
INFO: prod_mktVers{JISS} (w/ map) = 1u4
INFO: prod_mktVers{DA} (w/ map) = 7
INFO: prod_mktVers{MS_SCHA} (no map) = 7.0
INFO: prod_mktVers{IM_SCHA} (no map) = 7.3
Detecting Installed Products...
Checking LIBCPLUSPLUS 5.9 ...
  Checking pkg SUNWlibC... present.
  LIBCPLUSPLUS 5.9 is already present.
Checking PATCHUTILS Unknown ...
  Checking pkg SUNWpkgcmdsu... present.
  Checking pkg SUNWswmt... present.
  Checking pkg SUNWinstall-patch-utils-root... present.
  Checking pkg SUNWcsr... present.
  Checking pkg SUNWdtrc... present.
  Checking pkg SUNWzoneu... present.
  PATCHUTILS Unknown is already present.
Checking BZIP 11.10 ...
  Checking pkg SUNWbzip... present.
  BZIP 11.10 is already present.
Checking RECOMMENDED 2013.02.19 ...
  RECOMMENDED 2013.02.19 is not present.
Checking MYSQL_MARKER 1.1 ...
  Checking pkg SUNWcomms-mysql-marker... not present.
  MYSQL_MARKER 1.1 is not present.
Checking MYSQL_MARKER 1.0 ...
  Checking pkg SUNWcomms-mysql-marker... not present.
  MYSQL_MARKER 1.0 is not present.
Checking MYSQL 5.5.8 ...
  Checking pkg mysql... not present.
  MYSQL 5.5.8 is not present.
Checking MYSQL 5.1.36 ...
  Checking pkg mysql... not present.
  MYSQL 5.1.36 is not present.
Checking ST 1.1.4 ...
  Checking pkg SUNWservicetagr... present.
  Checking pkg SUNWservicetagu... present.
  Checking pkg SUNWstosreg... present.
  ST 1.1.4 is already present.
Checking NSS 4.8.8 ...
  Checking pkg SUNWjss... present.
  Checking pkg SUNWpr... present.
  Checking pkg SUNWprd... present.
  Checking pkg SUNWtls... present.
  Checking pkg SUNWtlsd... present.
  Checking pkg SUNWtlsu... present.
  NSS 4.8.8 is already present.
Checking SASL 2.19 ...
  Checking pkg SUNWsasl... present.
  SASL 2.19 is already present.
Checking LDAPCSDK6 6.0 ...
  Checking pkg SUNWldapcsdk-libs... present.
  Checking pkg SUNWldapcsdk-dev... present.
  LDAPCSDK6 6.0 is already present.
```

```
Checking LDAPCSDK6_TOOLS 6.0 ...
  Checking pkg SUNWldapcsdk-tools... present.
  LDAPCSDK6_TOOLS 6.0 is already present.
Checking ICU ICU2,ICU3 ...
  Checking pkg SUNWicu... present.
  ICU ICU2,ICU3 is already present.
Checking JDK 1.6.0 ...
  Checking pkg SUNWj6rt... not present.
  Checking pkg SUNWj6rtx... not present.
  Checking pkg SUNWj6dev... not present.
  Checking pkg SUNWj6dvx... not present.
  Checking pkg SUNWj6cfg... not present.
  JDK 1.6.0 is not present.
Checking JDK 1.5.0 ...
  Checking pkg SUNWj5rt... present.
  Checking pkg SUNWj5rtx... present.
  Checking pkg SUNWj5cfg... present.
  JDK 1.5.0 is already present.
Checking JHRT 2.0 ...
  Checking pkg SUNWjhrt... present.
  Checking pkg SUNWjhdev... present.
  Checking pkg SUNWjhdem... present.
  Checking pkg SUNWjhdoc... present.
  JHRT 2.0 is already present.
Checking MQ 4.4 ...
  Checking pkg SUNWiqr... present.
  Checking pkg SUNWiqu... present.
  Checking pkg SUNWiqdoc... present.
  Checking pkg SUNWiquc... present.
  Checking pkg SUNWiqum... present.
  Checking pkg SUNWiqjx... present.
  Checking pkg SUNWiqfs... present.
  Checking pkg SUNWiqcrt... present.
  Checking pkg SUNWiqcdv... present.
  Checking pkg SUNWiqlen... present.
  MQ 4.4 is already present.
Checking MQ 3.7 ...
  Checking pkg SUNWiqr... present but with a different pkg VERSION.
    checking SUNWiqr 3.7,REV=2006.06.18.22.34
  Checking pkg SUNWiqu... present but with a different pkg VERSION.
    checking SUNWiqu 3.7,REV=2006.06.18.22.34
  Checking pkg SUNWiqlpl... not present.
  Checking pkg SUNWiqdoc... present but with a different pkg VERSION.
    checking SUNWiqdoc 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiquc... present but with a different pkg VERSION.
    checking SUNWiquc 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiqum... present but with a different pkg VERSION.
    checking SUNWiqum 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiqjx... present but with a different pkg VERSION.
    checking SUNWiqjx 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiqfs... present but with a different pkg VERSION.
    checking SUNWiqfs 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiqcrt... present but with a different pkg VERSION.
    checking SUNWiqcrt 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiqcdv... present but with a different pkg VERSION.
    checking SUNWiqcdv 3.7,REV=2006.06.18.22.35
```

```
  Checking pkg SUNWiqlen... present but with a different pkg VERSION.
    checking SUNWiqlen 3.7,REV=2006.06.18.22.35
  NOTICE: Message Queue is present with a different pkg VERSION.
Checking MQ 4.1 ...
  Checking pkg SUNWiqr... present but with a different pkg VERSION.
    checking SUNWiqr 4.1,REV=2007.07.26.10.58
  Checking pkg SUNWiqu... present but with a different pkg VERSION.
    checking SUNWiqu 4.1,REV=2007.07.26.10.58
  Checking pkg SUNWiqdoc... present but with a different pkg VERSION.
    checking SUNWiqdoc 4.1,REV=2007.07.26.10.58
  Checking pkg SUNWiquc... present but with a different pkg VERSION.
    checking SUNWiquc 4.1,REV=2007.07.26.10.59
  Checking pkg SUNWiqum... present but with a different pkg VERSION.
    checking SUNWiqum 4.1,REV=2007.07.26.10.59
  Checking pkg SUNWiqjx... present but with a different pkg VERSION.
    checking SUNWiqjx 4.1,REV=2007.07.26.10.59
  Checking pkg SUNWiqfs... present but with a different pkg VERSION.
    checking SUNWiqfs 4.1,REV=2007.07.26.10.59
  Checking pkg SUNWiqcrt... present but with a different pkg VERSION.
    checking SUNWiqcrt 4.1,REV=2007.07.26.10.59
  Checking pkg SUNWiqcdv... present but with a different pkg VERSION.
    checking SUNWiqcdv 4.1,REV=2007.07.26.10.59
  NOTICE: Message Queue is present with a different pkg VERSION.
Checking MQ 4.3 ...
  Checking pkg SUNWiqr... present but with a different pkg VERSION.
    checking SUNWiqr 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqu... present but with a different pkg VERSION.
    checking SUNWiqu 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqdoc... present but with a different pkg VERSION.
    checking SUNWiqdoc 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiquc... present but with a different pkg VERSION.
    checking SUNWiquc 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqum... present but with a different pkg VERSION.
    checking SUNWiqum 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqjx... present but with a different pkg VERSION.
    checking SUNWiqjx 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqfs... present but with a different pkg VERSION.
    checking SUNWiqfs 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqcrt... present but with a different pkg VERSION.
    checking SUNWiqcrt 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqcdv... present but with a different pkg VERSION.
    checking SUNWiqcdv 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqlen... present but with a different pkg VERSION.
    checking SUNWiqlen 4.3,REV=2008.11.07.18.45
  NOTICE: Message Queue is present with a different pkg VERSION.
Checking MQ_L10N 4.4 ...
  Checking pkg SUNWfiqu... present.
  Checking pkg SUNWfiquc... present.
  Checking pkg SUNWdiqu... present.
  Checking pkg SUNWdiquc... present.
  Checking pkg SUNWjiqu... present.
  Checking pkg SUNWjiquc... present.
  Checking pkg SUNWeiqu... present.
  Checking pkg SUNWeiquc... present.
  Checking pkg SUNWkiqu... present.
  Checking pkg SUNWkiquc... present.
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  Checking pkg SUNWciqu... present.
  Checking pkg SUNWciquc... present.
  Checking pkg SUNWhiqu... present.
  Checking pkg SUNWhiquc... present.
  MQ_L10N 4.4 is already present.
Checking MQ_L10N 3.7 ...
  Checking pkg SUNWfiqu... present but with a different pkg VERSION.
    checking SUNWfiqu 3.7,REV=2006.09.28.02.20.49
  Checking pkg SUNWfiquc... present but with a different pkg VERSION.
    checking SUNWfiquc 3.7,REV=2006.09.28.02.21.13
  Checking pkg SUNWdiqu... present but with a different pkg VERSION.
    checking SUNWdiqu 3.7,REV=2006.09.28.02.20.38
  Checking pkg SUNWdiquc... present but with a different pkg VERSION.
    checking SUNWdiquc 3.7,REV=2006.09.28.02.21.09
  Checking pkg SUNWjiqu... present but with a different pkg VERSION.
    checking SUNWjiqu 3.7,REV=2006.09.02.02.06.39
  Checking pkg SUNWjiquc... present but with a different pkg VERSION.
    checking SUNWjiquc 3.7,REV=2006.09.02.02.07.00
  Checking pkg SUNWeiqu... present but with a different pkg VERSION.
    checking SUNWeiqu 3.7,REV=2006.09.28.02.20.43
  Checking pkg SUNWeiquc... present but with a different pkg VERSION.
    checking SUNWeiquc 3.7,REV=2006.09.28.02.21.11
  Checking pkg SUNWkiqu... present but with a different pkg VERSION.
    checking SUNWkiqu 3.7,REV=2006.09.28.02.20.59
  Checking pkg SUNWkiquc... present but with a different pkg VERSION.
    checking SUNWkiquc 3.7,REV=2006.09.28.02.21.19
  Checking pkg SUNWciqu... present but with a different pkg VERSION.
    checking SUNWciqu 3.7,REV=2006.09.02.02.06.49
  Checking pkg SUNWciquc... present but with a different pkg VERSION.
    checking SUNWciquc 3.7,REV=2006.09.02.02.07.03
  Checking pkg SUNWhiqu... present but with a different pkg VERSION.
    checking SUNWhiqu 3.7,REV=2006.10.28.02.59.24
  Checking pkg SUNWhiquc... present but with a different pkg VERSION.
    checking SUNWhiquc 3.7,REV=2006.10.28.02.59.36
  NOTICE: Message Queue Localization is present with a different pkg
VERSION.
Checking MQ_L10N 4.1 ...
  Checking pkg SUNWfiqu... present but with a different pkg VERSION.
    checking SUNWfiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWfiquc... present but with a different pkg VERSION.
    checking SUNWfiquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWdiqu... present but with a different pkg VERSION.
    checking SUNWdiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWdiquc... present but with a different pkg VERSION.
    checking SUNWdiquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWjiqu... present but with a different pkg VERSION.
    checking SUNWjiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWjiquc... present but with a different pkg VERSION.
    checking SUNWjiquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWeiqu... present but with a different pkg VERSION.
    checking SUNWeiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWeiquc... present but with a different pkg VERSION.
    checking SUNWeiquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWkiqu... present but with a different pkg VERSION.
    checking SUNWkiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWkiquc... present but with a different pkg VERSION.
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    checking SUNWkiquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWciqu... present but with a different pkg VERSION.
    checking SUNWciqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWciquc... present but with a different pkg VERSION.
    checking SUNWciquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWhiqu... present but with a different pkg VERSION.
    checking SUNWhiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWhiquc... present but with a different pkg VERSION.
    checking SUNWhiquc 4.1,REV=2007.08.02.12.38
  NOTICE: Message Queue Localization is present with a different pkg
VERSION.
Checking MQ_L10N 4.3 ...
  Checking pkg SUNWfiqu... present but with a different pkg VERSION.
    checking SUNWfiqu 4.3,REV=2008.10.27.08.57.02
  Checking pkg SUNWfiquc... present but with a different pkg VERSION.
    checking SUNWfiquc 4.3,REV=2008.10.27.08.57.05
  Checking pkg SUNWdiqu... present but with a different pkg VERSION.
    checking SUNWdiqu 4.3,REV=2008.10.27.08.57.55
  Checking pkg SUNWdiquc... present but with a different pkg VERSION.
    checking SUNWdiquc 4.3,REV=2008.10.27.08.57.58
  Checking pkg SUNWjiqu... present but with a different pkg VERSION.
    checking SUNWjiqu 4.3,REV=2008.10.27.09.00.27
  Checking pkg SUNWjiquc... present but with a different pkg VERSION.
    checking SUNWjiquc 4.3,REV=2008.10.27.09.00.28
  Checking pkg SUNWeiqu... present but with a different pkg VERSION.
    checking SUNWeiqu 4.3,REV=2008.10.27.08.58.45
  Checking pkg SUNWeiquc... present but with a different pkg VERSION.
    checking SUNWeiquc 4.3,REV=2008.10.27.08.58.48
  Checking pkg SUNWkiqu... present but with a different pkg VERSION.
    checking SUNWkiqu 4.3,REV=2008.10.27.08.59.36
  Checking pkg SUNWkiquc... present but with a different pkg VERSION.
    checking SUNWkiquc 4.3,REV=2008.10.27.08.59.38
  Checking pkg SUNWciqu... present but with a different pkg VERSION.
    checking SUNWciqu 4.3,REV=2008.10.27.09.01.18
  Checking pkg SUNWciquc... present but with a different pkg VERSION.
    checking SUNWciquc 4.3,REV=2008.10.27.09.01.19
  Checking pkg SUNWhiqu... present but with a different pkg VERSION.
    checking SUNWhiqu 4.3,REV=2008.10.27.09.02.09
  Checking pkg SUNWhiquc... present but with a different pkg VERSION.
    checking SUNWhiquc 4.3,REV=2008.10.27.09.02.10
  NOTICE: Message Queue Localization is present with a different pkg
VERSION.
Checking LDAPJDK 4.21 ...
  Checking pkg SUNWljdk... present.
  LDAPJDK 4.21 is already present.
Checking IMAPI 9.0 ...
  Checking pkg SUNWiimdv... present.
  IMAPI 9.0 is already present.
Checking IMAPI 7.0 ...
  Checking pkg SUNWiimdv... present but with a different pkg VERSION.
    checking SUNWiimdv 7.0,REV=2004.11.24.05.24.36
  NOTICE: Instant Messaging API is present with a different pkg VERSION.
Checking IMAPI 7.3 ...
  Checking pkg SUNWiimdv... present but with a different pkg VERSION.
    checking SUNWiimdv 7.3,REV=2008.01.15
  NOTICE: Instant Messaging API is present with a different pkg VERSION.
```

```
Checking IMAPI 8.0 ...
  Checking pkg SUNWiimdv... present but with a different pkg VERSION.
    checking SUNWiimdv 8.0,REV=2008.12.04
  NOTICE: Instant Messaging API is present with a different pkg VERSION.
Checking CI 7.4 ...
  Checking pkg SUNWcomms...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-v --installed /opt/sun/comms/CommsInstaller 2>&1
VERSION='7.4-0.05'
BUILDDATE='20130409'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
ORCL_VERSION='7.0.4.0.0'
-- Exit status: 0

/opt/sun/comms/CommsInstaller/lib/getVersion -v 2>&1
VERSION='7.4-0.05'
BUILDDATE='20130409'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
ORCL_VERSION='7.0.4.0.0'
-- Exit status: 0
 present.
  CI 7.4 is already present.
Checking MS64 7.5 ...
  Checking pkg SUNWmessaging-server-64...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/sun/comms/messaging64 2>&1
VERSION='7.5-28.21'
BUILDDATE='20130408'
UNAME='SunOS'
ARCH='sparc'
BITS='64'
-- Exit status: 0

/opt/sun/comms/messaging64/lib/getVersion -v 2>&1
VERSION='7.5-28.21'
BUILDDATE='20130408'
UNAME='SunOS'
ARCH='sparc'
BITS='64'
-- Exit status: 0
 present.
  MS64 7.5 is already present.
Checking MS64 6.3 ...
  Checking pkg SUNWmessaging-server-64... present but with a different
pkg VERSION.
    checking SUNWmessaging-server-64 6.3,REV=2007.02.26
  NOTICE: Messaging Server (64bit) is present with a different pkg
VERSION.
Checking MS64 6.3_32 ...
  Checking pkg SUNWmsgin... not present.
  Checking pkg SUNWmsgen... not present.
  Checking pkg SUNWmsglb... not present.
```

```
  Checking pkg SUNWmsgco... not present.
  Checking pkg SUNWmsgmt... not present.
  Checking pkg SUNWmsgst... not present.
  Checking pkg SUNWmsgmp... not present.
  Checking pkg SUNWmsgwm... not present.
  Checking pkg SUNWmsgmf... not present.
  MS64 6.3_32 is not present.
Checking MS64 7.2_32 ...
  Checking pkg SUNWmessaging-server... not present.
  MS64 7.2_32 is not present.
Checking MS64 7.3_32 ...
  MS64 7.3_32 is not present.
Checking MS64 7.5_32 ...
  MS64 7.5_32 is not present.
Checking DSSETUP 6.4 ...
  Checking pkg SUNWcomds...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/sun/comms/dssetup 2>&1
VERSION='6.4-24.03'
BUILDDATE='20120611'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0

/opt/sun/comms/dssetup/lib/getVersion -v 2>&1
VERSION='6.4-24.03'
BUILDDATE='20120611'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0
 present.
  DSSETUP 6.4 is already present.
Checking DAV 7.3 ...
  Checking pkg SUNWdavserver...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/sun/comms/davserver 2>&1
VERSION='7.3-10.10'
BUILDDATE='20130328'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
ORCL_VERSION='7.0.3.10.0'
-- Exit status: 0

/opt/sun/comms/davserver/lib/getVersion -v 2>&1
VERSION='7.3-10.10'
BUILDDATE='20130328'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
ORCL_VERSION='7.0.3.10.0'
-- Exit status: 0
 present.
  DAV 7.3 is already present.
```

```
Checking IM 9.0 ...
  Checking pkg SUNWiim...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/sun/comms/im 2>&1
No code to determine installed version
-- Exit status: 2

INFO: IM
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/sun/comms/im : returned 2
No code to determine installed version

/opt/sun/comms/im/lib/getVersion -v 2>&1
VERSION='9.0-03.02'
BUILDDATE='20130405'
UNAME='SunOS'
ARCH='sparc'
BITS='64'
ORCL_VERSION='9.0.0.3.0'
-- Exit status: 0
 present.
  Checking pkg SUNWiimin... present.
  Checking pkg SUNWiimm... present.
  Checking pkg SUNWiimjd... present.
  Checking pkg SUNWiimid... present.
  Checking pkg SUNWiimgw... present.
  Checking pkg SUNWiimw... present.
  Checking pkg SUNWiimfed... present.
  IM 9.0 is already present.
Checking IM 7.0 ...
  Checking pkg SUNWiimin... present but with a different pkg VERSION.
    checking SUNWiimin 7.0,REV=2004.11.24.05.24.36
  Checking pkg SUNWiim... present but with a different pkg VERSION.
    checking SUNWiim 7.0,REV=2004.11.24.05.24.36
  Checking pkg SUNWiimm... present but with a different pkg VERSION.
    checking SUNWiimm 7.0,REV=2004.11.24.05.24.36
  Checking pkg SUNWiimjd... present but with a different pkg VERSION.
    checking SUNWiimjd 7.0,REV=2004.11.24.05.24.36
  Checking pkg SUNWiimid... present but with a different pkg VERSION.
    checking SUNWiimid 7.0,REV=2004.11.24.05.24.36
  Checking pkg SUNWiimc... not present.
  Checking pkg SUNWiimd... not present.
  NOTICE: Instant Messaging is present with a different pkg VERSION.
Checking IM 7.3 ...
  Checking pkg SUNWiim... present but with a different pkg VERSION.
    checking SUNWiim 7.3,REV=2008.01.15
  Checking pkg SUNWiimin... present but with a different pkg VERSION.
    checking SUNWiimin 7.3,REV=2008.01.15
  Checking pkg SUNWiimm... present but with a different pkg VERSION.
    checking SUNWiimm 7.3,REV=2008.01.15
  Checking pkg SUNWiimjd... present but with a different pkg VERSION.
    checking SUNWiimjd 7.3,REV=2008.01.15
  Checking pkg SUNWiimid... present but with a different pkg VERSION.
    checking SUNWiimid 7.3,REV=2008.01.15
  Checking pkg SUNWiimc... not present.
  Checking pkg SUNWiimd... not present.
```

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  NOTICE: Instant Messaging is present with a different pkg VERSION.
Checking IM 8.3 ...
  Checking pkg SUNWiim... present but with a different pkg VERSION.
    checking SUNWiim 8.0,REV=2008.12.04
  Checking pkg SUNWiimin... present but with a different pkg VERSION.
    checking SUNWiimin 8.0,REV=2008.12.04
  Checking pkg SUNWiimm... present but with a different pkg VERSION.
    checking SUNWiimm 8.0,REV=2008.12.04
  Checking pkg SUNWiimjd... present but with a different pkg VERSION.
    checking SUNWiimjd 8.0,REV=2008.12.04
  Checking pkg SUNWiimid... present but with a different pkg VERSION.
    checking SUNWiimid 8.0,REV=2008.12.04
  Checking pkg SUNWiimc... not present.
  Checking pkg SUNWiimd... not present.
  Checking pkg SUNWiimgw... present but with a different pkg VERSION.
    checking SUNWiimgw 8.0,REV=2008.12.04
  NOTICE: Instant Messaging is present with a different pkg VERSION.
Checking IWC 2.0 ...
  Checking pkg SUNWiwc...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/sun/comms/iwc 2>&1
VERSION='2.0-6.01'
BUILDDATE='20130402'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0

/opt/sun/comms/iwc/lib/getVersion -v 2>&1
VERSION='2.0-6.01'
BUILDDATE='20130402'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0
 present.
  IWC 2.0 is already present.
Checking IWC 1.0 ...
  Checking pkg SUNWiwc... present but with a different pkg VERSION.
    checking SUNWiwc 1.0,REV=2008.07.07
  NOTICE: Convergence is present with a different pkg VERSION.
Checking JISS 1.4 ...
  Checking pkg SUNWjiss...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/sun/comms/jiss 2>&1
VERSION='1.4-16.9301'
BUILDDATE='20130320'
UNAME='SunOS'
ARCH='all'
BITS='32'
ORCL_VERSION='1.0.4.16.0'
-- Exit status: 0

/opt/sun/comms/jiss/lib/getVersion -v 2>&1
VERSION='1.4-16.9301'
BUILDDATE='20130320'
```

```
UNAME='SunOS'
ARCH='all'
BITS='32'
ORCL_VERSION='1.0.4.16.0'
-- Exit status: 0
 present.
  JISS 1.4 is already present.
Checking JISS 0.9 ...
  Checking pkg SUNWjiss-common... not present.
  Checking pkg SUNWjiss-conf... not present.
  Checking pkg SUNWjiss-extjars... not present.
  Checking pkg SUNWjiss-indexapi... not present.
  Checking pkg SUNWjiss-jmqc... not present.
  Checking pkg SUNWjiss-rest... not present.
  Checking pkg SUNWjiss-search... not present.
  Checking pkg SUNWjiss-searchui... not present.
  Checking pkg SUNWjiss-store... not present.
  Checking pkg SUNWjiss-storeui... not present.
  JISS 0.9 is not present.
Checking DA 7.0 ...
  Checking pkg SUNWcommda...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/sun/comms/da 2>&1
VERSION='Not Found'
BUILDDATE='Not Found'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0

/opt/sun/comms/da/lib/getVersion -v 2>&1
VERSION='7.0-7.00'
BUILDDATE='20130319'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0
 present.
  DA 7.0 is already present.
Checking DA 6.4 ...
  Checking pkg SUNWcomic... not present.
  Checking pkg SUNWcomis... not present.
  DA 6.4 is not present.
Checking MS_SCHA 7.0 ...
  Checking pkg SUNWmessaging-server-scha...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/sun/comms/msg_scha 2>&1
VERSION='7.0-0.03'
BUILDDATE='20080519'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0

/opt/sun/comms/msg_scha/lib/getVersion -v 2>&1
VERSION='7.0-0.03'
```

```
BUILDDATE='20080519'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0
 present.
  MS_SCHA 7.0 is already present.
Checking MS_SCHA 6.0 ...
  Checking pkg SUNWscims... not present.
  MS_SCHA 6.0 is not present.
Checking IM_SCHA 7.3 ...
  Checking pkg SUNWiimsc...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/sun/comms/im_scha 2>&1
No code to determine installed version
-- Exit status: 2

INFO: IM_SCHA
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/sun/comms/im_scha : returned 2
No code to determine installed version

/opt/sun/comms/im_scha/lib/getVersion -v 2>&1
VERSION='7.3-01.02'
BUILDDATE='20080403'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0
 present.
  IM_SCHA 7.3 is already present.
Checking IM_SCHA 7.0 ...
  Checking pkg SUNWiimsc... present but with a different pkg VERSION.
    checking SUNWiimsc 7.0,REV=2005.08.03.09.41.41
  NOTICE: Instant Messaging Sun Cluster HA agent is present with a
different pkg VERSION.
Checking MS 7.5_32 ...
  MS 7.5_32 is not present.
Checking MS 6.3_32 ...
  Checking pkg SUNWmsgin... not present.
  Checking pkg SUNWmsgen... not present.
  Checking pkg SUNWmsglb... not present.
  Checking pkg SUNWmsgco... not present.
  Checking pkg SUNWmsgmt... not present.
  Checking pkg SUNWmsgst... not present.
  Checking pkg SUNWmsgmp... not present.
  Checking pkg SUNWmsgwm... not present.
  Checking pkg SUNWmsgmf... not present.
  MS 6.3_32 is not present.
Checking MS 7.2_32 ...
  Checking pkg SUNWmessaging-server... not present.
  MS 7.2_32 is not present.
Checking MS 7.3_32 ...
  MS 7.3_32 is not present.
Checking MS_L10N 6.2 ...
  Checking pkg SUNWmsgde... not present.
```

```
  Checking pkg SUNWmsges... not present.
  Checking pkg SUNWmsgfr... not present.
  Checking pkg SUNWmsgja... not present.
  Checking pkg SUNWmsgko... not present.
  Checking pkg SUNWmsgzh... not present.
  Checking pkg SUNWmsgtw... not present.
  MS_L10N 6.2 is not present.
Checking MS_L10N 6.3 ...
  Checking pkg SUNWmsg-l10n... not present.
  MS_L10N 6.3 is not present.
Checking MS64_L10N 6.3 ...
  Checking pkg SUNWmessaging-server-l10n-64... not present.
  MS64_L10N 6.3 is not present.
Checking CS 6.3 ...
  Checking pkg SUNWics5... not present.
  Checking pkg SUNWica5... not present.
  CS 6.3 is not present.
Checking CS_L10N 6.2 ...
  Checking pkg SUNWdeics... not present.
  Checking pkg SUNWesics... not present.
  Checking pkg SUNWfrics... not present.
  Checking pkg SUNWjaics... not present.
  Checking pkg SUNWkoics... not present.
  Checking pkg SUNWzhics... not present.
  Checking pkg SUNWtwics... not present.
  CS_L10N 6.2 is not present.
Checking CS_L10N 6.3 ...
  Checking pkg SUNWics-l10n... not present.
  CS_L10N 6.3 is not present.
Checking IM_L10N 7.0 ...
  Checking pkg SUNWdiimc... not present.
  Checking pkg SUNWdiimd... not present.
  Checking pkg SUNWdimid... not present.
  Checking pkg SUNWeiimc... not present.
  Checking pkg SUNWeiimd... not present.
  Checking pkg SUNWeiimin... not present.
  Checking pkg SUNWeimid... not present.
  Checking pkg SUNWfiimc... not present.
  Checking pkg SUNWfiimd... not present.
  Checking pkg SUNWfiimin... not present.
  Checking pkg SUNWfimid... not present.
  Checking pkg SUNWjiimc... not present.
  Checking pkg SUNWjiimd... not present.
  Checking pkg SUNWjiimin... not present.
  Checking pkg SUNWjimid... not present.
  Checking pkg SUNWkiimc... not present.
  Checking pkg SUNWkiimd... not present.
  Checking pkg SUNWkiimin... not present.
  Checking pkg SUNWkimid... not present.
  Checking pkg SUNWciimc... not present.
  Checking pkg SUNWciimd... not present.
  Checking pkg SUNWciimin... not present.
  Checking pkg SUNWcimid... not present.
  Checking pkg SUNWhiimc... not present.
  Checking pkg SUNWhiimd... not present.
  Checking pkg SUNWhiimin... not present.
```

```
  Checking pkg SUNWhimid... not present.
  IM_L10N 7.0 is not present.
Checking IM_L10N 7.2 ...
  Checking pkg SUNWiimc-l10n... not present.
  Checking pkg SUNWiimd-l10n... not present.
  Checking pkg SUNWiimid-l10n... not present.
  Checking pkg SUNWiimin-l10n... not present.
  IM_L10N 7.2 is not present.
Checking CE 6.3 ...
  Checking pkg SUNWuwc... not present.
  CE 6.3 is not present.
Checking CE_L10N 6.2 ...
  Checking pkg SUNWduwc... not present.
  Checking pkg SUNWeuwc... not present.
  Checking pkg SUNWfuwc... not present.
  Checking pkg SUNWjuwc... not present.
  Checking pkg SUNWkuwc... not present.
  Checking pkg SUNWcuwc... not present.
  Checking pkg SUNWhuwc... not present.
  CE_L10N 6.2 is not present.
Checking CE_L10N 6.3 ...
  Checking pkg SUNWuwc-l10n... not present.
  CE_L10N 6.3 is not present.
Checking CS_SCHA 6.0 ...
  Checking pkg SUNWscics... not present.
  CS_SCHA 6.0 is not present.
Checking CS_SCHA 6.3 ...
  Checking pkg SUNWscics... not present.
  CS_SCHA 6.3 is not present.
Detecting Installed Patches...
-- chk4patch 119963-27 /tmp/.patchout_20130507174429.2050
-- Running patchadd  -p report...
--   Generating /tmp/.patchout_20130507174429.2050
patchadd  -p > /tmp/.patchout_20130507174429.2050 2>>
/tmp/CommsInstaller_20130507174429.log
-- Exit status: 0
--  older version at lineno 482 found 119963-24 - not acceptable
--  Exact match found at line 483
--  Final return status: 1
  LIBCPLUSPLUS patch 119963-27 is already present.
-- chk4patch 120900-04 /tmp/.patchout_20130507174429.2050
--  Exact match found at line 52
--  Final return status: 1
  PATCHUTILS patch 120900-04 is already present.
-- chk4patch 121133-02 /tmp/.patchout_20130507174429.2050
--  Exact match found at line 53
--  Final return status: 1
  PATCHUTILS patch 121133-02 is already present.
-- chk4patch 119254-88 /tmp/.patchout_20130507174429.2050
--  older version at lineno 227 found 119254-81 - not acceptable
--  Exact match found at line 230
--  Final return status: 1
  PATCHUTILS patch 119254-88 is already present.
-- chk4patch 126868-04 /tmp/.patchout_20130507174429.2050
--  Exact match found at line 559
--  Final return status: 1
```

```
  BZIP patch 126868-04 is already present.
-- chk4patch 137321-01 /tmp/.patchout_20130507174429.2050
--  Exact match found at line 560
--  Final return status: 1
  BZIP patch 137321-01 is already present.
-- chk4patch 119254-88 /tmp/.patchout_20130507174429.2050
--  older version at lineno 227 found 119254-81 - not acceptable
--  Exact match found at line 230
--  Final return status: 1
  RECOMMENDED patch 119254-88 is already present.
-- chk4patch 120272-28 /tmp/.patchout_20130507174429.2050
--  Newer version at line 298 found 120272-31
--  Final return status: 1
  RECOMMENDED patch 120272-28 is already present.
-- chk4patch 147147-26 /tmp/.patchout_20130507174429.2050
--  Final return status: 0
  RECOMMENDED patch 147147-26 is not present.
-- chk4patch 125358-15 /tmp/.patchout_20130507174429.2050
--  Exact match found at line 449
--  Final return status: 1
  NSS patch 125358-15 is already present.
-- chk4patch 119345-08 /tmp/.patchout_20130507174429.2050
--  Exact match found at line 671
--  Final return status: 1
  SASL patch 119345-08 is already present.
-- chk4patch 136798-03 /tmp/.patchout_20130507174429.2050
--  Exact match found at line 363
--  Final return status: 1
  LDAPCSDK6_TOOLS patch 136798-03 is already present.
-- chk4patch 119810-07 /tmp/.patchout_20130507174429.2050
--  older version at lineno 436 found 119810-05 - not acceptable
--  older version at lineno 740 found 119810-06 - not acceptable
--  Exact match found at line 741
--  Final return status: 1
  ICU patch 119810-07 is already present.
-- chk4patch 125136-35 /tmp/.patchout_20130507174429.2050
--  older version at lineno 590 found 125136-19 - not acceptable
--  older version at lineno 591 found 125136-28 - not acceptable
--  older version at lineno 592 found 125136-31 - not acceptable
--  Final return status: 0
  JDK patch 125136-35 is not present.
-- chk4patch 125137-35 /tmp/.patchout_20130507174429.2050
--  older version at lineno 800 found 125137-19 - not acceptable
--  older version at lineno 801 found 125137-28 - not acceptable
--  older version at lineno 802 found 125137-31 - not acceptable
--  Final return status: 0
  JDK patch 125137-35 is not present.
-- chk4patch 119725-06 /tmp/.patchout_20130507174429.2050
--  Exact match found at line 357
--  Final return status: 1
  LDAPJDK patch 119725-06 is already present.
-- chk4patch 148582-03 /tmp/.patchout_20130507174429.2050
--  Exact match found at line 256
--  Final return status: 1
  IMAPI patch 148582-03 is already present.
-- chk4patch 137204-28 /tmp/.patchout_20130507174429.2050
```

```
--  Exact match found at line 698
--  Final return status: 1
  MS64 patch 137204-28 is already present.
-- chk4patch 118242-03 /tmp/.patchout_20130507174429.2050
--  Exact match found at line 359
--  Final return status: 1
  DSSETUP patch 118242-03 is already present.
-- chk4patch 118245-24 /tmp/.patchout_20130507174429.2050
--  Exact match found at line 358
--  Final return status: 1
  DSSETUP patch 118245-24 is already present.
-- chk4patch 142785-10 /tmp/.patchout_20130507174429.2050
--  Exact match found at line 648
--  Final return status: 1
  DAV patch 142785-10 is already present.
-- chk4patch 148579-03 /tmp/.patchout_20130507174429.2050
--  Exact match found at line 263
--  Final return status: 1
  IM patch 148579-03 is already present.
-- chk4patch 145711-06 /tmp/.patchout_20130507174429.2050
--  Exact match found at line 351
--  Final return status: 1
  IWC patch 145711-06 is already present.
-- chk4patch 142824-16 /tmp/.patchout_20130507174429.2050
--  Exact match found at line 752
--  Final return status: 1
  JISS patch 142824-16 is already present.
-- chk4patch 124581-07 /tmp/.patchout_20130507174429.2050
--  Exact match found at line 672
--  Final return status: 1
  DA patch 124581-07 is already present.
-- chk4patch 137571-01 /tmp/.patchout_20130507174429.2050
--  Exact match found at line 604
--  Final return status: 1
  IM_SCHA patch 137571-01 is already present.
====== QQQ detectProducts ======
QQQ Dumper
!!! present
$VAR1 = {
          '148579-03' => 'PRESENT',
          '142785-10' => 'PRESENT',
          'IWC' => {
                     '2.0' => 'PRESENT',
                     '1.0' => 'DIFF_VERSION'
                   },
          'SASL' => {
                      '2.19' => 'PRESENT'
                    },
          '119345-08' => 'PRESENT',
          'MS64_L10N' => {
                           '6.3' => 'NOT_PRESENT'
                         },
          '142824-16' => 'PRESENT',
          '119725-06' => 'PRESENT',
          '119810-07' => 'PRESENT',
          'MS' => {
```

```
                '7.3_32' => 'NOT_PRESENT',
                '7.2_32' => 'NOT_PRESENT',
                '7.5_32' => 'NOT_PRESENT',
                '6.3_32' => 'NOT_PRESENT'
              },
      '137571-01' => 'PRESENT',
      'DSSETUP' => {
                    '6.4' => 'PRESENT'
                  },
      '126868-04' => 'PRESENT',
      '119254-88' => 'PRESENT',
      '120900-04' => 'PRESENT',
      '119963-27' => 'PRESENT',
      'MQ_L10N' => {
                    '4.3' => 'DIFF_VERSION',
                    '3.7' => 'DIFF_VERSION',
                    '4.1' => 'DIFF_VERSION',
                    '4.4' => 'PRESENT'
                  },
      'ICU' => {
                 'ICU2,ICU3' => 'PRESENT'
               },
      '120272-28' => 'PRESENT',
      'MS64' => {
                  '7.5' => 'PRESENT',
                  '7.3_32' => 'NOT_PRESENT',
                  '7.5_32' => 'NOT_PRESENT',
                  '7.2_32' => 'NOT_PRESENT',
                  '6.3' => 'DIFF_VERSION',
                  '6.3_32' => 'NOT_PRESENT'
                },
      'DAV' => {
                 '7.3' => 'PRESENT'
               },
      'LDAPCSDK6' => {
                       '6.0' => 'PRESENT'
                     },
      'CE' => {
                '6.3' => 'NOT_PRESENT'
              },
      'JDK' => {
                 '1.6.0' => 'NOT_PRESENT',
                 '1.5.0' => 'PRESENT'
               },
      '125137-35' => 'NOT_PRESENT',
      'MYSQL' => {
                   '5.1.36' => 'NOT_PRESENT',
                   '5.5.8' => 'NOT_PRESENT'
                 },
      'PATCHUTILS' => {
                        'Unknown' => 'PRESENT'
                      },
      'MQ' => {
                '4.3' => 'DIFF_VERSION',
                '3.7' => 'DIFF_VERSION',
                '4.1' => 'DIFF_VERSION',
```

```
          '4.4' => 'PRESENT'
        },
'125358-15' => 'PRESENT',
'CI' => {
          '7.4' => 'PRESENT'
        },
'IMAPI' => {
             '8.0' => 'DIFF_VERSION',
             '7.0' => 'DIFF_VERSION',
             '9.0' => 'PRESENT',
             '7.3' => 'DIFF_VERSION'
           },
'137321-01' => 'PRESENT',
'LDAPCSDK6_TOOLS' => {
                       '6.0' => 'PRESENT'
                     },
'125136-35' => 'NOT_PRESENT',
'JISS' => {
            '0.9' => 'NOT_PRESENT',
            '1.4' => 'PRESENT'
          },
'NSS' => {
           '4.8.8' => 'PRESENT'
         },
'CS_L10N' => {
               '6.2' => 'NOT_PRESENT',
               '6.3' => 'NOT_PRESENT'
             },
'ST' => {
          '1.1.4' => 'PRESENT'
        },
'IM' => {
          '8.3' => 'DIFF_VERSION',
          '7.0' => 'DIFF_VERSION',
          '9.0' => 'PRESENT',
          '7.3' => 'DIFF_VERSION'
        },
'RECOMMENDED' => {
                   '2013.02.19' => 'NOT_PRESENT'
                 },
'IM_L10N' => {
               '7.2' => 'NOT_PRESENT',
               '7.0' => 'NOT_PRESENT'
             },
'136798-03' => 'PRESENT',
'CS_SCHA' => {
               '6.0' => 'NOT_PRESENT',
               '6.3' => 'NOT_PRESENT'
             },
'LDAPJDK' => {
               '4.21' => 'PRESENT'
             },
'MYSQL_MARKER' => {
                    '1.1' => 'NOT_PRESENT',
                    '1.0' => 'NOT_PRESENT'
                  },
```

```
          'BZIP' => {
                      '11.10' => 'PRESENT'
                    },
          '145711-06' => 'PRESENT',
          'IM_SCHA' => {
                         '7.0' => 'DIFF_VERSION',
                         '7.3' => 'PRESENT'
                       },
          '148582-03' => 'PRESENT',
          'MS_L10N' => {
                         '6.2' => 'NOT_PRESENT',
                         '6.3' => 'NOT_PRESENT'
                       },
          'LIBCPLUSPLUS' => {
                              '5.9' => 'PRESENT'
                            },
          '121133-02' => 'PRESENT',
          '118245-24' => 'PRESENT',
          '118242-03' => 'PRESENT',
          'MS_SCHA' => {
                         '6.0' => 'NOT_PRESENT',
                         '7.0' => 'PRESENT'
                       },
          '147147-26' => 'NOT_PRESENT',
          'CS' => {
                    '6.3' => 'NOT_PRESENT'
                  },
          '124581-07' => 'PRESENT',
          'JHRT' => {
                      '2.0' => 'PRESENT'
                    },
          'CE_L10N' => {
                         '6.2' => 'NOT_PRESENT',
                         '6.3' => 'NOT_PRESENT'
                       },
          'DA' => {
                    '6.4' => 'NOT_PRESENT',
                    '7.0' => 'PRESENT'
                  },
          '137204-28' => 'PRESENT'
        };
!!! pkgparams
$VAR1 = {
          'SUNWica5' => {},
          'SUNWmsgja' => {},
          'SUNWcomic' => {},
          'SUNWservicetagu' => {
                                 '1.1.4,REV=2008.03.21.07.54' => [

'SUNWservicetagu',
                                                                    '/',

'1.1.4.1',
                                                                    ''
                                                                  ]
                                 },
```

```
          'SUNWjimid' => {},
          'SUNWdiquc' => {
                          '4.4,REV=2009.10.01.09.43.03' => [

'SUNWdiquc',
                                                            '/',
                                                            '4.4.1.0',
                                                            ''
                                                          ]
                        },
          'SUNWmsgko' => {},
          'SUNWics5' => {},
          'SUNWmessaging-server-l10n-64' => {},
          'SUNWiqlpl' => {},
          'SUNWmsgco' => {},
          'SUNWfiquc' => {
                          '4.4,REV=2009.10.01.09.42.16' => [

'SUNWfiquc',
                                                            '/',
                                                            '4.4.1.0',
                                                            ''
                                                          ]
                        },
          'SUNWjiss-extjars' => {},
          'SUNWjhdem' => {
                          '2.0,REV=2006.10.04' => [
                                                    'SUNWjhdem',
                                                    '/usr',
                                                    '2.0/FCS',
                                                    ''
                                                  ]
                        },
          'SUNWiqfs' => {
                           '4.4,REV=2009.08.27.08.33' => [
                                                          'SUNWiqfs',
                                                          '/',
                                                          '4.4.0.0',
                                                          ''
                                                        ]
                         },
          'SUNWfimid' => {},
          'SUNWcomds' => {
                          '6.3,REV=2004.08.12' => [
                                                    'SUNWcomds',

'/opt/sun/comms/dssetup',
                                                    '6.4-24.03',
                                                    ''
                                                  ]
                        },
          'SUNWjhdev' => {
                          '2.0,REV=2006.10.04' => [
                                                    'SUNWjhdev',
                                                    '/usr',
                                                    '2.0/FCS',
```

```
                                                        ''
                                                      ]
                          },
          'SUNWj6rtx' => {},
          'SUNWiqum' => {
                           '4.4,REV=2009.08.27.08.33' => [
                                                            'SUNWiqum',
                                                            '/',
                                                            '4.4.1.0',
                                                            ''
                                                          ]
                         },
          'SUNWduwc' => {},
          'SUNWhiimin' => {},
          'SUNWkiimin' => {},
          'SUNWeiimd' => {},
          'SUNWj6rt' => {},
          'SUNWj5rt' => {
                           '1.5.0,REV=2004.12.07.00.07' => [
                                                              'SUNWj5rt',
                                                              '/usr',

'1.5.0_12/1.5.0_12-b04',
                                                              ''
                                                            ]
                         },
          'SUNWiimc-l10n' => {},
          'SUNWhiimc' => {},
          'SUNWmsg-l10n' => {},
          'SUNWfrics' => {},
          'SUNWciqu' => {
                           '4.4,REV=2009.10.01.09.46.01' => [
                                                               'SUNWciqu',
                                                               '/',
                                                               '4.4.1.0',
                                                               ''
                                                             ]
                         },
          'SUNWkoics' => {},
          'SUNWdimid' => {},
          'SUNWjiquc' => {
                            '4.4,REV=2009.10.01.09.45.18' => [

'SUNWjiquc',
                                                                '/',
                                                                '4.4.1.0',
                                                                ''
                                                              ]
                          },
          'SUNWiimgw' => {
                            '9.0,REV=2011.09.05' => [
                                                       'SUNWiimgw',

'/opt/sun/comms/im',
                                                       '9.0-03.02',
                                                       ''
```

```
                                                        ]
                          },
          'SUNWiimd-l10n' => {},
          'SUNWhiquc' => {
                            '4.4,REV=2009.10.01.09.46.50' => [

'SUNWhiquc',
                                                                '/',
                                                                '4.4.1.0',
                                                                ''
                                                              ]
                          },
          'SUNWzhics' => {},
          'SUNWkiimd' => {},
          'SUNWiimfed' => {
                             '9.0,REV=2011.09.05' => [
                                                        'SUNWiimfed',

'/opt/sun/comms/im',
                                                        '9.0-03.02',
                                                        ''
                                                      ]
                           },
          'SUNWmsgmp' => {},
          'SUNWuwc' => {},
          'SUNWscics' => {},
          'SUNWiimc' => {},
          'SUNWhiimd' => {},
          'SUNWmessaging-server-scha' => {
                                            '7.0,REV=2008.05.19' => [

'SUNWmessaging-server-scha',

'/opt/sun/comms/msg_scha',

'7.0-0.03',
                                                                        ''
                                                                      ]
                                          },
          'SUNWmsglb' => {},
          'SUNWtls' => {
                          '3.11.4,REV=2006.11.16.20.40' => [
                                                              'SUNWtls',
                                                              '/',
                                                              '3.13.1',
                                                              ''
                                                            ]
                        },
          'SUNWj6dvx' => {},
          'SUNWfuwc' => {},
          'SUNWlibC' => {
                           '5.10,REV=2004.12.22' => [
                                                       'SUNWlibC',
                                                       '/',
                                                       '5.10',
                                                       ''
```

```
                                                    ]
                         },
          'SUNWjiss-searchui' => {},
          'SUNWjiimin' => {},
          'SUNWcomms-mysql-marker' => {},
          'SUNWscims' => {},
          'SUNWiimjd' => {
                           '9.0,REV=2011.09.05' => [
                                                      'SUNWiimjd',

'/opt/sun/comms/im',
                                                      '9.0-03.02',
                                                      ''
                                                    ]
                        },
          'SUNWciimd' => {},
          'SUNWldapcsdk-dev' => {
                                 '6.00,REV=2006.12.11.00.08' => [

'SUNWldapcsdk-dev',
                                                                  '/',

'6.03',
                                                                  ''
                                                                ]
                               },
          'SUNWiqlen' => {
                           '4.4,REV=2009.08.27.08.33' => [
                                                            'SUNWiqlen',
                                                            '/',
                                                            '4.4.1.0',
                                                            ''
                                                          ]
                        },
          'SUNWiimid-l10n' => {},
          'SUNWiqr' => {
                        '4.4,REV=2009.08.27.08.32' => [
                                                          'SUNWiqr',
                                                          '/',
                                                          '4.4.1.0',
                                                          ''
                                                        ]
                       },
          'SUNWdiimc' => {},
          'SUNWmsgwm' => {},
          'SUNWiimw' => {
                          '9.0,REV=2011.09.05' => [
                                                     'SUNWiimw',
                                                     '/opt/sun/comms/im',
                                                     '9.0-03.02',
                                                     ''
                                                   ]
                         },
          'SUNWmessaging-server-64' => {
                                        '7.0,REV=2008.06.20' => [
```

```
'SUNWmessaging-server-64',

'/opt/sun/comms/messaging64',

'7.5-28.21',
                                                                    ''
                                                                  ]
                                          },
          'SUNWeiquc' => {
                            '4.4,REV=2009.10.01.09.43.47' => [

'SUNWeiquc',
                                                                '/',
                                                                '4.4.1.0',
                                                                ''
                                                              ]
                          },
          'SUNWj5cfg' => {
                            '1.5.0,REV=2004.12.07.00.07' => [

'SUNWj5cfg',
                                                                '/',

'1.5.0_12/1.5.0_12-b04',
                                                                ''
                                                              ]
                          },
          'SUNWhiqu' => {
                           '4.4,REV=2009.10.01.09.46.48' => [
                                                                'SUNWhiqu',
                                                                '/',
                                                                '4.4.1.0',
                                                                ''
                                                              ]
                        },
          'SUNWjiss-search' => {},
          'SUNWiimdv' => {
                            '9.0,REV=2011.09.05' => [
                                                      'SUNWiimdv',
                                                      '/',
                                                      '9.0-03.02',
                                                      ''
                                                    ]
                          },
          'SUNWfiimd' => {},
          'SUNWj5rtx' => {
                            '1.5.0,REV=2004.12.06.22.09' => [

'SUNWj5rtx',
                                                                '/usr',

'1.5.0_12/1.5.0_12-b04',
                                                                ''
                                                              ]
                          },
          'SUNWiquc' => {
```

```
                          '4.4,REV=2009.08.27.08.33' => [
                                                          'SUNWiquc',
                                                          '/',
                                                          '4.4.1.0',
                                                          ''
                                                        ]
                        },
          'SUNWiimid' => {
                           '9.0,REV=2011.09.05' => [
                                                     'SUNWiimid',

'/opt/sun/comms/im',
                                                     '9.0-03.02',
                                                     ''
                                                   ]
                         },
          'SUNWmsgmt' => {},
          'SUNWljdk' => {
                          '1.0,REV=2004.10.11.06.02' => [
                                                          'SUNWljdk',
                                                          '/',
                                                          '4.21',
                                                          ''
                                                        ]
                        },
          'SUNWcuwc' => {},
          'SUNWldapcsdk-libs' => {
                                   '6.00,REV=2006.12.11.00.08' => [

'SUNWldapcsdk-libs',
                                                                    '/',

'6.03',
                                                                    ''
                                                                  ]
                                 },
          'SUNWservicetagr' => {
                                 '1.1.4,REV=2008.03.21.07.54' => [

'SUNWservicetagr',
                                                                    '/',

'1.1.4.1',
                                                                    ''
                                                                  ]
                                },
          'SUNWciimc' => {},
          'SUNWjhrt' => {
                          '2.0,REV=2006.10.31' => [
                                                    'SUNWjhrt',
                                                    '/usr',
                                                    '2.0/FCS',
                                                    ''
                                                  ]
                        },
          'SUNWtlsd' => {
```

```
                          '3.11.4,REV=2006.11.16.20.40' => [
                                                              'SUNWtlsd',
                                                              '/',
                                                              '3.13.1',
                                                              ''
                                                            ]
                        },
          'SUNWmsgin' => {},
          'SUNWdtrc' => {
                          '11.10.0,REV=2005.01.21.15.53' => [

'SUNWdtrc',
                                                               '/',

'5.10/Generic',
                                                               ''
                                                             ]
                        },
          'SUNWhuwc' => {},
          'mysql' => {},
          'SUNWiqdoc' => {
                            '4.4,REV=2009.08.27.08.32' => [
                                                             'SUNWiqdoc',
                                                             '/',
                                                             '4.4.0.0',
                                                             ''
                                                           ]
                          },
          'SUNWjiimd' => {},
          'SUNWjuwc' => {},
          'SUNWiimd' => {},
          'SUNWiqcrt' => {
                            '4.4,REV=2009.08.27.08.33' => [
                                                             'SUNWiqcrt',
                                                             '/opt',
                                                             '4.4.1.0',
                                                             ''
                                                           ]
                          },
          'SUNWmsgzh' => {},
          'SUNWprd' => {
                          '4.6.4,REV=2006.11.16.20.40' => [
                                                             'SUNWprd',
                                                             '/',
                                                             '4.8.9',
                                                             ''
                                                           ]
                        },
          'SUNWjiss-conf' => {},
          'SUNWcommda' => {
                             '7.0,REV=2009.03.31' => [
                                                        'SUNWcommda',

'/opt/sun/comms/da',
                                                        '7.0-7.00',
                                                        ''
```

```
                                                        ]
                            },
          'SUNWmsgen' => {},
          'SUNWjiss-store' => {},
          'SUNWiwc' => {
                        '2.0,REV=2010.07.26' => [
                                                  'SUNWiwc',
                                                  '/opt/sun/comms/iwc',
                                                  '2.0-6.01',
                                                  ''
                                                ]
                      },
          'SUNWjiss-storeui' => {},
          'SUNWiimin-l10n' => {},
          'SUNWiimsc' => {
                          '7.3,REV=2008.01.07.20.24.34' => [

'SUNWiimsc',

'/opt/sun/comms/im_scha',
                                                              '7.3-01',
                                                              ''
                                                            ]
                        },
          'SUNWinstall-patch-utils-root' => {

'11.10,REV=2005.01.09.23.05' => [

'SUNWinstall-patch-utils-root',

'/',

'5.10',

''

]
                                              },
          'SUNWiimin' => {
                          '9.0,REV=2011.09.05' => [
                                                    'SUNWiimin',

'/opt/sun/comms/im',
                                                    '9.0-03.02',
                                                    ''
                                                  ]
                        },
          'SUNWuwc-l10n' => {},
          'SUNWmsgst' => {},
          'SUNWiqu' => {
                        '4.4,REV=2009.08.27.08.32' => [
                                                        'SUNWiqu',
                                                        '/',
                                                        '4.4.1.0',
                                                        ''
                                                      ]
```

```
                        },
          'SUNWkiimc' => {},
          'SUNWiim' => {
                          '9.0,REV=2011.09.05' => [
                                                     'SUNWiim',
                                                     '/opt/sun/comms/im',
                                                     '9.0-03.02',
                                                     ''
                                                   ]
                        },
          'SUNWeiimin' => {},
          'SUNWcimid' => {},
          'SUNWiqcdv' => {
                            '4.4,REV=2009.08.27.08.33' => [
                                                             'SUNWiqcdv',
                                                             '/opt',
                                                             '4.4.1.0',
                                                             ''
                                                           ]
                          },
          'SUNWldapcsdk-tools' => {
                                     '6.00,REV=2006.12.11.00.08' => [

'SUNWldapcsdk-tools',

'/opt/SUNWdsee',

'6.03',
                                                                       ''
                                                                     ]
                                   },
          'SUNWjss' => {
                          '4.2.4,REV=2006.11.16.20.40' => [
                                                             'SUNWjss',
                                                             '/',
                                                             '4.3.2',
                                                             ''
                                                           ]
                        },
          'SUNWdiqu' => {
                           '4.4,REV=2009.10.01.09.42.59' => [
                                                               'SUNWdiqu',
                                                               '/',
                                                               '4.4.1.0',
                                                               ''
                                                             ]
                         },
          'SUNWjiss' => {
                           '1.0,REV=2009.09.09' => [
                                                      'SUNWjiss',

'/opt/sun/comms/jiss',
                                                      '1.4-16.9301',
                                                      ''
                                                    ]
                         },
```

```
          'SUNWj6cfg' => {},
          'SUNWhimid' => {},
          'SUNWciquc' => {
                          '4.4,REV=2009.10.01.09.46.03' => [

'SUNWciquc',
                                                                '/',
                                                                '4.4.1.0',
                                                                ''
                                                              ]
                        },
          'SUNWcomms' => {
                          '7.4,REV=2013.04.09' => [
                                                     'SUNWcomms',

'/opt/sun/comms/CommsInstaller',
                                                     '7.4-0.05',
                                                     ''
                                                   ]
                        },
          'SUNWjiqu' => {
                         '4.4,REV=2009.10.01.09.45.16' => [
                                                            'SUNWjiqu',
                                                            '/',
                                                            '4.4.1.0',
                                                            ''
                                                          ]
                       },
          'SUNWkiqu' => {
                         '4.4,REV=2009.10.01.09.44.30' => [
                                                            'SUNWkiqu',
                                                            '/',
                                                            '4.4.1.0',
                                                            ''
                                                          ]
                       },
          'SUNWkuwc' => {},
          'SUNWics-l10n' => {},
          'SUNWeiqu' => {
                         '4.4,REV=2009.10.01.09.43.44' => [
                                                            'SUNWeiqu',
                                                            '/',
                                                            '4.4.1.0',
                                                            ''
                                                          ]
                       },
          'SUNWmessaging-server' => {},
          'SUNWdavserver' => {
                              '7.0,REV=2009.08.27' => [

'SUNWdavserver',

'/opt/sun/comms/davserver',
                                                        '7.3-10.10',
                                                        ''
                                                      ]
```

```
                              },
          'SUNWmsgtw' => {},
          'SUNWeiimc' => {},
          'SUNWjaics' => {},
          'SUNWpkgcmdsu' => {
                               '11.11,REV=2005.01.09.23.05' => [

'SUNWpkgcmdsu',
                                                                  '/',
                                                                  '5.10',
                                                                  ''
                                                               ]
                             },
          'SUNWjiimc' => {},
          'SUNWeimid' => {},
          'SUNWiqjx' => {
                            '4.4,REV=2009.08.27.08.33' => [
                                                             'SUNWiqjx',
                                                             '/',
                                                             '4.4.1.0',
                                                             ''
                                                           ]
                         },
          'SUNWjhdoc' => {
                            '2.0,REV=2006.10.04' => [
                                                       'SUNWjhdoc',
                                                       '/usr',
                                                       '2.0/FCS',
                                                       ''
                                                     ]
                          },
          'SUNWj6dev' => {},
          'SUNWmsges' => {},
          'SUNWpr' => {
                         '4.6.4,REV=2006.11.16.20.40' => [
                                                             'SUNWpr',
                                                             '/',
                                                             '4.8.9',
                                                             ''
                                                           ]
                       },
          'SUNWmsgmf' => {},
          'SUNWkimid' => {},
          'SUNWicu' => {
                          '1.2,REV=2005.01.06.14.13' => [
                                                            'SUNWicu',
                                                            '/usr',
                                                            '10/Generic',
                                                            ''
                                                          ]
                        },
          'SUNWjiss-rest' => {},
          'SUNWfiimin' => {},
          'SUNWswmt' => {
                            '11.10,REV=2005.01.10.17.19' => [
                                                               'SUNWswmt',
```

```
                                                                '/',
                                                                '5.10',
                                                                ''
                                                              ]
                        },
          'SUNWcomis' => {},
          'SUNWdeics' => {},
          'SUNWtwics' => {},
          'SUNWciimin' => {},
          'SUNWmsgfr' => {},
          'SUNWdiimd' => {},
          'SUNWjiss-common' => {},
          'SUNWeuwc' => {},
          'SUNWkiquc' => {
                          '4.4,REV=2009.10.01.09.44.32' => [

'SUNWkiquc',
                                                                  '/',
                                                                  '4.4.1.0',
                                                                  ''
                                                                ]
                         },
          'SUNWstosreg' => {
                            '1.1.4,REV=2008.03.21.07.54' => [

'SUNWstosreg',
                                                                   '/',

'1.1.4.1',
                                                                   ''
                                                                 ]
                          },
          'SUNWmsgde' => {},
          'SUNWjiss-jmqc' => {},
          'SUNWjiss-indexapi' => {},
          'SUNWbzip' => {
                         '11.10.0,REV=2005.01.08.05.16' => [

'SUNWbzip',
                                                                  '/',

'5.10/SunOS Development',
                                                                  ''
                                                                ]
                        },
          'SUNWtlsu' => {
                         '3.11.4,REV=2006.11.16.20.40' => [
                                                                 'SUNWtlsu',
                                                                 '/',
                                                                 '3.13.1',
                                                                 ''
                                                               ]
                        },
          'SUNWfiqu' => {
                         '4.4,REV=2009.10.01.09.42.14' => [
                                                                 'SUNWfiqu',
```

```
                                                                '/',
                                                                '4.4.1.0',
                                                                ''
                                                              ]
                        },
          'SUNWsasl' => {
                          '2.17,REV=2004.04.06.15.24' => [
                                                              'SUNWsasl',
                                                              '/',
                                                              '2.19',
                                                              ''
                                                            ]
                        },
          'SUNWfiimc' => {},
          'SUNWzoneu' => {
                           '11.10.0,REV=2005.01.21.15.53' => [

'SUNWzoneu',
                                                                  '/',

'5.10/Generic',
                                                                  ''
                                                                ]
                         },
          'SUNWcsr' => {
                         '11.10.0,REV=2005.01.21.15.53' => [
                                                                'SUNWcsr',
                                                                '/',

'5.10/Generic',
                                                                ''
                                                              ]
                        },
          'SUNWesics' => {},
          'SUNWiimm' => {
                          '9.0,REV=2011.09.05' => [
                                                     'SUNWiimm',
                                                     '/opt/sun/comms/im',
                                                     '9.0-03.02',
                                                     ''
                                                   ]
                        }
        };
!!! installedprod
$VAR1 = {
          'IWC' => {
                     '2.0' => [
                               '/opt/sun/comms/iwc',
                               '2.0-6.01',
                               '20130402',
                               '2',
                               'SunOS',
                               'sparc',
                               '32',
                               '',
                               'Not Found'
```

```
                        ]
                },
        'IM' => {
                  '9.0' => [
                            '/opt/sun/comms/im',
                            '9.0-03.02',
                            'Not Found',
                            '9',
                            'Not Found',
                            'Not Found',
                            'Not Found',
                            '',
                            'Not Found'
                          ]
                },
        'SASL' => {
                    '2.19' => [
                               '/',
                               '2.19',
                               'Not Found',
                               '2.19',
                               'Not Found',
                               'Not Found',
                               'Not Found',
                               '',
                               'Not Found'
                             ]
                  },
        'ST' => {
                  '1.1.4' => [
                              '/',
                              '1.1.4.1',
                              'Not Found',
                              '1.1.4',
                              'Not Found',
                              'Not Found',
                              'Not Found',
                              '',
                              'Not Found'
                            ]
                },
        'DSSETUP' => {
                       '6.4' => [
                                 '/opt/sun/comms/dssetup',
                                 '6.4-24.03',
                                 '20120611',
                                 '6.4',
                                 'SunOS',
                                 'sparc',
                                 '32',
                                 '',
                                 'Not Found'
                               ]
                     },
        'LDAPJDK' => {
                       '4.21' => [
```

```
                                '/',
                                '4.21',
                                'Not Found',
                                '4.21',
                                'Not Found',
                                'Not Found',
                                'Not Found',
                                '',
                                'Not Found'
                              ]
                  },
        'MQ_L10N' => {
                    '4.4' => [
                                '/',
                                '4.4.1.0',
                                'Not Found',
                                '4.4',
                                'Not Found',
                                'Not Found',
                                'Not Found',
                                '',
                                'Not Found'
                              ]
                  },
        'BZIP' => {
                '11.10' => [
                                '/',
                                '5.10/SunOS Development',
                                'Not Found',
                                '11.10',
                                'Not Found',
                                'Not Found',
                                'Not Found',
                                '',
                                'Not Found'
                              ]
                },
        'IM_SCHA' => {
                    '7.3' => [
                                '/opt/sun/comms/im_scha',
                                '7.3-01',
                                'Not Found',
                                '7.3',
                                'Not Found',
                                'Not Found',
                                'Not Found',
                                '',
                                'Not Found'
                              ]
                  },
        'ICU' => {
                'ICU2,ICU3' => [
                                  '/usr',
                                  '10/Generic',
                                  'Not Found',
                                  'ICU2,ICU3',
```

```
                                    'Not Found',
                                    'Not Found',
                                    'Not Found',
                                    '',
                                    'Not Found'
                                  ]
                  },
          'MS64' => {
                     '7.5' => [
                                 '/opt/sun/comms/messaging64',
                                 '7.5-28.21',
                                 '20130408',
                                 '7u5',
                                 'SunOS',
                                 'sparc',
                                 '64',
                                 '',
                                 'Not Found'
                               ]
                   },
          'DAV' => {
                    '7.3' => [
                                '/opt/sun/comms/davserver',
                                '7.3-10.10',
                                '20130328',
                                '7u3',
                                'SunOS',
                                'sparc',
                                '32',
                                '',
                                '7.0.3.10.0'
                              ]
                  },
          'LIBCPLUSPLUS' => {
                              '5.9' => [
                                          '/',
                                          '5.10',
                                          'Not Found',
                                          '5.9',
                                          'Not Found',
                                          'Not Found',
                                          'Not Found',
                                          '',
                                          'Not Found'
                                        ]
                            },
          'LDAPCSDK6' => {
                           '6.0' => [
                                       '/',
                                       '6.03',
                                       'Not Found',
                                       '6.0',
                                       'Not Found',
                                       'Not Found',
                                       'Not Found',
                                       '',
```

```
                                  'Not Found'
                                ]
                    },
          'JDK' => {
                    '1.5.0' => [
                                '/usr',
                                '1.5.0_12/1.5.0_12-b04',
                                'Not Found',
                                '1.5.0',
                                'Not Found',
                                'Not Found',
                                'Not Found',
                                '',
                                'Not Found'
                              ]
                  },
          'MS_SCHA' => {
                    '7.0' => [
                                '/opt/sun/comms/msg_scha',
                                '7.0-0.03',
                                '20080519',
                                '7.0',
                                'SunOS',
                                'sparc',
                                '32',
                                '',
                                'Not Found'
                              ]
                  },
          'PATCHUTILS' => {
                        'Unknown' => [
                                      '/',
                                      '5.10',
                                      'Not Found',
                                      'Unknown',
                                      'Not Found',
                                      'Not Found',
                                      'Not Found',
                                      '',
                                      'Not Found'
                                    ]
                    },
          'MQ' => {
                    '4.4' => [
                              '/',
                              '4.4.1.0',
                              'Not Found',
                              '4.4',
                              'Not Found',
                              'Not Found',
                              'Not Found',
                              '',
                              'Not Found'
                            ]
                  },
          'JHRT' => {
```

```
                    '2.0' => [
                              '/usr',
                              '2.0/FCS',
                              'Not Found',
                              '2.0',
                              'Not Found',
                              'Not Found',
                              'Not Found',
                              '',
                              'Not Found'
                            ]
                  },
          'IMAPI' => {
                      '9.0' => [
                                '/',
                                '9.0-03.02',
                                'Not Found',
                                '9',
                                'Not Found',
                                'Not Found',
                                'Not Found',
                                '',
                                'Not Found'
                               ]
                   },
          'CI' => {
                  '7.4' => [
                            '/opt/sun/comms/CommsInstaller',
                            '7.4-0.05',
                            '20130409',
                            '7u4',
                            'SunOS',
                            'sparc',
                            '32',
                            '',
                            '7.0.4.0.0'
                          ]
                 },
          'DA' => {
                  '7.0' => [
                            '/opt/sun/comms/da',
                            '7.0-7.00',
                            'Not Found',
                            '7',
                            'SunOS',
                            'sparc',
                            '32',
                            '',
                            'Not Found'
                          ]
                 },
          'LDAPCSDK6_TOOLS' => {
                                '6.0' => [
                                          '/opt/SUNWdsee',
                                          '6.03',
                                          'Not Found',
```

```
                                             '6.0',
                                             'Not Found',
                                             'Not Found',
                                             'Not Found',
                                             '',
                                             'Not Found'
                                           ]
                                },
          'JISS' => {
                      '1.4' => [
                                  '/opt/sun/comms/jiss',
                                  '1.4-16.9301',
                                  '20130320',
                                  '1u4',
                                  'SunOS',
                                  'all',
                                  '32',
                                  '',
                                  '1.0.4.16.0'
                                ]
                    },
          'NSS' => {
                     '4.8.8' => [
                                   '/',
                                   '4.3.2',
                                   'Not Found',
                                   '4.8.8',
                                   'Not Found',
                                   'Not Found',
                                   'Not Found',
                                   '',
                                   'Not Found'
                                 ]
                   }
        };
====== End QQQ detectProducts ======
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Product Selection:

Communication Products:

    Item  Description
    ----  -----------
       1  Messaging Server (64bit) 7u5 (7.5-28.21)
          Installed Version at /opt/sun/comms/messaging64
       2  Comms DSsetup 6.4 (6.4-24.03)
          Installed Version at /opt/sun/comms/dssetup
       3  Calendar Server 7.0.3.10.0
          Installed Version at /opt/sun/comms/davserver
       4  Instant Messaging 9 (9.0-03.02)
          Installed Version at /opt/sun/comms/im
       5  Convergence 2 (2.0-6.01)
          Installed Version at /opt/sun/comms/iwc
       6  Indexing and Search Service 1.0.4.16.0
          Installed Version at /opt/sun/comms/jiss
       7  Comms Delegated Administrator 7 (7.0-7.00)
```

```
           Installed Version at /opt/sun/comms/da
        8  Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
           Installed Version at /opt/sun/comms/msg_scha
        9  Instant Messaging Sun Cluster HA agent 7.3 (7.3-01)
           Installed Version at /opt/sun/comms/im_scha

Enter the items you wish to uninstall. Enter q to quit.
You can enter multiple items using commas to separate them.
For example: 1,2

Please select the products you wish to uninstall [1, 2, 3, 4, 5, 6, 7,
8, 9]: =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
QQQ selections: MS64 7.5 DSSETUP 6.4 DAV 7.3 IM 9.0 IWC 2.0 JISS 1.4 DA
7.0 MS_SCHA 7.0 IM_SCHA 7.3
  WILL UNINSTALL: Messaging Server (64bit) 7u5 (7.5-28.21)
                  at /opt/sun/comms/messaging64
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWmessaging-server-64
  WILL UNINSTALL: Comms DSsetup 6.4 (6.4-24.03)
                  at /opt/sun/comms/dssetup
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWcomds
  WILL UNINSTALL: Calendar Server 7.0.3.10.0
                  at /opt/sun/comms/davserver
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWdavserver
  WILL UNINSTALL: Instant Messaging 9 (9.0-03.02)
                  at /opt/sun/comms/im
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimfed
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimw
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimgw
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimid
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimjd
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimm
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimin
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiim
  WILL UNINSTALL: Convergence 2 (2.0-6.01)
```

```
                  at /opt/sun/comms/iwc
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiwc
  WILL UNINSTALL: Indexing and Search Service 1.0.4.16.0
                  at /opt/sun/comms/jiss
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWjiss
  WILL UNINSTALL: Comms Delegated Administrator 7 (7.0-7.00)
                  at /opt/sun/comms/da
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWcommda
  WILL UNINSTALL: Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
                  at /opt/sun/comms/msg_scha
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWmessaging-server-scha
  WILL UNINSTALL: Instant Messaging Sun Cluster HA agent 7.3 (7.3-01)
                  at /opt/sun/comms/im_scha
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimsc
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Ready to uninstall

Do you want to continue ? [yes] :

============================================================
Uninstalling Messaging Server (64bit) 7u5 (7.5-28.21) at
/opt/sun/comms/messaging64)...
------ Executing Task 1 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWmessaging-server-64 2>&1

Removal of <SUNWmessaging-server-64> was successful.
-- Exit status: 0

============================================================
Uninstalling Comms DSsetup 6.4 (6.4-24.03) at /opt/sun/comms/dssetup)...
------ Executing Task 2 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWcomds 2>&1

Removal of <SUNWcomds> was successful.
-- Exit status: 0

============================================================
Uninstalling Calendar Server 7.0.3.10.0 at /opt/sun/comms/davserver)...
------ Executing Task 3 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWdavserver 2>&1
```

```
Removal of <SUNWdavserver> was successful.
-- Exit status: 0

============================================================
Uninstalling Instant Messaging 9 (9.0-03.02) at /opt/sun/comms/im)...
------ Executing Task 4 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimfed 2>&1

Removal of <SUNWiimfed> was successful.
-- Exit status: 0
------ Executing Task 5 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimw 2>&1

Removal of <SUNWiimw> was successful.
-- Exit status: 0
------ Executing Task 6 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimgw 2>&1

Removal of <SUNWiimgw> was successful.
-- Exit status: 0
------ Executing Task 7 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimid 2>&1

Removal of <SUNWiimid> was successful.
-- Exit status: 0
------ Executing Task 8 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimjd 2>&1

Removal of <SUNWiimjd> was successful.
-- Exit status: 0
------ Executing Task 9 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimm 2>&1

Removal of <SUNWiimm> was successful.
-- Exit status: 0
------ Executing Task 10 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimin 2>&1

Removal of <SUNWiimin> was successful.
-- Exit status: 0
------ Executing Task 11 of 16 ...
```

```
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiim 2>&1
Configuration file /opt/sun/comms/im/sbin/../config/iim.conf is missing,
exiting
Shutting down IM services..
Configuration file /opt/sun/comms/im/sbin/../config/iim.conf is missing,
exiting

Removal of <SUNWiim> was successful.
-- Exit status: 0

============================================================
Uninstalling Convergence 2 (2.0-6.01) at /opt/sun/comms/iwc)...
------ Executing Task 12 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiwc 2>&1

Removal of <SUNWiwc> was successful.
-- Exit status: 0

============================================================
Uninstalling Indexing and Search Service 1.0.4.16.0 at
/opt/sun/comms/jiss)...
------ Executing Task 13 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWjiss 2>&1

Removal of <SUNWjiss> was successful.
-- Exit status: 0

============================================================
Uninstalling Comms Delegated Administrator 7 (7.0-7.00) at
/opt/sun/comms/da)...
------ Executing Task 14 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWcommda 2>&1

Removal of <SUNWcommda> was successful.
-- Exit status: 0

============================================================
Uninstalling Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03) at
/opt/sun/comms/msg_scha)...
------ Executing Task 15 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWmessaging-server-scha 2>&1

Removal of <SUNWmessaging-server-scha> was successful.
-- Exit status: 0

============================================================
```

```
Uninstalling Instant Messaging Sun Cluster HA agent 7.3 (7.3-01) at
/opt/sun/comms/im_scha)...
------ Executing Task 16 of 16 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimsc 2>&1

Removal of <SUNWiimsc> was successful.
-- Exit status: 0
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
SUMMARY:

PASSED: Task 1: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWmessaging-server-64
PASSED: Task 2: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWcomds
PASSED: Task 3: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWdavserver
PASSED: Task 4: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimfed
PASSED: Task 5: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimw
PASSED: Task 6: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimgw
PASSED: Task 7: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimid
PASSED: Task 8: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimjd
PASSED: Task 9: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimm
PASSED: Task 10: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimin
PASSED: Task 11: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiim
PASSED: Task 12: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiwc
PASSED: Task 13: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWjiss
PASSED: Task 14: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWcommda
PASSED: Task 15: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
```

```
SUNWmessaging-server-scha
PASSED: Task 16: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWiimsc

All tasks PASSED
Checking JES java symlink...
ls -l /usr/jdk /usr/java 2>&1
lrwxrwxrwx   1 root     other         15 May  7 17:34 /usr/java ->
jdk/jdk1.5.0_12

/usr/jdk:
total 9
drwxr-xr-x   4 root     bin            4 Jun 12  2012 instances
lrwxrwxrwx   1 root     other          7 Jun 12  2012 j2sdk1.4.2_32 ->
../j2se
lrwxrwxrwx   1 root     other         18 Feb 26 14:05 jdk1.5.0_12 ->
instances/jdk1.5.0
lrwxrwxrwx   1 root     other         11 May  7 17:34 latest ->
jdk1.5.0_12
drwxr-xr-x   8 root     bin            8 May  7 17:41 packages
-- Exit status: 0
ls -l /usr/jdk/entsys-j2se /usr/jdk/latest 2>&1
/usr/jdk/entsys-j2se: No such file or directory
lrwxrwxrwx   1 root     other         11 May  7 17:34 /usr/jdk/latest ->
jdk1.5.0_12
-- Exit status: 2
ls -lL /usr/jdk/entsys-j2se /usr/jdk/latest 2>&1
/usr/jdk/entsys-j2se: No such file or directory
/usr/jdk/latest:
total 34560
-rw-r--r--   1 root     bin         2487 May  2  2007 COPYRIGHT
-rw-r--r--   1 root     bin        11827 Oct  2  2011 README.html
-rw-r--r--   1 root     bin        67265 Oct  2  2011
THIRDPARTYLICENSEREADME.txt
drwxr-xr-x   3 root     bin           41 May  7 17:41 bin
drwxr-xr-x   9 root     bin           10 Jun 12  2012 demo
drwxr-xr-x   3 root     bin            9 Jun 12  2012 include
drwxr-xr-x   6 root     bin           12 Feb 26 14:05 jre
drwxr-xr-x   2 root     bin            9 Jun 12  2012 lib
drwxr-xr-x   6 root     bin            6 Jun 12  2012 man
-r--r--r--   1 root     other       5264 Feb 12 15:49 register.html
-r--r--r--   1 root     other       5702 Feb 12 15:49 register_ja.html
-r--r--r--   1 root     other       4862 Feb 12 15:49
register_zh_CN.html
drwxr-xr-x   4 root     bin            4 Jun 12  2012 sample
-rw-r--r--   1 root     bin      17483215 Oct  2  2011 src.zip
-- Exit status: 2
INFO: no update to /etc/softlist.xml required

Hit Return to Continue:
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
-- unlink /tmp/.patchout_20130507174429.2050
mkdir -p /var/opt/CommsInstaller/logs 2>&1
-- Exit status: 0
```

```
NOTICE: silent file created in:

/var/opt/CommsInstaller/logs/silent_CommsInstaller_20130507174429
-- Closing the log at Tue May  7 17:47:12 2013
```

```
[935 Tue May 07 17:47:28 root@example.com%
/home/user/wspace/releases/ci74#
```

Shared Components

Shared Components Bundled With the Communications Suite Installer

For the list of shared components that can be installed by the Communications Suite installer, run the `commpkg info --listPackages` command. See commpkg info Usage for additional information.

GlassFish Message Queue is automatically installed with the other shared components.

See the following output for each supported operating system for more information:

- listPackages for Solaris OS 10 SPARC
- listPackages for Solaris OS 10 x86
- listPackages for Red Hat Linux 4, 32-bit
- listPackages for Red Hat Linux 5, 64-bit
- listPackages for Oracle Linux 6, 64-bit

listPackages for Solaris OS 10 SPARC

listPackages for Solaris OS 10 SPARC

This sample session shows the output of `commpkg info --listPackages` in Communications Suite 7 Update 4 on Solaris 10 OS SPARC.

Topics:

- Summary of Commands Run:
- Session

Summary of Commands Run:

```
1162 ./commpkg -V
1163 uname -a
1164 cat /etc/release
1165 isainfo -b
1166 ./commpkg info --listPackages
```

Session

```
$ ./commpkg -V
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr 9 08:16:37
PDT 2013
[1163 Tue May 07 17:06:06 name1@host1% ~/wspace/releases/ci74$ ]
$ uname -a
SunOS host1 5.10 Generic_147440-12 sun4v sparc sun4v
[1164 Tue May 07 17:06:08 name1@host1% ~/wspace/releases/ci74$ ]
$ cat /etc/release
Oracle Solaris 10 8/11 s10s_u10wos_17b SPARC
Copyright (c) 1983, 2011, Oracle and/or its affiliates. All rights
reserved.
Assembled 23 August 2011
[1165 Tue May 07 17:06:11 name1@host1% ~/wspace/releases/ci74$ ]
$ isainfo -b
64
[1166 Tue May 07 17:06:15 name1@host1% ~/wspace/releases/ci74$ ]
$ ./commpkg info --listPackages
-- LOGFILE: /tmp/CommsInstaller_20130507170621.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr 9 08:16:37
PDT 2013
Package list per product

Product: Messaging Server (64bit)
Product Group: Comms
Description: Messaging Server 64bit Edition
Oracle Version: Not Found
Version: 7.5
Marketing Version: 7u5
Full Version: 7.5-28.21
Build Date: 20130408
```

```
Mnemonic: MS64
Installation directory: <INSTALLROOT>/messaging64
Patches: 137204-28
Dependencies:
PATCHUTILS (120900-04 121133-02 119254-88)
LIBCPLUSPLUS (119963-27)
BZIP (126868-04 137321-01)
NSS (125358-15)
Package Name/Version:
SUNWmessaging-server-64 7.0,REV=2008.06.20

Product: Comms DSsetup
Product Group: Comms
Description: Comms Directory Server Setup
Oracle Version: Not Found
Version: 6.4
Marketing Version: 6.4
Full Version: 6.4-24.03
Build Date: 20120611
Mnemonic: DSSETUP
Installation directory: <INSTALLROOT>/dssetup
Patches: 118242-03 118245-24
Dependencies:
PATCHUTILS (120900-04 121133-02 119254-88)
LDAPCSDK6_TOOLS (136798-03)
Package Name/Version:
SUNWcomds 6.3,REV=2004.08.12

Product: Calendar Server
Product Group: Comms
Description: Calendar Server
Oracle Version: 7.0.3.10.0
Version: 7.3
Marketing Version: 7u3
Full Version: 7.3-10.10
Build Date: 20130328
Mnemonic: DAV
Installation directory: <INSTALLROOT>/davserver
Patches: 142785-10
Dependencies:
PATCHUTILS (120900-04 121133-02 119254-88)
ST
JDK (125136-35 125137-35)
LDAPCSDK6_TOOLS (136798-03)
Package Name/Version:
SUNWdavserver 7.0,REV=2009.08.27

Product: Instant Messaging
Product Group: Comms
Description: Instant Messaging
100 Oracle Version: 9.0.0.3.0
101 Version: 9.0
102 Marketing Version: 9
103 Full Version: 9.0-03.02
104 Build Date: 20130405
105 Mnemonic: IM
```

```
Installation directory: <INSTALLROOT>/im
Patches: 148579-03
Dependencies:
ST
JDK (125136-35 125137-35)
PATCHUTILS (120900-04 121133-02 119254-88)
MQ
LDAPJDK (119725-06)
MQ_L10N
IMAPI (148582-03)
NSS (125358-15)
Package Name/Version:
SUNWiim 9.0,REV=2011.09.05
SUNWiimin 9.0,REV=2011.09.05
SUNWiimm 9.0,REV=2011.09.05
SUNWiimjd 9.0,REV=2011.09.05
SUNWiimid 9.0,REV=2011.09.05
SUNWiimgw 9.0,REV=2011.09.05
SUNWiimw 9.0,REV=2011.09.05
SUNWiimfed 9.0,REV=2011.09.05

Product: Convergence
Product Group: Comms
Description: Integrated Web Client
Oracle Version: Not Found
Version: 2.0
Marketing Version: 2
Full Version: 2.0-6.01
Build Date: 20130402
Mnemonic: IWC
Installation directory: <INSTALLROOT>/iwc
Patches: 145711-06
Dependencies:
PATCHUTILS (120900-04 121133-02 119254-88)
ST
JDK (125136-35 125137-35)
Package Name/Version:
SUNWiwc 2.0,REV=2010.07.26

Product: Indexing and Search Service
Product Group: Comms
Description: Indexing Search Services
Oracle Version: 1.0.4.16.0
Version: 1.4
Marketing Version: 1u4
Full Version: 1.4-16.9301
Build Date: 20130320
Mnemonic: JISS
Installation directory: <INSTALLROOT>/jiss
Patches: 142824-16
Dependencies:
MQ
PATCHUTILS (120900-04 121133-02 119254-88)
ST
MQ_L10N
JDK (125136-35 125137-35)
```

```
162 LDAPCSDK6_TOOLS (136798-03)
163 Package Name/Version:
164 SUNWjiss 1.0,REV=2009.09.09
165
166 Product: Comms Delegated Administrator
167 Product Group: Comms
168 Description: Comms Delegated Administrator
169 Oracle Version: Not Found
170 Version: 7.0
171 Marketing Version: 7
172 Full Version: 7.0-7.00
173 Build Date: 20130319
174 Mnemonic: DA
175 Installation directory: <INSTALLROOT>/da
176 Patches: 124581-07
177 Dependencies:
178 PATCHUTILS (120900-04 121133-02 119254-88)
179 ST
180 JDK (125136-35 125137-35)
181 LDAPCSDK6_TOOLS (136798-03)
182 NSS (125358-15)
183 Package Name/Version:
184 SUNWcommda 7.0,REV=2009.03.31
185
186 Product: Messaging Server Sun Cluster HA agent
187 Product Group: Comms
188 Description: Messaging Server Sun Cluster HA Agent
189 Oracle Version: Not Found
190 Version: 7.0
191 Marketing Version: 7.0
192 Full Version: 7.0-0.03
193 Build Date: 20080519
194 Mnemonic: MS_SCHA
195 Installation directory: <INSTALLROOT>/msg_scha
196 Patches:
197 Dependencies:
198 PATCHUTILS (120900-04 121133-02 119254-88)
199 Package Name/Version:
200 SUNWmessaging-server-scha 7.0,REV=2008.05.19
201
202 Product: Instant Messaging Sun Cluster HA agent
203 Product Group: Comms
204 Description: Instant Messaging Sun Cluster HA Agent
205 Oracle Version: Not Found
206 Version: 7.3
207 Marketing Version: 7.3
208 Full Version: 7.3-01.02
209 Build Date: 20080403
210 Mnemonic: IM_SCHA
211 Installation directory: <INSTALLROOT>/im_scha
212 Patches: 137571-01
213 Dependencies:
214 PATCHUTILS (120900-04 121133-02 119254-88)
215 Package Name/Version:
216 SUNWiimsc 7.3,REV=2008.01.07.20.24.34
217
```

```
218 Product: NSS/NSPR/JSS
219 Product Group: Shared Component
220 Description: Network Security Services,Netscape Portable Runtime
221 Oracle Version: Not Found
222 Version: 4.8.8
223 Marketing Version: 4.8.8
224 Mnemonic: NSS
225 Installation directory: <package default>
226 Patches: 125358-15
227 Dependencies:
228 PATCHUTILS (120900-04 121133-02 119254-88)
229 Package Name/Version:
230 SUNWjss 4.2.4,REV=2006.11.16.20.40
231 SUNWpr 4.6.4,REV=2006.11.16.20.40
232 SUNWprd 4.6.4,REV=2006.11.16.20.40
233 SUNWtls 3.11.4,REV=2006.11.16.20.40
234 SUNWtlsd 3.11.4,REV=2006.11.16.20.40
235 SUNWtlsu 3.11.4,REV=2006.11.16.20.40
236
237 Product: Simple Authentication and Security Layer
238 Product Group: Shared Component
239 Description:
240 Oracle Version: Not Found
241 Version: 2.19
242 Marketing Version: 2.19
243 Mnemonic: SASL
244 Installation directory: <package default>
245 Patches: 119345-08
246 Dependencies:
247 PATCHUTILS (120900-04 121133-02 119254-88)
248 Package Name/Version:
249 SUNWsasl 2.17,REV=2004.04.06.15.24
250
251 Product: LDAPCSDK6
252 Product Group: Shared Component
253 Description: ldap c sdk 6
254 Oracle Version: Not Found
255 Version: 6.0
256 Marketing Version: 6.0
257 Mnemonic: LDAPCSDK6
258 Installation directory: <package default>
259 Patches:
260 Dependencies:
261 SASL (119345-08)
262 ICU (119810-07)
263 NSS (125358-15)
264 Package Name/Version:
265 SUNWldapcsdk-libs 6.00,REV=2006.12.11.00.08
266 SUNWldapcsdk-dev 6.00,REV=2006.12.11.00.08
267
268 Product: LDAPCSDK6 Tools
269 Product Group: Shared Component
270 Description: ldap c sdk 6 Tools
271 Oracle Version: Not Found
272 Version: 6.0
273 Marketing Version: 6.0
```

```
Mnemonic: LDAPCSDK6_TOOLS
Installation directory: <INSTALLROOT>/directory
Patches: 136798-03
Dependencies:
PATCHUTILS (120900-04 121133-02 119254-88)
LDAPCSDK6
Package Name/Version:
SUNWldapcsdk-tools 6.00,REV=2006.12.11.00.08

Product: International Components for Unicode
Product Group: Shared Component
Description:
Oracle Version: Not Found
Version: ICU2,ICU3
Marketing Version: ICU2,ICU3
Mnemonic: ICU
Installation directory: <package default>
Patches: 119810-07
Dependencies:
PATCHUTILS (120900-04 121133-02 119254-88)
Package Name/Version:
SUNWicu 1.2,REV=2005.01.06.14.13

Product: JDK
Product Group: Shared Component
Description: Java Development Kit
Oracle Version: Not Found
Version: 1.6.0
Marketing Version: 1.6.0
Mnemonic: JDK
Installation directory: <package default>
Patches: 125136-35 125137-35
Dependencies:
PATCHUTILS (120900-04 121133-02 119254-88)
ST
Package Name/Version:
SUNWj6rt 1.6.0,REV=2006.11.29.05.57
SUNWj6rtx 1.6.0,REV=2006.11.29.04.58
SUNWj6dev 1.6.0,REV=2006.11.29.05.57
SUNWj6dvx 1.6.0,REV=2006.11.29.04.58
SUNWj6cfg 1.6.0,REV=2006.11.29.05.57

Product: Java Help Runtime
Product Group: Shared Component
Description: Java Help Runtime
Oracle Version: Not Found
Version: 2.0
Marketing Version: 2.0
Mnemonic: JHRT
Installation directory: <package default>
Patches:
Dependencies:
PATCHUTILS (120900-04 121133-02 119254-88)
BZIP (126868-04 137321-01)
JDK (125136-35 125137-35)
Package Name/Version:
```

```
330 SUNWjhrt 2.0,REV=2006.10.31
331 SUNWjhdev 2.0,REV=2006.10.04
332 SUNWjhdem 2.0,REV=2006.10.04
333 SUNWjhdoc 2.0,REV=2006.10.04
334
335 Product: Message Queue
336 Product Group: Shared Component
337 Description: Message Queue
338 Oracle Version: Not Found
339 Version: 4.4
340 Marketing Version: 4.4
341 Mnemonic: MQ
342 Installation directory: <package default>
343 Patches:
344 Dependencies:
345 PATCHUTILS (120900-04 121133-02 119254-88)
346 JHRT
347 JDK (125136-35 125137-35)
348 NSS (125358-15)
349 Package Name/Version:
350 SUNWiqr 4.4,REV=2009.08.27.08.32
351 SUNWiqu 4.4,REV=2009.08.27.08.32
352 SUNWiqdoc 4.4,REV=2009.08.27.08.32
353 SUNWiquc 4.4,REV=2009.08.27.08.33
354 SUNWiqum 4.4,REV=2009.08.27.08.33
355 SUNWiqjx 4.4,REV=2009.08.27.08.33
356 SUNWiqfs 4.4,REV=2009.08.27.08.33
357 SUNWiqcrt 4.4,REV=2009.08.27.08.33
358 SUNWiqcdv 4.4,REV=2009.08.27.08.33
359 SUNWiqlen 4.4,REV=2009.08.27.08.33
360
361 Product: Message Queue Localization
362 Product Group: Shared Component
363 Description: Message Queue Localization
364 Oracle Version: Not Found
365 Version: 4.4
366 Marketing Version: 4.4
367 Mnemonic: MQ_L10N
368 Installation directory: <package default>
369 Patches:
370 Dependencies:
371 MQ
372 PATCHUTILS (120900-04 121133-02 119254-88)
373 Package Name/Version:
374 SUNWfiqu 4.4,REV=2009.10.01.09.42.14
375 SUNWfiquc 4.4,REV=2009.10.01.09.42.16
376 SUNWdiqu 4.4,REV=2009.10.01.09.42.59
377 SUNWdiquc 4.4,REV=2009.10.01.09.43.03
378 SUNWjiqu 4.4,REV=2009.10.01.09.45.16
379 SUNWjiquc 4.4,REV=2009.10.01.09.45.18
380 SUNWeiqu 4.4,REV=2009.10.01.09.43.44
381 SUNWeiquc 4.4,REV=2009.10.01.09.43.47
382 SUNWkiqu 4.4,REV=2009.10.01.09.44.30
383 SUNWkiquc 4.4,REV=2009.10.01.09.44.32
384 SUNWciqu 4.4,REV=2009.10.01.09.46.01
385 SUNWciquc 4.4,REV=2009.10.01.09.46.03
```

```
SUNWhiqu 4.4,REV=2009.10.01.09.46.48
SUNWhiquc 4.4,REV=2009.10.01.09.46.50

Product: LDAPJDK
Product Group: Shared Component
Description: LDAP JDK
Oracle Version: Not Found
Version: 4.21
Marketing Version: 4.21
Mnemonic: LDAPJDK
Installation directory: <package default>
Patches: 119725-06
Dependencies:
PATCHUTILS (120900-04 121133-02 119254-88)
Package Name/Version:
SUNWljdk 1.0,REV=2004.10.11.06.02

Product: Instant Messaging API
Product Group: Shared Component
Description: Instant Messaging API
Oracle Version: Not Found
Version: 9.0
Marketing Version: 9
Mnemonic: IMAPI
Installation directory: <package default>
Patches: 148582-03
Dependencies:
PATCHUTILS (120900-04 121133-02 119254-88)
Package Name/Version:
SUNWiimdv 9.0,REV=2011.09.05

Product: MySQL Marker
Product Group: OS Auxiliary
Description: MySQL Marker
Oracle Version: Not Found
Version: 1.1
Marketing Version: 1.1
Mnemonic: MYSQL_MARKER
Installation directory: <package default>
Patches:
Dependencies:
Package Name/Version:
SUNWcomms-mysql-marker 1.1,REV=2011.09.09

Product: MySQL
Product Group: OS Auxiliary
Description: MySQL
Oracle Version: Not Found
Version: 5.5.8
Marketing Version: 5.5.8
Mnemonic: MYSQL
Installation directory: <package default>
Patches:
Dependencies:
Package Name/Version:
mysql 5.5.8
```

```
442
443 Product: Service Tags
444 Product Group: OS Auxiliary
445 Description: Service Tags
446 Oracle Version: Not Found
447 Version: 1.1.4
448 Marketing Version: 1.1.4
449 Mnemonic: ST
450 Installation directory: <package default>
451 Patches:
452 Dependencies:
453 PATCHUTILS (120900-04 121133-02 119254-88)
454 Package Name/Version:
455 SUNWservicetagr 1.1.4,REV=2008.03.21.07.54
456 SUNWservicetagu 1.1.4,REV=2008.03.21.07.54
457 SUNWstosreg 1.1.4,REV=2008.03.21.07.54
458
459 Product: LIBCPLUSPLUS
460 Product Group: OS - Patches only
461 Description: libC (C++) patch for Solaris
462 Oracle Version: Not Found
463 Version: 5.9
464 Marketing Version: 5.9
465 Mnemonic: LIBCPLUSPLUS
466 Installation directory: <package default>
467 Patches: 119963-27
468 Dependencies:
469 PATCHUTILS (120900-04 121133-02 119254-88)
470 Package Name/Version:
471 SUNWlibC 5.10,REV=2004.12.22
472
473 Product: PATCHUTILS
474 Product Group: OS - Patches only
475 Description: Solaris patch for install/patching utilities
476 Oracle Version: Not Found
477 Version: Unknown
478 Marketing Version: Unknown
479 Mnemonic: PATCHUTILS
480 Installation directory: <package default>
481 Patches: 120900-04 121133-02 119254-88
482 Dependencies:
483 Package Name/Version:
484 SUNWpkgcmdsu 11.11,REV=2005.01.09.23.05
485 SUNWswmt 11.10,REV=2005.01.10.17.19
486 SUNWinstall-patch-utils-root 11.10,REV=2005.01.09.23.05
487 SUNWcsr 11.10.0,REV=2005.01.21.15.53
488 SUNWdtrc 11.10.0,REV=2005.01.21.15.53
489 SUNWzoneu 11.10.0,REV=2005.01.21.15.53
490
491 Product: BZIP OS Component
492 Product Group: OS - Patches only
493 Description: Solaris patch for bzip
494 Oracle Version: Not Found
495 Version: 11.10
496 Marketing Version: 11.10
497 Mnemonic: BZIP
```

```
Installation directory: <package default>
Patches: 126868-04 137321-01
Dependencies:
PATCHUTILS (120900-04 121133-02 119254-88)
Package Name/Version:
SUNWbzip 11.10.0,REV=2005.01.08.05.16

Product: RECOMMENDED PATCH CLUSTER
Product Group: OS - Patches only
Description: Representative sample of patches from the Recommended Patch Cluster
Oracle Version: Not Found
Version: 2013.02.19
Marketing Version: 2013.02.19
Mnemonic: RECOMMENDED
Installation directory: <package default>
Patches: 119254-88 120272-28 147147-26
Dependencies:
Package Name/Version:
No packages defines for this OS version

Product: CommsInstaller
Product Group: CI Products
Description: The CommsInstaller installed as a package
Oracle Version: 7.0.4.0.0
Version: 7.4
Marketing Version: 7u4
Full Version: 7.4-0.05
Build Date: 20130409
Mnemonic: CI
Installation directory: <INSTALLROOT>/CommsInstaller
Patches:
Dependencies:
PATCHUTILS (120900-04 121133-02 119254-88)
Package Name/Version:
SUNWcomms 7.4,REV=2013.04.09
[1167 Tue May 07 17:06:26 name1@host1% ~/wspace/releases/ci74$ ]
```

```
ci_tip
RSS Atom
```

listPackages for Solaris OS 10 x86

listPackages for Solaris OS 10 x86

This sample session shows the output of `commpkg info --listPackages` in Communications Suite 7 Update 4 on Solaris 10 OS x86.

Topics:

- Summary of commands run:
- Session

Summary of commands run:

```
679 ./commpkg -V
680 uname -a
681 cat /etc/release
682 isainfo -b
683 ./commpkg info --listPackages
```

Session

```
[679 Tue May 07 17:10:18 name1@host1% ~/wspace/releases/ci74$ ]
$ ./commpkg -V
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr 9 08:16:37
PDT 2013
[680 Tue May 07 17:10:41 name1@host1% ~/wspace/releases/ci74$ ]
$ uname -a
SunOS host1 5.10 Generic_142910-17 i86pc i386 i86pc
[681 Tue May 07 17:10:43 name1@host1% ~/wspace/releases/ci74$ ]
$ cat /etc/release
Oracle Solaris 10 9/10 s10x_u9wos_14a X86
Copyright (c) 2010, Oracle and/or its affiliates. All rights reserved.
Assembled 11 August 2010
[682 Tue May 07 17:10:45 name1@host1% ~/wspace/releases/ci74$ ]
$ isainfo -b
64
[683 Tue May 07 17:10:48 name1@host1% ~/wspace/releases/ci74$ ]
$ ./commpkg info --listPackages
-- LOGFILE: /tmp/CommsInstaller_20130507171051.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr 9 08:16:37
PDT 2013
Package list per product

Product: Messaging Server (64bit)
Product Group: Comms
Description: Messaging Server 64bit Edition
Oracle Version: Not Found
Version: 7.5
Marketing Version: 7u5
Full Version: 7.5-28.21
Build Date: 20130408
```

```
Mnemonic: MS64
Installation directory: <INSTALLROOT>/messaging64
Patches: 137205-28
Dependencies:
PATCHUTILS (120901-03 121334-04 119255-88)
LIBCPLUSPLUS (119964-27)
SNMP (120273-06)
BZIP (126869-05 137322-01)
NSS (125359-15)
Package Name/Version:
SUNWmessaging-server-64 7.0,REV=2008.06.20

Product: Comms DSsetup
Product Group: Comms
Description: Comms Directory Server Setup
Oracle Version: Not Found
Version: 6.4
Marketing Version: 6.4
Full Version: 6.4-24.03
Build Date: 20120611
Mnemonic: DSSETUP
Installation directory: <INSTALLROOT>/dssetup
Patches: 118243-03 118246-24
Dependencies:
PATCHUTILS (120901-03 121334-04 119255-88)
LDAPCSDK6_TOOLS (136800-03)
Package Name/Version:
SUNWcomds 6.3,REV=2004.08.12

Product: Calendar Server
Product Group: Comms
Description: Calendar Server
Oracle Version: 7.0.3.10.0
Version: 7.3
Marketing Version: 7u3
Full Version: 7.3-10.10
Build Date: 20130328
Mnemonic: DAV
Installation directory: <INSTALLROOT>/davserver
Patches: 142786-10
Dependencies:
PATCHUTILS (120901-03 121334-04 119255-88)
ST
JDK (125138-35 125139-35)
LDAPCSDK6_TOOLS (136800-03)
Package Name/Version:
SUNWdavserver 7.0,REV=2009.08.27

Product: Instant Messaging
100 Product Group: Comms
101 Description: Instant Messaging
102 Oracle Version: 9.0.0.3.0
103 Version: 9.0
104 Marketing Version: 9
105 Full Version: 9.0-03.02
106 Build Date: 20130405
```

```
Mnemonic: IM
Installation directory: <INSTALLROOT>/im
Patches: 148580-03
Dependencies:
ST
JDK (125138-35 125139-35)
PATCHUTILS (120901-03 121334-04 119255-88)
MQ
LDAPJDK (119725-06)
MQ_L10N
IMAPI (148583-03)
NSS (125359-15)
Package Name/Version:
SUNWiim 9.0,REV=2011.09.05
SUNWiimin 9.0,REV=2011.09.05
SUNWiimm 9.0,REV=2011.09.05
SUNWiimjd 9.0,REV=2011.09.05
SUNWiimid 9.0,REV=2011.09.05
SUNWiimgw 9.0,REV=2011.09.05
SUNWiimw 9.0,REV=2011.09.05
SUNWiimfed 9.0,REV=2011.09.05

Product: Convergence
Product Group: Comms
Description: Integrated Web Client
Oracle Version: Not Found
Version: 2.0
Marketing Version: 2
Full Version: 2.0-6.01
Build Date: 20130402
Mnemonic: IWC
Installation directory: <INSTALLROOT>/iwc
Patches: 145712-06
Dependencies:
PATCHUTILS (120901-03 121334-04 119255-88)
ST
JDK (125138-35 125139-35)
Package Name/Version:
SUNWiwc 2.0,REV=2010.07.26

Product: Indexing and Search Service
Product Group: Comms
Description: Indexing Search Services
Oracle Version: 1.0.4.16.0
Version: 1.4
Marketing Version: 1u4
Full Version: 1.4-16.9301
Build Date: 20130320
Mnemonic: JISS
Installation directory: <INSTALLROOT>/jiss
Patches: 142823-16
Dependencies:
MQ
PATCHUTILS (120901-03 121334-04 119255-88)
ST
MQ_L10N
```

```
JDK (125138-35 125139-35)
LDAPCSDK6_TOOLS (136800-03)
Package Name/Version:
SUNWjiss 1.0,REV=2009.09.09

Product: Comms Delegated Administrator
Product Group: Comms
Description: Comms Delegated Administrator
Oracle Version: Not Found
Version: 7.0
Marketing Version: 7
Full Version: 7.0-7.00
Build Date: 20130319
Mnemonic: DA
Installation directory: <INSTALLROOT>/da
Patches: 124582-07
Dependencies:
PATCHUTILS (120901-03 121334-04 119255-88)
ST
JDK (125138-35 125139-35)
LDAPCSDK6_TOOLS (136800-03)
NSS (125359-15)
Package Name/Version:
SUNWcommda 7.0,REV=2009.03.31

Product: Messaging Server Sun Cluster HA agent
Product Group: Comms
Description: Messaging Server Sun Cluster HA Agent
Oracle Version: Not Found
Version: 7.0
Marketing Version: 7.0
Full Version: 7.0-0.03
Build Date: 20080519
Mnemonic: MS_SCHA
Installation directory: <INSTALLROOT>/msg_scha
Patches:
Dependencies:
PATCHUTILS (120901-03 121334-04 119255-88)
Package Name/Version:
SUNWmessaging-server-scha 7.0,REV=2008.05.19

Product: Instant Messaging Sun Cluster HA agent
Product Group: Comms
Description: Instant Messaging Sun Cluster HA Agent
Oracle Version: Not Found
Version: 7.3
Marketing Version: 7.3
Full Version: 7.3-01.02
Build Date: 20080403
Mnemonic: IM_SCHA
Installation directory: <INSTALLROOT>/im_scha
Patches: 137572-01
Dependencies:
PATCHUTILS (120901-03 121334-04 119255-88)
Package Name/Version:
SUNWiimsc 7.3,REV=2008.01.07.20.24.17
```

```
Product: NSS/NSPR/JSS
Product Group: Shared Component
Description: Network Security Services,Netscape Portable Runtime
Oracle Version: Not Found
Version: 4.8.8
Marketing Version: 4.8.8
Mnemonic: NSS
Installation directory: <package default>
Patches: 125359-15
Dependencies:
PATCHUTILS (120901-03 121334-04 119255-88)
Package Name/Version:
SUNWjss 4.2.4,REV=2006.11.16.21.41
SUNWpr 4.6.4,REV=2006.11.16.21.41
SUNWprd 4.6.4,REV=2006.11.16.21.41
SUNWtls 3.11.4,REV=2006.11.16.21.41
SUNWtlsd 3.11.4,REV=2006.11.16.21.41
SUNWtlsu 3.11.4,REV=2006.11.16.21.41

Product: Simple Authentication and Security Layer
Product Group: Shared Component
Description:
Oracle Version: Not Found
Version: 2.19
Marketing Version: 2.19
Mnemonic: SASL
Installation directory: <package default>
Patches: 119346-08
Dependencies:
PATCHUTILS (120901-03 121334-04 119255-88)
Package Name/Version:
SUNWsasl 2.17,REV=2003.07.18.13.13

Product: LDAPCSDK6
Product Group: Shared Component
Description: ldap c sdk 6
Oracle Version: Not Found
Version: 6.0
Marketing Version: 6.0
Mnemonic: LDAPCSDK6
Installation directory: <package default>
Patches:
Dependencies:
SASL (119346-08)
ICU (119811-07)
NSS (125359-15)
Package Name/Version:
SUNWldapcsdk-libs 6.00,REV=2006.12.11.00.35
SUNWldapcsdk-dev 6.00,REV=2006.12.11.00.35

Product: LDAPCSDK6 Tools
Product Group: Shared Component
Description: ldap c sdk 6 Tools
Oracle Version: Not Found
Version: 6.0
```

```
Marketing Version: 6.0
Mnemonic: LDAPCSDK6_TOOLS
Installation directory: <INSTALLROOT>/directory
Patches: 136800-03
Dependencies:
PATCHUTILS (120901-03 121334-04 119255-88)
LDAPCSDK6
Package Name/Version:
SUNWldapcsdk-tools 6.00,REV=2006.12.11.00.35

Product: International Components for Unicode
Product Group: Shared Component
Description:
Oracle Version: Not Found
Version: ICU2,ICU3
Marketing Version: ICU2,ICU3
Mnemonic: ICU
Installation directory: <package default>
Patches: 119811-07
Dependencies:
PATCHUTILS (120901-03 121334-04 119255-88)
Package Name/Version:
SUNWicu 1.2,REV=2005.01.06.14.13

Product: JDK
Product Group: Shared Component
Description: Java Development Kit
Oracle Version: Not Found
Version: 1.6.0
Marketing Version: 1.6.0
Mnemonic: JDK
Installation directory: <package default>
Patches: 125138-35 125139-35
Dependencies:
PATCHUTILS (120901-03 121334-04 119255-88)
ST
Package Name/Version:
SUNWj6rt 1.6.0,REV=2006.11.29.05.03
SUNWj6rtx 1.6.0,REV=2006.11.29.02.51
SUNWj6dev 1.6.0,REV=2006.11.29.05.03
SUNWj6dvx 1.6.0,REV=2006.11.29.02.51
SUNWj6cfg 1.6.0,REV=2006.11.29.05.03

Product: Java Help Runtime
Product Group: Shared Component
Description: Java Help Runtime
Oracle Version: Not Found
Version: 2.0
Marketing Version: 2.0
Mnemonic: JHRT
Installation directory: <package default>
Patches:
Dependencies:
PATCHUTILS (120901-03 121334-04 119255-88)
BZIP (126869-05 137322-01)
JDK (125138-35 125139-35)
```

```
Package Name/Version:
SUNWjhrt 2.0,REV=2006.10.31
SUNWjhdev 2.0,REV=2006.10.04
SUNWjhdem 2.0,REV=2006.10.04
SUNWjhdoc 2.0,REV=2006.10.04

Product: Message Queue
Product Group: Shared Component
Description: Message Queue
Oracle Version: Not Found
Version: 4.4
Marketing Version: 4.4
Mnemonic: MQ
Installation directory: <package default>
Patches:
Dependencies:
PATCHUTILS (120901-03 121334-04 119255-88)
JHRT
JDK (125138-35 125139-35)
NSS (125359-15)
Package Name/Version:
SUNWiqr 4.4,REV=2009.08.27.09.45
SUNWiqu 4.4,REV=2009.08.27.09.45
SUNWiqdoc 4.4,REV=2009.08.27.09.46
SUNWiquc 4.4,REV=2009.08.27.09.46
SUNWiqum 4.4,REV=2009.08.27.09.46
SUNWiqjx 4.4,REV=2009.08.27.09.46
SUNWiqfs 4.4,REV=2009.08.27.09.46
SUNWiqcrt 4.4,REV=2009.08.27.09.46
SUNWiqcdv 4.4,REV=2009.08.27.09.46
SUNWiqlen 4.4,REV=2009.08.27.09.46

Product: Message Queue Localization
Product Group: Shared Component
Description: Message Queue Localization
Oracle Version: Not Found
Version: 4.4
Marketing Version: 4.4
Mnemonic: MQ_L10N
Installation directory: <package default>
Patches:
Dependencies:
MQ
PATCHUTILS (120901-03 121334-04 119255-88)
Package Name/Version:
SUNWfiqu 4.4,REV=2009.10.01.09.34.22
SUNWfiquc 4.4,REV=2009.10.01.09.34.22
SUNWdiqu 4.4,REV=2009.10.01.09.34.32
SUNWdiquc 4.4,REV=2009.10.01.09.34.32
SUNWjiqu 4.4,REV=2009.10.01.09.34.58
SUNWjiquc 4.4,REV=2009.10.01.09.34.58
SUNWeiqu 4.4,REV=2009.10.01.09.34.40
SUNWeiquc 4.4,REV=2009.10.01.09.34.40
SUNWkiqu 4.4,REV=2009.10.01.09.34.50
SUNWkiquc 4.4,REV=2009.10.01.09.34.50
SUNWciqu 4.4,REV=2009.10.01.09.35.07
```

```
387 SUNWciquc 4.4,REV=2009.10.01.09.35.07
388 SUNWhiqu 4.4,REV=2009.10.01.09.35.15
389 SUNWhiquc 4.4,REV=2009.10.01.09.35.15
390
391 Product: LDAPJDK
392 Product Group: Shared Component
393 Description: LDAP JDK
394 Oracle Version: Not Found
395 Version: 4.21
396 Marketing Version: 4.21
397 Mnemonic: LDAPJDK
398 Installation directory: <package default>
399 Patches: 119725-06
400 Dependencies:
401 PATCHUTILS (120901-03 121334-04 119255-88)
402 Package Name/Version:
403 SUNWljdk 1.0,REV=2004.10.11.06.02
404
405 Product: Instant Messaging API
406 Product Group: Shared Component
407 Description: Instant Messaging API
408 Oracle Version: Not Found
409 Version: 9.0
410 Marketing Version: 9
411 Mnemonic: IMAPI
412 Installation directory: <package default>
413 Patches: 148583-03
414 Dependencies:
415 PATCHUTILS (120901-03 121334-04 119255-88)
416 Package Name/Version:
417 SUNWiimdv 9.0,REV=2011.09.05
418
419 Product: MySQL Marker
420 Product Group: OS Auxiliary
421 Description: MySQL Marker
422 Oracle Version: Not Found
423 Version: 1.1
424 Marketing Version: 1.1
425 Mnemonic: MYSQL_MARKER
426 Installation directory: <package default>
427 Patches:
428 Dependencies:
429 Package Name/Version:
430 SUNWcomms-mysql-marker 1.1,REV=2011.09.09
431
432 Product: MySQL
433 Product Group: OS Auxiliary
434 Description: MySQL
435 Oracle Version: Not Found
436 Version: 5.5.8
437 Marketing Version: 5.5.8
438 Mnemonic: MYSQL
439 Installation directory: <package default>
440 Patches:
441 Dependencies:
442 Package Name/Version:
```

```
443 mysql 5.5.8
444
445 Product: Service Tags
446 Product Group: OS Auxiliary
447 Description: Service Tags
448 Oracle Version: Not Found
449 Version: 1.1.4
450 Marketing Version: 1.1.4
451 Mnemonic: ST
452 Installation directory: <package default>
453 Patches:
454 Dependencies:
455 PATCHUTILS (120901-03 121334-04 119255-88)
456 Package Name/Version:
457 SUNWservicetagr 1.1.4,REV=2008.03.21.07.56
458 SUNWservicetagu 1.1.4,REV=2008.03.21.07.56
459 SUNWstosreg 1.1.4,REV=2008.03.21.07.56
460
461 Product: LIBCPLUSPLUS
462 Product Group: OS - Patches only
463 Description: libC (C++) patch for Solaris
464 Oracle Version: Not Found
465 Version: 5.9
466 Marketing Version: 5.9
467 Mnemonic: LIBCPLUSPLUS
468 Installation directory: <package default>
469 Patches: 119964-27
470 Dependencies:
471 PATCHUTILS (120901-03 121334-04 119255-88)
472 Package Name/Version:
473 SUNWlibC 5.10,REV=2004.12.20
474
475 Product: PATCHUTILS
476 Product Group: OS - Patches only
477 Description: Solaris patch for install/patching utilities
478 Oracle Version: Not Found
479 Version: Unknown
480 Marketing Version: Unknown
481 Mnemonic: PATCHUTILS
482 Installation directory: <package default>
483 Patches: 120901-03 121334-04 119255-88
484 Dependencies:
485 Package Name/Version:
486 SUNWpkgcmdsu 11.11,REV=2005.01.09.21.19
487 SUNWswmt 11.10,REV=2005.01.10.15.35
488 SUNWinstall-patch-utils-root 11.10,REV=2005.01.09.21.19
489 SUNWcsr 11.10.0,REV=2005.01.21.16.34
490 SUNWdtrc 11.10.0,REV=2005.01.21.16.34
491 SUNWzoneu 11.10.0,REV=2005.01.21.16.34
492
493 Product: SNMP OS Patch
494 Product Group: OS - Patches only
495 Description: SNMP patch for Solaris
496 Oracle Version: Not Found
497 Version: Unknown
498 Marketing Version: Unknown
```

```
499 Mnemonic: SNMP
500 Installation directory: <package default>
501 Patches: 120273-06
502 Dependencies:
503 PATCHUTILS (120901-03 121334-04 119255-88)
504 Package Name/Version:
505 SUNWsmagt 1.0,REV=2005.01.08.01.09
506 SUNWsmcmd 1.0,REV=2005.01.08.01.09
507 SUNWsmmgr 1.0,REV=2005.01.08.01.09
508
509 Product: BZIP OS Component
510 Product Group: OS - Patches only
511 Description: Solaris patch for bzip
512 Oracle Version: Not Found
513 Version: 11.10
514 Marketing Version: 11.10
515 Mnemonic: BZIP
516 Installation directory: <package default>
517 Patches: 126869-05 137322-01
518 Dependencies:
519 PATCHUTILS (120901-03 121334-04 119255-88)
520 Package Name/Version:
521 SUNWbzip 11.10.0,REV=2005.01.08.01.09
522
523 Product: RECOMMENDED PATCH CLUSTER
524 Product Group: OS - Patches only
525 Description: Representative sample of patches from the Recommended
Patch Cluster
526 Oracle Version: Not Found
527 Version: 2013.02.19
528 Marketing Version: 2013.02.19
529 Mnemonic: RECOMMENDED
530 Installation directory: <package default>
531 Patches: 119255-88 120273-30 147148-26
532 Dependencies:
533 Package Name/Version:
534 No packages defines for this OS version
535
536 Product: CommsInstaller
537 Product Group: CI Products
538 Description: The CommsInstaller installed as a package
539 Oracle Version: 7.0.4.0.0
540 Version: 7.4
541 Marketing Version: 7u4
542 Full Version: 7.4-0.05
543 Build Date: 20130409
544 Mnemonic: CI
545 Installation directory: <INSTALLROOT>/CommsInstaller
546 Patches:
547 Dependencies:
548 PATCHUTILS (120901-03 121334-04 119255-88)
549 Package Name/Version:
550 SUNWcomms 7.4,REV=2013.04.09
551 [684 Tue May 07 17:10:55 name1@host1% ~/wspace/releases/ci74$ ]
```

```
ci_tip
RSS Atom
```

listPackages for Oracle Linux 6, 64-bit

listPackages for Oracle Linux 6, 64-bit

This sample session shows the output of `commpkg info --listPackages` in Communications Suite 7 Update 4 on Oracle Linux 6, 64-bit.

Topics:

- Summary of commands run:
- Session

Summary of commands run:

```
602 cat /etc/oracle-release
603 ./commpkg -V
604 uname -a
605 cat /etc/redhat-release
606 ./commpkg info --listPackages
```

Session

```
[602 Tue May 7 16:43:45 root@host1% ~/wspace/releases/ci74# ]
# cat /etc/oracle-release
Oracle Linux Server release 6.2
[603 Tue May 7 16:43:51 root@host1% ~/wspace/releases/ci74# ]
# ./commpkg -V
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr 9 08:16:37
PDT 2013
[604 Tue May 7 16:43:58 root@host1% ~/wspace/releases/ci74# ]
# uname -a
Linux host1 2.6.39-100.5.1.el6uek.x86_64 #1 SMP Tue Mar 6 20:26:00 EST
2012 x86_64 x86_64 x86_64 GNU/Linux
[605 Tue May 7 16:44:04 root@host1% ~/wspace/releases/ci74# ]
# cat /etc/redhat-release
Red Hat Enterprise Linux Server release 6.2 (Santiago)
[606 Tue May 7 16:44:10 root@host1% ~/wspace/releases/ci74# ]
# ./commpkg info --listPackages
-- LOGFILE: /tmp/CommsInstaller_20130507164416.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr 9 08:16:37
PDT 2013
Package list per product

Product: Messaging Server (32bit)
Product Group: Comms
Description: Messaging Server 32bit Edition
Oracle Version: Not Found
Version: 7.5_32
Marketing Version: 7u5
Full Version: 7.5-28.21
Build Date: 20130408
Mnemonic: MS
```

```
Installation directory: <INSTALLROOT>/messaging
Patches:
Dependencies:
NSS
Package Name/Version:
sun-messaging-server 7.5-28.21.i386

Product: Messaging Server (64bit)
Product Group: Comms
Description: Messaging Server 64bit Edition
Oracle Version: Not Found
Version: 7.5
Marketing Version: 7u5
Full Version: 7.5-28.21
Build Date: 20130408
Mnemonic: MS64
Installation directory: <INSTALLROOT>/messaging64
Patches:
Dependencies:
NSS
Package Name/Version:
sun-messaging-server64 7.5-28.21.x86_64

Product: Comms DSsetup
Product Group: Comms
Description: Comms Directory Server Setup
Oracle Version: Not Found
Version: 6.4
Marketing Version: 6.4
Full Version: 6.4-24.03
Build Date: 20120611
Mnemonic: DSSETUP
Installation directory: <INSTALLROOT>/dssetup
Patches:
Dependencies:
LDAPCSDK6_TOOLS
Package Name/Version:
sun-comms-dssetup 6.4-24.03.i386

Product: Calendar Server
Product Group: Comms
Description: Calendar Server
Oracle Version: 7.0.3.10.0
Version: 7.3
Marketing Version: 7u3
Full Version: 7.3-10.10
Build Date: 20130328
Mnemonic: DAV
Installation directory: <INSTALLROOT>/davserver
Patches:
100 Dependencies:
101 ST
102 JDK
103 LDAPCSDK6_TOOLS
104 Package Name/Version:
105 sun-davserver 7.3-10.10.i386
```

```
106
107 Product: Instant Messaging
108 Product Group: Comms
109 Description: Instant Messaging
110 Oracle Version: 9.0.0.3.0
111 Version: 9.0
112 Marketing Version: 9
113 Full Version: 9.0-03.02
114 Build Date: 20130405
115 Mnemonic: IM
116 Installation directory: <INSTALLROOT>/im
117 Patches:
118 Dependencies:
119 MQ
120 LDAPJDK
121 ST
122 IMAPI
123 MQ_L10N
124 JDK
125 NSS
126 Package Name/Version:
127 sun-im-server 9.0-03.02.x86_64
128 sun-im-install 9.0-03.02.x86_64
129 sun-im-mux 9.0-03.02.x86_64
130 sun-im-apidoc 9.0-03.02.x86_64
131 sun-im-ident 9.0-03.02.x86_64
132 sun-im-gateways 9.0-03.02.x86_64
133 sun-im-webapps 9.0-03.02.x86_64
134 sun-im-fed 9.0-03.02.x86_64
135
136 Product: Convergence
137 Product Group: Comms
138 Description: Integrated Web Client
139 Oracle Version: Not Found
140 Version: 2.0
141 Marketing Version: 2
142 Full Version: 2.0-6.01
143 Build Date: 20130402
144 Mnemonic: IWC
145 Installation directory: <INSTALLROOT>/iwc
146 Patches:
147 Dependencies:
148 ST
149 JDK
150 Package Name/Version:
151 sun-iwc 2.0-6.01.i386
152
153 Product: Indexing and Search Service
154 Product Group: Comms
155 Description: Indexing Search Services
156 Oracle Version: 1.0.4.16.0
157 Version: 1.4
158 Marketing Version: 1u4
159 Full Version: 1.4-16.9301
160 Build Date: 20130320
161 Mnemonic: JISS
```

```
Installation directory: <INSTALLROOT>/jiss
Patches:
Dependencies:
MQ
ST
MQ_L10N
JDK
LDAPCSDK6_TOOLS
Package Name/Version:
sun-jiss 1.4-16.9301.noarch

Product: Comms Delegated Administrator
Product Group: Comms
Description: Comms Delegated Administrator
Oracle Version: Not Found
Version: 7.0
Marketing Version: 7
Full Version: 7.0-7.00
Build Date: 20130319
Mnemonic: DA
Installation directory: <INSTALLROOT>/da
Patches:
Dependencies:
ST
JDK
LDAPCSDK6_TOOLS
NSS
Package Name/Version:
sun-commda 7.0-7.00.i386

Product: NSS/NSPR/JSS
Product Group: Shared Component
Description: Network Security Services,Netscape Portable Runtime
Oracle Version: Not Found
Version: 4.8.8
Marketing Version: 4.8.8
Mnemonic: NSS
Installation directory: <package default>
Patches:
Dependencies:
Package Name/Version:
sun-nspr 4.8.9-1.x86_64
sun-nspr 4.8.9-1.i386
sun-nss 3.13.1-1.x86_64
sun-nss 3.13.1-1.i386
sun-jss 4.3.2-4.x86_64
sun-jss 4.3.2-4.i386

Product: Simple Authentication and Security Layer
Product Group: Shared Component
Description:
Oracle Version: Not Found
Version: 2.19
Marketing Version: 2.19
Mnemonic: SASL
Installation directory: <package default>
```

```
Patches:
Dependencies:
Package Name/Version:
sun-sasl 2.19-6.x86_64
sun-sasl 2.19-6.i386

Product: LDAPCSDK6
Product Group: Shared Component
Description: ldap c sdk 6
Oracle Version: Not Found
Version: 6.0
Marketing Version: 6.0
Mnemonic: LDAPCSDK6
Installation directory: <package default>
Patches:
Dependencies:
SASL
ICU
NSS
Package Name/Version:
sun-ldapcsdk-libs 6.00-8.x86_64
sun-ldapcsdk-libs 6.00-8.i386
sun-ldapcsdk-dev 6.00-8.i386

Product: LDAPCSDK6 Tools
Product Group: Shared Component
Description: ldap c sdk 6 Tools
Oracle Version: Not Found
Version: 6.0
Marketing Version: 6.0
Mnemonic: LDAPCSDK6_TOOLS
Installation directory: <INSTALLROOT>/directory
Patches:
Dependencies:
LDAPCSDK6
Package Name/Version:
sun-ldapcsdk-tools 6.00-8.x86_64

Product: International Components for Unicode
Product Group: Shared Component
Description:
Oracle Version: Not Found
Version: ICU2,ICU3
Marketing Version: ICU2,ICU3
Mnemonic: ICU
Installation directory: <package default>
Patches:
Dependencies:
Package Name/Version:
sun-icu 3.2.1-5.x86_64
sun-icu 3.2.1-5.i386

Product: JDK
Product Group: Shared Component
Description: Java Development Kit
Oracle Version: Not Found
```

```
Version: 1.6.0
Marketing Version: 1.6.0
Mnemonic: JDK
Installation directory: <package default>
Patches:
Dependencies:
ST
Package Name/Version:
jdk 1.6.0_33-fcs.i586

Product: Java Help Runtime
Product Group: Shared Component
Description: Java Help Runtime
Oracle Version: Not Found
Version: 2.0
Marketing Version: 2.0
Mnemonic: JHRT
Installation directory: <package default>
Patches:
Dependencies:
JDK
Package Name/Version:
sun-javahelp 2.0-fcs.i586

Product: Message Queue
Product Group: Shared Component
Description: Message Queue
Oracle Version: Not Found
Version: 4.4
Marketing Version: 4.4
Mnemonic: MQ
Installation directory: <package default>
Patches:
Dependencies:
JHRT
JDK
NSS
Package Name/Version:
sun-mq-config 4.4-10.i386
sun-mq-var 4.4-10.i386
sun-mq-jaxm 4.4-10.i386
sun-mq-jmsclient 4.4-10.i386
sun-mq-xmlclient 4.4-10.i386
sun-mq-capi 4.4-10.i386
sun-mq 4.4-10.i386
sun-mq-ent 4.4-10.i386

Product: Message Queue Localization
Product Group: Shared Component
Description: Message Queue Localization
Oracle Version: Not Found
Version: 4.4
Marketing Version: 4.4
Mnemonic: MQ_L10N
Installation directory: <package default>
Patches:
```

```
330 Dependencies:
331 MQ
332 Package Name/Version:
333 sun-mq-de 4.4-1.i386
334 sun-mq-es 4.4-1.i386
335 sun-mq-fr 4.4-1.i386
336 sun-mq-ja 4.4-1.i386
337 sun-mq-ko 4.4-1.i386
338 sun-mq-zh_CN 4.4-1.i386
339 sun-mq-zh_TW 4.4-1.i386
340
341 Product: LDAPJDK
342 Product Group: Shared Component
343 Description: LDAP JDK
344 Oracle Version: Not Found
345 Version: 4.21
346 Marketing Version: 4.21
347 Mnemonic: LDAPJDK
348 Installation directory: <package default>
349 Patches:
350 Dependencies:
351 Package Name/Version:
352 sun-ljdk 4.21-1.i386
353
354 Product: Instant Messaging API
355 Product Group: Shared Component
356 Description: Instant Messaging API
357 Oracle Version: Not Found
358 Version: 9.0
359 Marketing Version: 9
360 Mnemonic: IMAPI
361 Installation directory: <package default>
362 Patches:
363 Dependencies:
364 Package Name/Version:
365 sun-im-dev 9.0-03.02.x86_64
366
367 Product: MySQL Marker
368 Product Group: OS Auxiliary
369 Description: MySQL Marker
370 Oracle Version: Not Found
371 Version: 1.1
372 Marketing Version: 1.1
373 Mnemonic: MYSQL_MARKER
374 Installation directory: <package default>
375 Patches:
376 Dependencies:
377 Package Name/Version:
378 sun-comms-mysql-marker 1.1-0.01.i386
379
380 Product: MySQL
381 Product Group: OS Auxiliary
382 Description: MySQL
383 Oracle Version: Not Found
384 Version: 5.5.8
385 Marketing Version: 5.5.8
```

```
386 Mnemonic: MYSQL
387 Installation directory: <package default>
388 Patches:
389 Dependencies:
390 Package Name/Version:
391 MySQL-server-advanced 5.5.8-1.rhel5.x86_64
392 MySQL-client-advanced 5.5.8-1.rhel5.x86_64
393
394 Product: Service Tags
395 Product Group: OS Auxiliary
396 Description: Service Tags
397 Oracle Version: Not Found
398 Version: 1.1.4
399 Marketing Version: 1.1.4
400 Mnemonic: ST
401 Installation directory: <package default>
402 Patches:
403 Dependencies:
404 Package Name/Version:
405 sun-servicetag 1.1.4-1.i386
406
407 Product: CommsInstaller
408 Product Group: CI Products
409 Description: The CommsInstaller installed as a package
410 Oracle Version: 7.0.4.0.0
411 Version: 7.4
412 Marketing Version: 7u4
413 Full Version: 7.4-0.05
414 Build Date: 20130409
415 Mnemonic: CI
416 Installation directory: <INSTALLROOT>/CommsInstaller
417 Patches:
418 Dependencies:
419 Package Name/Version:
420 sun-comms-installer 7.4-0.05.i386
421 [607 Tue May 7 16:44:29 root@host1% ~/wspace/releases/ci74# ]
422
423
424
```

```
ci_tip
RSS Atom
```

listPackages for Red Hat Linux 4, 32-bit

listPackages for Red Hat Linux 4, 32-bit

This sample session shows the output of `commpkg info --listPackages` in Communications Suite 7 Update 4 on Red Hat Linux 4, 32-bit.

Topics:

- Summary of commands run:
- Session

Summary of commands run:

```
511 ls /etc/oracle*
512 cat /etc/redhat-release
513 uname -a
514 ./commpkg -V
515 ./commpkg info --listPackages
```

Session

```
[510 Tue May 07 16:50:27 name1@host1% ~/wspace$ ]
$ cd releases/ci74
[511 Tue May 07 16:50:31 name1@host1% ~/wspace/releases/ci74$ ]
$ ls /etc/oracle*
/bin/ls: /etc/oracle*: No such file or directory
[512 Tue May 07 16:50:44 name1@host1% ~/wspace/releases/ci74$ ]
$ cat /etc/redhat-release
Red Hat Enterprise Linux AS release 4 (Nahant Update 4)
[513 Tue May 07 16:50:49 name1@host1% ~/wspace/releases/ci74$ ]
$ uname -a
Linux host1 2.6.9-42.ELsmp #1 SMP Wed Jul 12 23:32:02 EDT 2006 x86_64
x86_64 x86_64 GNU/Linux
[514 Tue May 07 16:50:51 name1@host1% ~/wspace/releases/ci74$ ]
$ ./commpkg -V
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr 9 08:16:37
PDT 2013
[515 Tue May 07 16:50:53 name1@host1% ~/wspace/releases/ci74$ ]
$ ./commpkg info --listPackages
-- LOGFILE: /tmp/CommsInstaller_20130507165100.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr 9 08:16:37
PDT 2013
Package list per product

Product: Messaging Server (32bit)
Product Group: Comms
Description: Messaging Server 32bit Edition
Oracle Version: Not Found
Version: 7.5_32
Marketing Version: 7u5
Full Version: 7.5-28.21
```

```
Build Date: 20130408
Mnemonic: MS
Installation directory: <INSTALLROOT>/messaging
Patches:
Dependencies:
NSS
Package Name/Version:
sun-messaging-server 7.5-28.21.i386

Product: Comms DSsetup
Product Group: Comms
Description: Comms Directory Server Setup
Oracle Version: Not Found
Version: 6.4
Marketing Version: 6.4
Full Version: 6.4-24.03
Build Date: 20120611
Mnemonic: DSSETUP
Installation directory: <INSTALLROOT>/dssetup
Patches:
Dependencies:
LDAPCSDK6_TOOLS
Package Name/Version:
sun-comms-dssetup 6.4-24.03.i386

Product: Convergence
Product Group: Comms
Description: Integrated Web Client
Oracle Version: Not Found
Version: 2.0
Marketing Version: 2
Full Version: 2.0-6.01
Build Date: 20130402
Mnemonic: IWC
Installation directory: <INSTALLROOT>/iwc
Patches:
Dependencies:
ST
JDK
Package Name/Version:
sun-iwc 2.0-6.01.i386

Product: Comms Delegated Administrator
Product Group: Comms
Description: Comms Delegated Administrator
Oracle Version: Not Found
Version: 7.0
Marketing Version: 7
Full Version: 7.0-7.00
Build Date: 20130319
Mnemonic: DA
100 Installation directory: <INSTALLROOT>/da
101 Patches:
102 Dependencies:
103 ST
104 JDK
```

```
LDAPCSDK6_TOOLS
NSS
Package Name/Version:
sun-commda 7.0-7.00.i386

Product: NSS/NSPR/JSS
Product Group: Shared Component
Description: Network Security Services,Netscape Portable Runtime
Oracle Version: Not Found
Version: 4.8.8
Marketing Version: 4.8.8
Mnemonic: NSS
Installation directory: <package default>
Patches:
Dependencies:
Package Name/Version:
sun-nspr 4.8.9-1.x86_64
sun-nspr 4.8.9-1.i386
sun-nss 3.13.1-1.x86_64
sun-nss 3.13.1-1.i386
sun-jss 4.3.2-4.x86_64
sun-jss 4.3.2-4.i386

Product: Simple Authentication and Security Layer
Product Group: Shared Component
Description:
Oracle Version: Not Found
Version: 2.19
Marketing Version: 2.19
Mnemonic: SASL
Installation directory: <package default>
Patches:
Dependencies:
Package Name/Version:
sun-sasl 2.19-6.x86_64
sun-sasl 2.19-6.i386

Product: LDAPCSDK6
Product Group: Shared Component
Description: ldap c sdk 6
Oracle Version: Not Found
Version: 6.0
Marketing Version: 6.0
Mnemonic: LDAPCSDK6
Installation directory: <package default>
Patches:
Dependencies:
SASL
ICU
NSS
Package Name/Version:
sun-ldapcsdk-libs 6.00-8.x86_64
sun-ldapcsdk-libs 6.00-8.i386
sun-ldapcsdk-dev 6.00-8.i386

Product: LDAPCSDK6 Tools
```

```
Product Group: Shared Component
Description: ldap c sdk 6 Tools
Oracle Version: Not Found
Version: 6.0
Marketing Version: 6.0
Mnemonic: LDAPCSDK6_TOOLS
Installation directory: <INSTALLROOT>/directory
Patches:
Dependencies:
LDAPCSDK6
Package Name/Version:
sun-ldapcsdk-tools 6.00-8.x86_64

Product: International Components for Unicode
Product Group: Shared Component
Description:
Oracle Version: Not Found
Version: ICU2,ICU3
Marketing Version: ICU2,ICU3
Mnemonic: ICU
Installation directory: <package default>
Patches:
Dependencies:
Package Name/Version:
sun-icu 3.2.1-5.x86_64
sun-icu 3.2.1-5.i386

Product: JDK
Product Group: Shared Component
Description: Java Development Kit
Oracle Version: Not Found
Version: 1.6.0
Marketing Version: 1.6.0
Mnemonic: JDK
Installation directory: <package default>
Patches:
Dependencies:
ST
Package Name/Version:
jdk 1.6.0_33-fcs.i586

Product: Java Help Runtime
Product Group: Shared Component
Description: Java Help Runtime
Oracle Version: Not Found
Version: 2.0
Marketing Version: 2.0
Mnemonic: JHRT
Installation directory: <package default>
Patches:
Dependencies:
JDK
Package Name/Version:
sun-javahelp 2.0-fcs.i586

Product: Message Queue
```

```
217 Product Group: Shared Component
218 Description: Message Queue
219 Oracle Version: Not Found
220 Version: 4.4
221 Marketing Version: 4.4
222 Mnemonic: MQ
223 Installation directory: <package default>
224 Patches:
225 Dependencies:
226 JHRT
227 JDK
228 NSS
229 Package Name/Version:
230 sun-mq-config 4.4-10.i386
231 sun-mq-var 4.4-10.i386
232 sun-mq-jaxm 4.4-10.i386
233 sun-mq-jmsclient 4.4-10.i386
234 sun-mq-xmlclient 4.4-10.i386
235 sun-mq-capi 4.4-10.i386
236 sun-mq 4.4-10.i386
237 sun-mq-ent 4.4-10.i386
238
239 Product: Message Queue Localization
240 Product Group: Shared Component
241 Description: Message Queue Localization
242 Oracle Version: Not Found
243 Version: 4.4
244 Marketing Version: 4.4
245 Mnemonic: MQ_L10N
246 Installation directory: <package default>
247 Patches:
248 Dependencies:
249 MQ
250 Package Name/Version:
251 sun-mq-de 4.4-1.i386
252 sun-mq-es 4.4-1.i386
253 sun-mq-fr 4.4-1.i386
254 sun-mq-ja 4.4-1.i386
255 sun-mq-ko 4.4-1.i386
256 sun-mq-zh_CN 4.4-1.i386
257 sun-mq-zh_TW 4.4-1.i386
258
259 Product: LDAPJDK
260 Product Group: Shared Component
261 Description: LDAP JDK
262 Oracle Version: Not Found
263 Version: 4.21
264 Marketing Version: 4.21
265 Mnemonic: LDAPJDK
266 Installation directory: <package default>
267 Patches:
268 Dependencies:
269 Package Name/Version:
270 sun-ljdk 4.21-1.i386
271
272 Product: Instant Messaging API
```

```
Product Group: Shared Component
Description: Instant Messaging API
Oracle Version: Not Found
Version: 9.0
Marketing Version: 9
Mnemonic: IMAPI
Installation directory: <package default>
Patches:
Dependencies:
Package Name/Version:
sun-im-dev 9.0-03.02.x86_64

Product: MySQL Marker
Product Group: OS Auxiliary
Description: MySQL Marker
Oracle Version: Not Found
Version: 1.1
Marketing Version: 1.1
Mnemonic: MYSQL_MARKER
Installation directory: <package default>
Patches:
Dependencies:
Package Name/Version:
sun-comms-mysql-marker 1.1-0.01.i386

Product: MySQL
Product Group: OS Auxiliary
Description: MySQL
Oracle Version: Not Found
Version: 5.5.8
Marketing Version: 5.5.8
Mnemonic: MYSQL
Installation directory: <package default>
Patches:
Dependencies:
Package Name/Version:
MySQL-server-advanced 5.5.8-1.rhel5.x86_64
MySQL-client-advanced 5.5.8-1.rhel5.x86_64

Product: Service Tags
Product Group: OS Auxiliary
Description: Service Tags
Oracle Version: Not Found
Version: 1.1.4
Marketing Version: 1.1.4
Mnemonic: ST
Installation directory: <package default>
Patches:
Dependencies:
Package Name/Version:
sun-servicetag 1.1.4-1.i386

Product: CommsInstaller
Product Group: CI Products
Description: The CommsInstaller installed as a package
Oracle Version: 7.0.4.0.0
```

```
Version: 7.4
Marketing Version: 7u4
Full Version: 7.4-0.05
Build Date: 20130409
Mnemonic: CI
Installation directory: <INSTALLROOT>/CommsInstaller
Patches:
Dependencies:
Package Name/Version:
sun-comms-installer 7.4-0.05.i386
[516 Tue May 07 16:51:01 name1@host1% ~/wspace/releases/ci74$ ]
```

```
ci_tip
RSS Atom
```

listPackages for Red Hat Linux 5, 64-bit

listPackages for Red Hat Linux 5, 64-bit

This sample session shows the output of `commpkg info --listPackages` in Communications Suite 7 Update 4 on Red Hat Linux 5.8, 64-bit.

Topics:

- Summary of commands run:
- Session

Summary of commands run:

```
926 cat /etc/oracle-release
927 ./commpkg -V
928 uname -a
929 cat /etc/redhat-release
930 ./commpkg info --listPackages
```

Session

```
$ cd ci74
[926 Tue May 07 17:01:27 name1@host1% ~/wspace/releases/ci74$ ]
$ cat /etc/oracle-release
Oracle Linux Server release 5.8
[927 Tue May 07 17:01:31 name1@host1% ~/wspace/releases/ci74$ ]
$ ./commpkg -V
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr 9 08:16:37
PDT 2013
[928 Tue May 07 17:01:38 name1@host1% ~/wspace/releases/ci74$ ]
$ uname -a
Linux host1 2.6.18-308.0.0.0.1.el5xen #1 SMP Sat Feb 25 16:26:29 EST
2012 x86_64 x86_64 x86_64 GNU/Linux
[929 Tue May 07 17:01:40 name1@host1% ~/wspace/releases/ci74$ ]
$ cat /etc/redhat-release
Red Hat Enterprise Linux Server release 5.8 (Tikanga)
[930 Tue May 07 17:01:46 name1@host1% ~/wspace/releases/ci74$ ]
$ ./commpkg info --listPackages
-- LOGFILE: /tmp/CommsInstaller_20130507170149.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr 9 08:16:37
PDT 2013
Package list per product

Product: Messaging Server (32bit)
Product Group: Comms
Description: Messaging Server 32bit Edition
Oracle Version: Not Found
Version: 7.5_32
Marketing Version: 7u5
Full Version: 7.5-28.21
Build Date: 20130408
```

```
Mnemonic: MS
Installation directory: <INSTALLROOT>/messaging
Patches:
Dependencies:
NSS
Package Name/Version:
sun-messaging-server 7.5-28.21.i386

Product: Messaging Server (64bit)
Product Group: Comms
Description: Messaging Server 64bit Edition
Oracle Version: Not Found
Version: 7.5
Marketing Version: 7u5
Full Version: 7.5-28.21
Build Date: 20130408
Mnemonic: MS64
Installation directory: <INSTALLROOT>/messaging64
Patches:
Dependencies:
NSS
Package Name/Version:
sun-messaging-server64 7.5-28.21.x86_64

Product: Comms DSsetup
Product Group: Comms
Description: Comms Directory Server Setup
Oracle Version: Not Found
Version: 6.4
Marketing Version: 6.4
Full Version: 6.4-24.03
Build Date: 20120611
Mnemonic: DSSETUP
Installation directory: <INSTALLROOT>/dssetup
Patches:
Dependencies:
LDAPCSDK6_TOOLS
Package Name/Version:
sun-comms-dssetup 6.4-24.03.i386

Product: Calendar Server
Product Group: Comms
Description: Calendar Server
Oracle Version: 7.0.3.10.0
Version: 7.3
Marketing Version: 7u3
Full Version: 7.3-10.10
Build Date: 20130328
Mnemonic: DAV
Installation directory: <INSTALLROOT>/davserver
Patches:
100 Dependencies:
101 ST
102 JDK
103 LDAPCSDK6_TOOLS
104 Package Name/Version:
```

```
105 sun-davserver 7.3-10.10.i386
106
107 Product: Instant Messaging
108 Product Group: Comms
109 Description: Instant Messaging
110 Oracle Version: 9.0.0.3.0
111 Version: 9.0
112 Marketing Version: 9
113 Full Version: 9.0-03.02
114 Build Date: 20130405
115 Mnemonic: IM
116 Installation directory: <INSTALLROOT>/im
117 Patches:
118 Dependencies:
119 MQ
120 LDAPJDK
121 ST
122 IMAPI
123 MQ_L10N
124 JDK
125 NSS
126 Package Name/Version:
127 sun-im-server 9.0-03.02.x86_64
128 sun-im-install 9.0-03.02.x86_64
129 sun-im-mux 9.0-03.02.x86_64
130 sun-im-apidoc 9.0-03.02.x86_64
131 sun-im-ident 9.0-03.02.x86_64
132 sun-im-gateways 9.0-03.02.x86_64
133 sun-im-webapps 9.0-03.02.x86_64
134 sun-im-fed 9.0-03.02.x86_64
135
136 Product: Convergence
137 Product Group: Comms
138 Description: Integrated Web Client
139 Oracle Version: Not Found
140 Version: 2.0
141 Marketing Version: 2
142 Full Version: 2.0-6.01
143 Build Date: 20130402
144 Mnemonic: IWC
145 Installation directory: <INSTALLROOT>/iwc
146 Patches:
147 Dependencies:
148 ST
149 JDK
150 Package Name/Version:
151 sun-iwc 2.0-6.01.i386
152
153 Product: Indexing and Search Service
154 Product Group: Comms
155 Description: Indexing Search Services
156 Oracle Version: 1.0.4.16.0
157 Version: 1.4
158 Marketing Version: 1u4
159 Full Version: 1.4-16.9301
160 Build Date: 20130320
```

```
Mnemonic: JISS
Installation directory: <INSTALLROOT>/jiss
Patches:
Dependencies:
MQ
ST
MQ_L10N
JDK
LDAPCSDK6_TOOLS
Package Name/Version:
sun-jiss 1.4-16.9301.noarch

Product: Comms Delegated Administrator
Product Group: Comms
Description: Comms Delegated Administrator
Oracle Version: Not Found
Version: 7.0
Marketing Version: 7
Full Version: 7.0-7.00
Build Date: 20130319
Mnemonic: DA
Installation directory: <INSTALLROOT>/da
Patches:
Dependencies:
ST
JDK
LDAPCSDK6_TOOLS
NSS
Package Name/Version:
sun-commda 7.0-7.00.i386

Product: NSS/NSPR/JSS
Product Group: Shared Component
Description: Network Security Services,Netscape Portable Runtime
Oracle Version: Not Found
Version: 4.8.8
Marketing Version: 4.8.8
Mnemonic: NSS
Installation directory: <package default>
Patches:
Dependencies:
Package Name/Version:
sun-nspr 4.8.9-1.x86_64
sun-nspr 4.8.9-1.i386
sun-nss 3.13.1-1.x86_64
sun-nss 3.13.1-1.i386
sun-jss 4.3.2-4.x86_64
sun-jss 4.3.2-4.i386

Product: Simple Authentication and Security Layer
Product Group: Shared Component
Description:
Oracle Version: Not Found
Version: 2.19
Marketing Version: 2.19
Mnemonic: SASL
```

```
Installation directory: <package default>
Patches:
Dependencies:
Package Name/Version:
sun-sasl 2.19-6.x86_64
sun-sasl 2.19-6.i386

Product: LDAPCSDK6
Product Group: Shared Component
Description: ldap c sdk 6
Oracle Version: Not Found
Version: 6.0
Marketing Version: 6.0
Mnemonic: LDAPCSDK6
Installation directory: <package default>
Patches:
Dependencies:
SASL
ICU
NSS
Package Name/Version:
sun-ldapcsdk-libs 6.00-8.x86_64
sun-ldapcsdk-libs 6.00-8.i386
sun-ldapcsdk-dev 6.00-8.i386

Product: LDAPCSDK6 Tools
Product Group: Shared Component
Description: ldap c sdk 6 Tools
Oracle Version: Not Found
Version: 6.0
Marketing Version: 6.0
Mnemonic: LDAPCSDK6_TOOLS
Installation directory: <INSTALLROOT>/directory
Patches:
Dependencies:
LDAPCSDK6
Package Name/Version:
sun-ldapcsdk-tools 6.00-8.x86_64

Product: International Components for Unicode
Product Group: Shared Component
Description:
Oracle Version: Not Found
Version: ICU2,ICU3
Marketing Version: ICU2,ICU3
Mnemonic: ICU
Installation directory: <package default>
Patches:
Dependencies:
Package Name/Version:
sun-icu 3.2.1-5.x86_64
sun-icu 3.2.1-5.i386

Product: JDK
Product Group: Shared Component
Description: Java Development Kit
```

```
Oracle Version: Not Found
Version: 1.6.0
Marketing Version: 1.6.0
Mnemonic: JDK
Installation directory: <package default>
Patches:
Dependencies:
ST
Package Name/Version:
jdk 1.6.0_33-fcs.i586

Product: Java Help Runtime
Product Group: Shared Component
Description: Java Help Runtime
Oracle Version: Not Found
Version: 2.0
Marketing Version: 2.0
Mnemonic: JHRT
Installation directory: <package default>
Patches:
Dependencies:
JDK
Package Name/Version:
sun-javahelp 2.0-fcs.i586

Product: Message Queue
Product Group: Shared Component
Description: Message Queue
Oracle Version: Not Found
Version: 4.4
Marketing Version: 4.4
Mnemonic: MQ
Installation directory: <package default>
Patches:
Dependencies:
JHRT
JDK
NSS
Package Name/Version:
sun-mq-config 4.4-10.i386
sun-mq-var 4.4-10.i386
sun-mq-jaxm 4.4-10.i386
sun-mq-jmsclient 4.4-10.i386
sun-mq-xmlclient 4.4-10.i386
sun-mq-capi 4.4-10.i386
sun-mq 4.4-10.i386
sun-mq-ent 4.4-10.i386

Product: Message Queue Localization
Product Group: Shared Component
Description: Message Queue Localization
Oracle Version: Not Found
Version: 4.4
Marketing Version: 4.4
Mnemonic: MQ_L10N
Installation directory: <package default>
```

```
Patches:
Dependencies:
MQ
Package Name/Version:
sun-mq-de 4.4-1.i386
sun-mq-es 4.4-1.i386
sun-mq-fr 4.4-1.i386
sun-mq-ja 4.4-1.i386
sun-mq-ko 4.4-1.i386
sun-mq-zh_CN 4.4-1.i386
sun-mq-zh_TW 4.4-1.i386

Product: LDAPJDK
Product Group: Shared Component
Description: LDAP JDK
Oracle Version: Not Found
Version: 4.21
Marketing Version: 4.21
Mnemonic: LDAPJDK
Installation directory: <package default>
Patches:
Dependencies:
Package Name/Version:
sun-ljdk 4.21-1.i386

Product: Instant Messaging API
Product Group: Shared Component
Description: Instant Messaging API
Oracle Version: Not Found
Version: 9.0
Marketing Version: 9
Mnemonic: IMAPI
Installation directory: <package default>
Patches:
Dependencies:
Package Name/Version:
sun-im-dev 9.0-03.02.x86_64

Product: MySQL Marker
Product Group: OS Auxiliary
Description: MySQL Marker
Oracle Version: Not Found
Version: 1.1
Marketing Version: 1.1
Mnemonic: MYSQL_MARKER
Installation directory: <package default>
Patches:
Dependencies:
Package Name/Version:
sun-comms-mysql-marker 1.1-0.01.i386

Product: MySQL
Product Group: OS Auxiliary
Description: MySQL
Oracle Version: Not Found
Version: 5.5.8
```

```
Marketing Version: 5.5.8
Mnemonic: MYSQL
Installation directory: <package default>
Patches:
Dependencies:
Package Name/Version:
MySQL-server-advanced 5.5.8-1.rhel5.x86_64
MySQL-client-advanced 5.5.8-1.rhel5.x86_64

Product: Service Tags
Product Group: OS Auxiliary
Description: Service Tags
Oracle Version: Not Found
Version: 1.1.4
Marketing Version: 1.1.4
Mnemonic: ST
Installation directory: <package default>
Patches:
Dependencies:
Package Name/Version:
sun-servicetag 1.1.4-1.i386

Product: CommsInstaller
Product Group: CI Products
Description: The CommsInstaller installed as a package
Oracle Version: 7.0.4.0.0
Version: 7.4
Marketing Version: 7u4
Full Version: 7.4-0.05
Build Date: 20130409
Mnemonic: CI
Installation directory: <INSTALLROOT>/CommsInstaller
Patches:
Dependencies:
Package Name/Version:
sun-comms-installer 7.4-0.05.i386

```

```
ci_tip
RSS Atom
```

Using the ALTROOT Command-Line Argument

Using the ALTROOT | name Command-Line Argument

Topics:

- About the Alternate Root
- ALTROOT | name Syntax and Examples
- Understanding INSTALLROOT and ALTROOT
- Running Multiple Installations of the Same Product on One Host: Conflicting Ports

About the Alternate Root

The Communications Suite installer enables you to install multiple copies of the same product version on the same Solaris OS machine or Solaris zone by using the alternate root feature of the `commpkg install` command. For example, you might deploy a host with an installation in the default root directory, `/opt/sun/comms`, and a second, separate installation in the `/opt/sun/comms2` alternate root directory. The alternate root installation directory is the top-level directory underneath which the Communications Suite component products and shared components are installed in their respective directories.

Some possible uses for multiple installations include:

1. Performing a side-by-side upgrade. For more information about the side-by-side upgrade scenario, see Using the Side-by-Side Strategy to Upgrade Messaging Server.
2. Installing the symmetric HA scenario.
3. Enabling an installation to be easily moved from one machine to another.

> **Note**
> The alternate root feature is available only on Solaris OS. This feature is a "power user" feature. If you are interested in installing more than one instance of the same version of a Communications Suite product on the same physical host, another option is to use Solaris zones. For more information, see Installing Communications Suite on Solaris Zones.

ALTROOT | name Syntax and Examples

The Communications Suite installer uses the optional *ALTROOT* | *name* command-line argument to the `commpkg install`, `commpkg upgrade`, `commpkg uninstall`, and `commpkg verify` commands. You use either *ALTROOT* or *name*. The *name* acts as an alias for the alternate root installation path. The *name* is registered in an internal software list maintained by the installer. You can use the *name* in place of the alternate root's path in commands that accept the alternate root. The distinction between the alternate root and name is that the alternate root always begins with a slash (`/`) whereas the name does not.

Syntax:
`commpkg` [`install` | `upgrade` | `uninstall` | `verify`] [*ALTROOT* | *name*]

Example 1:

```
./commpkg install /opt/sun/comms2
```

In this example, the path `/opt/sun/comms2` is the alternate root, which becomes the top-level directory underneath which the Communications Suite component products and shared components are installed.

Example 2:

```
./commpkg install Comms2
```

In this example, `Comms2` is the name for the alternate root. During the installation process, the installer prompts you to type in the alternate root installation directory.

Example 3:

In this example, you avoid installing the shared components in the alternate root by using the `--excludeSC` option:

```
./commpkg install --excludeSC /opt/sun/comms2
```

Example 4:

To install only the shared components, run `commpkg install` and select the product you want to install, but prepend a tilde ({~}).

For example, if you plan to install Messaging Server in the alternate root, you select `~1` during the default installation. This tells the installer to install the dependencies but not the product itself.

Notes on the *ALTROOT* | *name* command-line argument:

- Specifying a slash (`/`) as an alternate root is the same as specifying the default root installation directory. That is, specifying a slash is interpreted by the Installer as having specified no alternate root.
- Likewise, specifying "" as an alternate root is interpreted as having specified no alternate root. (The "friendly name" for the default alternate root is "".)
- If you specify the `--installroot` option in addition to *ALTROOT* | *name*, the two must match.
- Operating system patches are always installed into the default root (`/`). Some shared components are installed into the *ALTROOT* and some are installed into the default root (`/`). MySQL Server is an example of a shared component that is always installed into the default root.
- You can quickly uninstall an *ALTROOT* installation by using the `rm -r` command on the alternate root directory. The next time that you run the `commpkg info` command, the internal software list that maintains the alternate root information is updated.
- The `--altroot` [*name*] argument has been deprecated in favor of the *ALTROOT* | *name* argument.
- You can create as many alternate roots as you like. Running the `commpkg info` command reports on the various alternate roots.

Understanding INSTALLROOT and ALTROOT

The following concepts define an alternate root (*ALTROOT*):

- An alternate root directory is a Solaris OS feature that is used by `commpkg` to enable multiple installations of Communications Suite products on the same host.
- The default alternate root is the standard root directory (`/`) and is always present.

The following concepts define an installation root (*INSTALLROOT*):

- An *INSTALLROOT* is the top-level umbrella installation path for the Communications Suite products.

- On the default alternate root (that is, `/`), you can specify an *INSTALLROOT*.
- On an alternate root, the *INSTALLROOT* is the same as the alternate root.

What Is the Default?

If you use the default root, the default *INSTALLROOT* is:

```
/opt/sun/comms/
```

Example Using Both a Default Root and Alternate Root

Suppose you want to install one instance of the Communications Suite products in the `/opt/sun/mycompany/comms/` directory, and another instance of the same products in the `/opt/sun/mycompany/comms2/` directory. You would use the following commands:

For the default root:

```
./commpkg install --installroot /opt/sun/mycompany/comms
```

For the alternate root:

```
commpkg install /opt/sun/mycompany/comms2/
```

Running Multiple Installations of the Same Product on One Host: Conflicting Ports

By default, after you initially configure the product on alternate roots, the ports used by the different product installations are the same and thus conflict with each other.

This is not a problem if you install multiple installations of the same product on the same host but only intend to have one instance running at one time. For example, you may perform a side-by-side upgrade scenario in which you plan to stop the old instance before you start the new instance.

However, you may plan to test the new instance while the old instance is still running (and supporting end users). In this scenario, the ports are used simultaneously.

There are two ways to resolve this conflict:

- Configure individual ports
- Use a multi-home configuration

These approaches are described in the following sections.

Configuring Individual Ports

See Configuring Individual Ports for Multiple Installations of the Same Product.

Configuring a Host to Be Multi-Homed

See Configuring a Host to be Multi-Homed.

Uninstalling Communications Suite in Silent Mode

Uninstalling Oracle Communications Unified Communications Suite in Silent Mode Version 7 Update 4

If you run the uninstaller in Silent mode, you are running a non-interactive session. The uninstallation inputs are taken from a silent uninstallation file (also known as a state file), from command line arguments, or defaults.

To run a silent uninstallation, follow these steps:

1. Run an interactive uninstallation session.
   A state file similar to `/var/opt/CommsInstaller/logs/silent_CommsInstaller_20130130090040` is automatically created.

   > **Note**
   > The silent installation and uninstallation files have the same syntax and file naming convention. To determine if it is an installation or uninstallation silent file consult the value of the VERB property.

2. Copy the state file to each host machine and edit the file as needed.
3. Run the silent uninstallation on each host. See usage in commpkg uninstall Usage.

   > **Note**
   > Command-line arguments override the values and arguments in the state file.

   The following is a sample uninstall silent file:

```
#
# Silent File for CommsInstaller 7.0.4.0.0 (7.3-0.28)
# Generated on 20130130090040
#

#
# verb used to create this silent file
VERB=upgrade

#
# alternate distro path if not found where commpkg resides
#    and no --distro switch specified is
#
ALTDISTROPATH=/Downloads/Comms7U4-May

#
# flag to indicate whether to perform pkg overwrite if the pkg
already exists
#
PKGOVERWRITE=no
```

```
#
# flag to indicate whether to exclude OS patches
#
EXCLUDEOS=no

#
# flag to indicate whether to exclude shared components
#
EXCLUDESC=no

#
# flag to indicate that all SC should or should not be upgraded
without prompting
#
UPGRADESC=no

#
# INSTALLROOT friendly name
#
INSTALLNAME=

#
# flag to indicate whether to perform upgrade using pkgrm/pkgadd
#
USEPKGUPGRADE=no

#
# flag to indicate whether to skip OS Level Check
#
SKIPOSLEVELCHECK=no

#
# list of components (using mnemonics)
#
```

```
COMPONENTS=JISS
COMPONENT_VERSIONS= 1.4
```

Verifying the GlassFish Server Version

Verifying the Sun GlassFish Server Version

Use the following commands to obtain information about your GlassFish Server deployment.

- To verify the GlassFish Server version that you have installed:

```
# /opt/SUNWappserver/bin/asadmin version
```

- To see the profile type:

```
# grep -i admin_profile /opt/SUNWappserver/config/asadminenv.conf
```

- To see environment variables, examine the `asenv.conf` file, for example:

```
# grep -i hadb /opt/SUNWappserver/config/asenv.conf

# grep -i jdk /opt/SUNWappserver/config/asenv.conf
```

- To see the Java version:

```
# /opt/SUNWappserver/jdk/bin/java -version
java version "1.6.0_37"
Java(TM) SE Runtime Environment (build 1.6.0_37-b03)
Java HotSpot(TM) Server VM (build 20.1-b02, mixed mode)
```

Chapter 4. Communications Suite Upgrade Guide

Oracle Communications Unified Communications Suite Upgrade Guide
Version 7 Update 4

This information describes the best practices for upgrading prior versions of Oracle Communications Unified Communications Suite (formerly known as Sun Java Communications Suite). For a list of those individual product version numbers see Oracle Communications Unified Communications Suite Products and Components.

Topics:

- About This Information
- About the Communications Suite Upgrade Process
- Defining Your Target Communications Suite Deployment
- Determining the Sequence of Product Upgrade
- Preparing to Upgrade
- Upgrading `comm_dssetup.pl`
- Upgrading Messaging Server
  - Upgrading Messaging Server in a High Availability (HA) Environment
- Upgrading Calendar Server (Calendar Server 7)
- Upgrading Instant Messaging Server
  - Upgrading the Instant Messaging Server in a High Availability (HA) Environment
- Upgrading Convergence
- Upgrading Indexing and Search Service
- Upgrading Delegated Administrator for Oracle Communications Unified Communications Suite
- Upgrading Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite

About This Information

In this information, the terms products, product components, and shared components are used. *Products* are items such as Messaging Server, Calendar Server, Delegated Administrator, and Instant Messaging Server. *Product components* are functional parts of the products. For example, Messaging Server has message stores, relays, and messaging multiplexors. Calendar Server has front-end and back-end servers. *Shared components* are software components that are not part of Communications Suite or other support products, but are required for Communications Suite products to operate. Examples include Network File System (NFS), Simple Authentication and Security Layer (SASL), and Java software.

About the Communications Suite Upgrade Process

Communications Suite consists of a number of individual products, product components, and shared components. Unfortunately, Communications Suite does not provide a single system utility to upgrade all Communications Suite components at the same time. Therefore, upgrading a Communications Suite deployment consists of upgrading one component at a time and one computer at a time, by using the component-specific upgrade procedures described in the following sections. Some upgrade procedures are simple, such as applying a patch to the existing software. Other procedures are more complex and require considerably more planning and preparation. Proper upgrading starts with knowing what products you want to upgrade and the order in which to upgrade them.

Defining Your Target Communications Suite Deployment

A successful upgrade depends on identifying both your current deployment and your target deployment. By defining your target deployment, you identify which products and components you need to upgrade and which ones can remain as is.

The three most common Communications Suite upgrade scenarios include:

- **Upgrade for a product feature.** You want a feature from a specific product and you are only interested in upgrading the products and components that are necessary to support that feature.
  - In this scenario, you upgrade the desired product as described in the upgrade information for that product.
- **Upgrade to use Convergence.** You only want to upgrade the products and components that are necessary to use Convergence.
  - See Product Version Compatibility Requirements for Convergence 2 for the minimum versions of products that run Convergence.
- **Upgrade all products and components to the latest release.** You want to run the latest versions of all Communications Suite products and components.
  - Upgrade each product and component individually, host by host. See Requirements for Communications Suite.

When you have chosen the scenario that best fits your situation, you can determine what products to upgrade.

> **Tip**
> Installing only shared components: To install just the shared components for a component product, launch the Communications Suite installer, then prefix your product selection with a tilde (~). For example, to install only the shared components for Messaging Server 64-bit, at the Product Selection prompt, type **~1**. You can type multiple selections, separating each of your entries with a comma.

Determining the Sequence of Product Upgrade

The order in which you update the Communications Suite products and versions can be critical. Use the following guidelines to determine the sequence for upgrading Communications Suite products:

1. Upgrade and run `comm_dssetup` before upgrading any other component.

   > **Note**
   > Communications Suite components cannot be upgraded at the same time. Some of the components need to be upgraded before others. Calendar Server and Delegated Administrator check for the latest configured version of `comm_dssetup`.

2. Prior to upgrading and reconfiguring Convergence, first upgrade and configure the components on which your Convergence deployment is dependent (such as Calendar Server, Messaging Server and Instant Messaging Server).
3. Calendar Server, Messaging Server, Directory Server, and GlassFish Server should be up and running before upgrading Convergence.

The following sections describe how to upgrade each of the Communications Suite products.

Preparing to Upgrade

Before starting an upgrade, it is good practice to make a backup copy of customized files and configuration files. In particular, the following files should be backed up:

- Convergence: `/opt/SUNWappserver/domains/domain1/docroot/iwc_static/layout/login.html`
- Instant Messaging: `/opt/sun/comms/im/config/iim.conf`

Upgrading `comm_dssetup.pl`

Run the latest version of `comm_dssetup.pl` to prepare the schema, index, and data in your Directory Server to work with Messaging Server, Calendar Server, Instant Messaging, Delegated Administrator, or any products that depend on the Directory Server. See: DSsetup Patches By Release.

See also: Sample Dssetup Upgrade Script.

To upgrade the schema, index, and data in your Directory Server:

1. Run `commpkg upgrade`.
   For upgrade details, see `commpkg upgrade` Usage.
2. Select only Comms DSsetup 6.4 from the list of products.
3. Run `perl comm_dssetup.pl` on your Directory Server hosts.
   For details, see Communications Suite Directory Server Setup Script (comm_dssetup.pl).

Upgrading Messaging Server

See Messaging Server Upgrade.

Upgrading Messaging Server in a High Availability (HA) Environment

See Upgrading to Messaging Server in an HA Environment.

Upgrading Calendar Server (Calendar Server 7)

See Upgrading Calendar Server.

Upgrading Instant Messaging Server

See Instant Messaging Upgrade.

Upgrading the Instant Messaging Server in a High Availability (HA) Environment

See Upgrading Instant Messaging in an HA Environment.

Upgrading Convergence

To upgrade from Convergence 2 to Convergence 2 Patch 6, see Upgrading Convergence.

Upgrading Indexing and Search Service

See Upgrading Indexing and Search Service.

Upgrading Delegated Administrator for Oracle Communications Unified Communications Suite

See Delegated Administrator Upgrade.

Upgrading Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite

See Connector for Microsoft Outlook Upgrade Guide.

commpkg upgrade Usage

commpkg upgrade Usage
Version 7 Update 4

Topics:

- About commpkg upgrade
- commpkg upgrade Command Syntax
- commpkg upgrade Command Options
- commpkg upgrade Sample Session

About commpkg upgrade

The `commpkg upgrade` command enables you to upgrade the Communications Suite products and shared components. To use the command, as `root`, invoke `commpkg upgrade`. Additional "power user" options are available for more complicated upgrade scenarios.

The `upgrade` sub-command upgrades the Communications Suite components' software installation. However, some components require additional steps after running the command.

For more information about upgrading specific components, see the Communications Suite Upgrade Guide. Consult a specific component's upgrade information to see if additional steps are required before or after running the `upgrade` sub-command.

commpkg upgrade Command Syntax

`commpkg` [*general options*] `upgrade` [*upgrade options*] [*ALTROOT* | *name*]

For information about the `commpkg` general syntax, other sub-commands, and general options, see:

commpkg - General Syntax and Commands

Using the ALTROOT | name Command-Line Argument

This argument is supported only on Solaris OS. Specify *ALTROOT* | *name* on the command line to upgrade components that were previously installed in an alternate root.

If you specify the *name* command-line argument, it must exist in the software list, otherwise an error is returned. The *name* is looked up in the software list and is used for the corresponding *ALTROOT*.

For more information, see Using the ALTROOT Command-Line Argument.

commpkg upgrade Command Options

The following table shows the `commpkg upgrade` command options.

commpkg Upgrade Options

Options	Description
`--excludeOS`	Does not apply operating system patches during product upgrade.
`--excludeSC`	Does not install, upgrade, or patch any shared components.

`--altroot` [*name*]	**This option has been deprecated.** Use the *ALTROOT* | *name* command line argument instead. This option is available only on Solaris OS. Specifies an alternate root directory during a multi-host installation. The `INSTALLROOT` (the top-level installation directory for all products and shared components) is the alternate root. If you specify a *name*, it is an "alias" associated with the alternate root that is registered in the software list. The *name* option is supported only on Solaris OS (not on Linux). You can use this option to install multiple instances of Communications Suite products on the same host or Solaris zone. Additionally, you can use this option to perform a side-by-side upgrade of Communications Suite products.
`--distro` *path*	Specifies the *path* to packages and patches for the products. Default path: Location of `commpkg` script
`--installroot` *path*	Specifies the *path* of `INSTALLROOT`, the top-level installation directory for Communications Suite products and shared components. Default `INSTALLROOT` on Solaris OS and Red Hat Linux: `/opt/sun/comms` The subdirectories for individual Communications Suite products are installed under the `INSTALLROOT`.
`--silent` *INPUTFILE*	Runs silent upgrade, taking the inputs from the *INPUTFILE* and the command-line arguments. The command-line arguments override entries in the *INPUTFILE*. Upgrade proceeds without interactive prompts. Use `--dry-run` to test silent upgrade without actually installing the software. Specify `NONE` for *INPUTFILE* if you want to run in silent mode without using an input file. When you specify `NONE`, the upgrade uses default values. For more information about running a silent upgrade, see Upgrading Communications Suite in Silent Mode.
`--dry-run` or `-n`	Does not upgrade Communications Suite components but performs checks. This option creates a silent upgrade file in the `/tmp` directory.
`--upgradeSC [y|n]`	Indicates whether or not to upgrade shared components as required. If this option is not specified, you are prompted for each shared component that needs to be upgraded by the package uninstall/install. Default: n **Caution** Upgrading shared components is irreversible. However, if you do not upgrade required shared components, products might not work as designed. The `--excludeSC` flag has precedence over this flag.
`--pkgOverwrite`	This option is only for Solaris OS systems. Overwrites the existing installation package. You might use this option when you are installing a shared component in a global zone where either the shared component does not exist in a global zone, or the shared component exists in the whole root zone. The default is not to override the existing package. In general, shared components should be managed in the global zone.

`--components` *`comp1 comp2 ...`*	Specifies the Communications Suite component products to be upgraded. Separate each component product with a space. (Thus, the list is a space-delimited set.) To specify each component product, use the mnemonic associated with that product. For example, Messaging Server (32-bit) uses MS, Messaging Server (64-bit) uses MS64, Calendar Server uses CS, and so on. To display a list of the mnemonics for all the component products, use the `commpkg info --listpackages` command.
`--usePkgUpgrade`	For Communications Suite products, if the upgrade can be performed by using a patch or an in-place package upgrade, this option uses the in-place package upgrade. The default is to use a patch to upgrade, if possible. **Note** Patches are used only on Solaris OS.

Note: The `auditDistro` option was removed in Communications Suite 7 Update 3.

commpkg upgrade Sample Session

Here is a sample session of `commpkg upgrade`.

commpkg upgrade Sample Session

commpkg upgrade Sample Session

This sample session shows an upgrade of the following Communications Suite 7 Update 4 products:

- Messaging Server, from version 7 Update 4 to version 7 Update 5
- Comms Directory Server Setup Script, to version 6.4-24.03.

The session uses the `commpkg upgrade` command to perform the upgrade.

Topics:

- Summary of Commands Run
- Comments
- Session

This section outlines the commands to run and lists a sample session.

Summary of Commands Run

```
999  ./commpkg install --silent=NONE --comp="MS64 DSSETUP"
 1000  /opt/sun/comms/messaging64/bin/configure -state
~user/wspace/saveStates/worfin
 1001  /opt/sun/comms/messaging64/bin/start-msg
 1002  uname -a
 1003  ./commpkg upgrade
 1004  cd ../ci74
 1005  ./commpkg upgrade

 1007  cat
/var/opt/CommsInstaller/logs/silent_CommsInstaller_20130507193917
 1008  cat
/var/opt/CommsInstaller/logs/CommsInstaller_20130507193917.log
 1009  ./commpkg info
 1010  ./commpkg info --verbose
```

Comments

```
(Carryover from R7u2) Upgrade comments
- Only products that are upgradable are listed. E.g. if MS was already
  at the latest version, then it would not be displayed as a selection
  for upgrade.
- Different products may require additional steps after upgrade.
  - Dssetup in particular requires that you run the new version to
    update the DS. This isn't shown in the sample session.
  - For MS, there are no additional steps required unless you are in a
    cluster.
  - For DA you typically have to upgrade DSsetup first prior to
    upgrading DA, entailing that you have to run commpkg upgrade twice
    (unfortunately)
- Shared components (SCs) will be upgraded as required.
  - If you don't want SCs upgraded use the --excludeSC switch
- Note that upgrade will either do a pkgrm/pkgadd or a patchadd for
  the upgrade depending on what is installed. In the case of MS for
  this session, patchadd is done. If the original MS installation was
  6.3, a pkgrm/pkgadd would have been done. For Dssetup, the new
  version is a  patch, so patchadd is used. Note that you can backout
  a patch with patchrm, but there is no easy way to backout an upgrade
  that uses pkgrm/pkgadd. In either case, it is always advisable to have
a
  backup of your system (e.g. using zfs snapshot)
```

Session

```
[999 Tue May 07 19:35:05 root@host1% /home/user/wspace/releases/ci72# ]
# ./commpkg install --silent=NONE --comp="MS64 DSSETUP"
-- LOGFILE: /tmp/CommsInstaller_20130507193621.log
CommsInstaller version R7u2 (7.2-0.36 [7.0.2.0.0]) built on Fri Sep  9
13:45:27 PDT 2011

Welcome to the Oracle Communications Unified Communications Suite
Product Installer
This program will install selected components of the Communications
Suite
on your computer. Do note that the installer lays down the
bits, but does not do configuration. Separate configuration
steps for each individual product will be required.

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Specify Install Location

This program will extract the server files and install them
into a directory you specify. That directory is called the
INSTALLROOT in the product documentation and will contain
the server programs.

To accept the default shown in brackets, press the Enter key.
```

```
Install location [/opt/sun/comms]: -- /opt/sun/comms already exists,
existing data may be overwritten
Accept
Anyway?=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Detecting Installed Patches...
Use of uninitialized value in concatenation (.) or string at
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci72/.inst
line 114, <PATCHADD> line 16.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Product Selection:

Shared Components (not shown) will be installed as required.
  Any required Shared Components upgrade will NOT be performed.
  This may result in products not working.
OS patches (not shown) will be installed as required.

Communication Products:

    Item  Description
    ----  -----------
       1  Messaging Server (64bit) 7u4 (7.4-23.01)
       2  Comms DSsetup 6.4 (6.4-23.01)
       3  Calendar Server 7u2 (7.2-4.19)
       4  Instant Messaging 9 (9.0-00.15)
       5  Convergence 2 (2.0-2.01)
       6  Indexing and Search Service 1u3 (1.3-8.6501)
       7  Comms Delegated Administrator 7 (7.0-4.00)
       8  Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
       9  Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)


Enter the items you wish to install. Enter q to quit.
Prefix an item with ~ to indicate you only want
  to install shared component dependencies of that product
You can enter multiple items using commas to separate them.
For example: 1,2
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Generating list of things to install...
Checking for Shared Component Upgrade Requirements...
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
  WILL INSTALL: Simple Authentication and Security Layer 2.19
  WILL INSTALL: LDAPCSDK6 Tools 6.0
  WILL INSTALL: International Components for Unicode ICU2,ICU3
  WILL INSTALL: LDAPCSDK6 6.0
  WILL INSTALL: Service Tags 1.1.4
  WILL INSTALL: JDK 1.6.0
  WILL INSTALL: Java Help Runtime 2.0
  WILL INSTALL: Message Queue 4.4
  WILL INSTALL: Message Queue Localization 4.4
  WILL INSTALL: Messaging Server (64bit) 7u4 (7.4-23.01)
                to /opt/sun/comms/messaging64
  WILL INSTALL: Comms DSsetup 6.4 (6.4-23.01)
                to /opt/sun/comms/dssetup
  WILL INSTALL: CommsInstaller 7u2 (7.2-0.36)
                to /opt/sun/comms/CommsInstaller
```

```
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Ready to install


==========================================================
Installing Simple Authentication and Security Layer 2.19...
------ Executing Task 1 of 44 ...

==========================================================
Installing LDAPCSDK6 Tools 6.0...
------ Executing Task 2 of 44 ...

==========================================================
Installing International Components for Unicode ICU2,ICU3...
------ Executing Task 3 of 44 ...

==========================================================
Installing LDAPCSDK6 6.0...
------ Executing Task 4 of 44 ...
------ Executing Task 5 of 44 ...

==========================================================
Installing Service Tags 1.1.4...
------ Executing Task 6 of 44 ...
------ Executing Task 7 of 44 ...
------ Executing Task 8 of 44 ...

==========================================================
Installing JDK 1.6.0...
------ Executing Task 9 of 44 ...
------ Executing Task 10 of 44 ...
------ Executing Task 11 of 44 ...
------ Executing Task 12 of 44 ...
------ Executing Task 13 of 44 ...

==========================================================
Installing Java Help Runtime 2.0...
------ Executing Task 14 of 44 ...
------ Executing Task 15 of 44 ...
------ Executing Task 16 of 44 ...
------ Executing Task 17 of 44 ...

==========================================================
Installing Message Queue 4.4...
------ Executing Task 18 of 44 ...
------ Executing Task 19 of 44 ...
------ Executing Task 20 of 44 ...
------ Executing Task 21 of 44 ...
------ Executing Task 22 of 44 ...
------ Executing Task 23 of 44 ...
------ Executing Task 24 of 44 ...
------ Executing Task 25 of 44 ...
------ Executing Task 26 of 44 ...
------ Executing Task 27 of 44 ...

==========================================================
```

```
Installing Message Queue Localization 4.4...
------ Executing Task 28 of 44 ...
------ Executing Task 29 of 44 ...
------ Executing Task 30 of 44 ...
------ Executing Task 31 of 44 ...
------ Executing Task 32 of 44 ...
------ Executing Task 33 of 44 ...
------ Executing Task 34 of 44 ...
------ Executing Task 35 of 44 ...
------ Executing Task 36 of 44 ...
------ Executing Task 37 of 44 ...
------ Executing Task 38 of 44 ...
------ Executing Task 39 of 44 ...
------ Executing Task 40 of 44 ...
------ Executing Task 41 of 44 ...

============================================================
Installing Messaging Server (64bit) 7u4 (7.4-23.01)...
------ Executing Task 42 of 44 ...

============================================================
Installing Comms DSsetup 6.4 (6.4-23.01)...
------ Executing Task 43 of 44 ...

============================================================
Installing CommsInstaller 7u2 (7.2-0.36)...
------ Executing Task 44 of 44 ...
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
SUMMARY:


All tasks PASSED
Checking JES java symlink...
INFO: no update to /etc/softlist.xml required
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=

NOTICE: To undo the installation, run the commands in:
        /var/opt/CommsInstaller/logs/undoCommsInstall_20130507193621

NOTICE: silent file created in:

/var/opt/CommsInstaller/logs/silent_CommsInstaller_20130507193621
NOTICE: LOGFILE  created in:
        /var/opt/CommsInstaller/logs/CommsInstaller_20130507193621.log
[1000 Tue May 07 19:37:24 root@host1% /home/user/wspace/releases/ci72# ]
# /opt/sun/comms/messaging64/bin/configure -state
~user/wspace/saveStates/worfin
WARNING: unknown state file variable: InternalIPlist
WARNING: unknown state file variable: XMLCONFIG
==Creating directories for server data and configuration files
==Checking Directory Server Setup from comm_dssetup
Domain Suffix: o=isp
User/Group Suffix: o=isp
Mail List User Suffix: o=mlusers
Schema Type: 2
==Creating LDAP domain, group and admin accounts
```

```
==Creating Configuration Files
==Writing install/VERSION file
==Compiling MTA character set tables (chbuild)
==Compiling MTA command line tables (clbuild)
==Checking for Common Configuration Warnings
==Writing Save State File
 /var/opt/sun/comms/messaging64/setup/saveState
==Disabling sendmail
  sendmail is already disabled.
Next Steps:
* Disable any other active mail servers on this host
* Configure sendmail client (see documentation for details)
* Make sure nsswitch.conf (or equivalent) has 'hosts: files dns'
* Make sure DNS MX/A record is present for 'company33.com'
* Make sure DNS A record for 'host1.example.com' points to this machine
* Generate/Install SSL Certificate if SSL services desired
* Enable/Disable required services:
 Service          Port  Change Port          Enable/Disable Service
 -------          ----  -----------          ----------------------
 Message Store                               local.store.enable (1)
  IMAP Server     143   service.imap.port     service.imap.enable (1)
  POP Server      110   service.pop.port      service.pop.enable (1)
  IMAPS Server    993   service.imap.sslport  service.imap.enablesslport
(0)
  POPS Server     995   service.pop.sslport   service.pop.enablesslport
(0)
  LMTP Server     225   dispatcher.cnf       dispatcher.cnf (disabled)
 MTA                                         local.imta.enable (1)
  SMTP Relay      25    dispatcher.cnf        dispatcher.cnf (enabled)
  SMTP Submit     587   dispatcher.cnf        dispatcher.cnf (enabled)
  SMTPS Submit    465   dispatcher.cnf        dispatcher.cnf (disabled)
 http mail proxy  8990  service.http.port    service.http.enable (1)
 https mail proxy 8991  service.http.sslport service.http.enablesslport
(0)
 MMP                                         local.mmp.enable (0)
  IMAP Proxy      143   AService.cfg          AService.cfg (0)
  POP Proxy       110   AService.cfg          AService.cfg (0)
  Submit Proxy    587   AService.cfg          AService.cfg (disabled)
  IMAPS Proxy     993   AService.cfg & ImapProxyAService.cfg (disabled)
  POPS Proxy      995   AService.cfg & PopProxyAService.cfg (disabled)
  Submits Proxy   465   AService.cfg & SmtpProxyAService.cfg (disabled)
Internal Servers
 watcher          49994 local.watcher.port   local.watcher.enable (1)
 job_controller   27442 job_controller.cnf   local.imta.enable (1)
 ENS              7997  local.ens.port       local.ens.enable (1)
* Configure your network firewall to allow/block above services as
appropriate
* Make sure postmaster 'user@example.com' is provisioned and functional
* Enable RBAC non-root support for improved security
* Use 'start-msg' to start servers
  or Enable SMF for Messaging Server (see documentation for details)
Configuration Completed with 2 warnings
See log file for details:
 /var/opt/sun/comms/messaging64/log/configure_20130507193804.log
[1001 Tue May 07 19:38:05 root@host1% /home/user/wspace/releases/ci72# ]
# /opt/sun/comms/messaging64/bin/start-msg
```

```
Connecting to watcher ...
Launching watcher ... 23698
Starting ens server ... 23699
Starting store server .... 23700
Checking store server status .... ready
Starting purge server .... 23701
Starting imap server .... 23702
Starting pop server .... 23703
Starting http server .... 23704
Starting sched server ... 23705
Starting dispatcher server .... 23707
Starting job_controller server .... 23713
[1002 Tue May 07 19:38:18 root@host1% /home/user/wspace/releases/ci72# ]
# uname -a
SunOS host1 5.10 Generic_147440-12 sun4v sparc sun4v
[1003 Tue May 07 19:38:23 root@host1% /home/user/wspace/releases/ci72# ]
# ./commpkg upgrade
-- LOGFILE: /tmp/CommsInstaller_20130507193826.log
CommsInstaller version R7u2 (7.2-0.36 [7.0.2.0.0]) built on Fri Sep  9
13:45:27 PDT 2011

Welcome to the Oracle Communications Unified Communications Suite
Product Installer
This program will install selected components of the Communications
Suite
on your computer. Do note that the installer lays down the
bits, but does not do configuration. Separate configuration
steps for each individual product will be required.

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=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Detecting Installed Patches...
Use of uninitialized value in concatenation (.) or string at
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci72/.inst
line 114, <PATCHADD> line 16.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Product Selection:

Communication Products:

    Item  Description
    ----  -----------

Enter the items you wish to upgrade. Enter q to quit.
You can enter multiple items using commas to separate them.
For example: 1,2


 NOTICE: There are no products available to upgrade
Do you want to continue ? [yes] : no
Exiting....
[1004 Tue May 07 19:39:11 root@host1% /home/user/wspace/releases/ci72# ]
# cd ../ci74
```

```
[1005 Tue May 07 19:39:14 root@host1% /home/user/wspace/releases/ci74# ]
# ./commpkg upgrade
-- LOGFILE: /tmp/CommsInstaller_20130507193917.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013

Welcome to the Oracle Communications Unified Communications Suite
Product Installer
This program will install selected components of the Communications
Suite
on your computer. Do note that the installer lays down the
bits, but does not do configuration. Separate configuration
steps for each individual product will be required.

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=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
  NOTICE: CommsInstaller is present with a different pkg VERSION.
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: You must apply the latest OS Recommended Patchset
          Some products will not work properly without it
Do you want to continue ? [no] : yes
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Product Selection:

Communication Products:

    Item  Description
    ----  -----------
       1  Messaging Server (64bit) 7u5 (7.5-28.21)
          Installed Version 7u4 (7.4-23.01) at
/opt/sun/comms/messaging64
       2  Comms DSsetup 6.4 (6.4-24.03)
          Installed Version 6.4 (6.4-23.01) at /opt/sun/comms/dssetup

Enter the items you wish to upgrade. Enter q to quit.
You can enter multiple items using commas to separate them.
For example: 1,2

Please select the products you wish to upgrade [1, 2]:
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Checking for Shared Component Upgrade Requirements...
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
  WILL INSTALL: patch 125358-15 for NSS/NSPR/JSS
  NOTICE: CommsInstaller will be upgraded...
          Removing the old version is an irreversible process.
  WILL REMOVE EXISTING: CommsInstaller 7.0.2.0.0
  WILL INSTALL: CommsInstaller 7.0.4.0.0
                to /opt/sun/comms/CommsInstaller
  NOTICE: Upgrading Messaging Server (64bit) 7u4 (7.4-23.01)
```

```
          to 7u5 (7.5-28.21) at /opt/sun/comms/messaging64
          Upgrade will be done by applying a patch
  WILL INSTALL: patch 137204-28 for Messaging Server (64bit)
  NOTICE: Upgrading Comms DSsetup 6.4 (6.4-23.01)
          to 6.4 (6.4-24.03) at /opt/sun/comms/dssetup
          Upgrade will be done by applying a patch
  WILL INSTALL: patch 118245-24 for Comms DSsetup
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Ready to upgrade

Do you want to continue ? [yes] :

============================================================
Installing patch 125358-15 for NSS/NSPR/JSS...
------ Executing Task 1 of 7 ...

============================================================
Removing existing CommsInstaller 7.0.2.0.0...
------ Executing Task 2 of 7 ...

============================================================
Installing CommsInstaller 7.0.4.0.0...
------ Executing Task 3 of 7 ...

============================================================
Upgrading Messaging Server (64bit) 7u4 (7.4-23.01) at
/opt/sun/comms/messaging64...
------ Executing Task 4 of 7 ...
--
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
7.4-23.01 /opt/sun/comms/messaging64 0 "137204-28"

============================================================
Installing patch 137204-28 for Messaging Server (64bit)...
------ Executing Task 5 of 7 ...
------ Executing Task 6 of 7 ...
--
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
7.4-23.01 /opt/sun/comms/messaging64 0 "137204-28"
-- /opt/sun/comms/messaging64/bin/patch-config
/opt/sun/comms/messaging64/install/patch/137204-28
-- LOGFILE:
/opt/sun/comms/messaging64/install/patch/137204-28/patch-config_20130507194
New: /opt/sun/comms/messaging64/config/msg.conf.defaults
-- New: /opt/sun/comms/messaging64/config/mappings.locale
-- New: /opt/sun/comms/messaging64/config/internet.rules
-- New: /opt/sun/comms/messaging64/config/imta.cnf
-- New: /opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
-- Del: /opt/sun/comms/messaging64/config/ImapProxyAService-def.cfg
-- Del: /opt/sun/comms/messaging64/config/PopProxyAService-def.cfg
-- Del: /opt/sun/comms/messaging64/config/SmtpProxyAService-def.cfg
--
-- Number of new config files: 5
-- Number of config files to delete: 3
-- Number of config files with conflicts: 0
-- Number of config files that are images (gif png ico or jpg): 0
```

```
-- The list of new config files are in:
    /opt/sun/comms/messaging64/install/patch/137204-28/newconfig.list
-- The list of config files to be deleted are in:
    /opt/sun/comms/messaging64/install/patch/137204-28/delconfig.list

--
-- Please review the changes in the new config files before installing
them.
-- To install the updated config files, run
-- /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-28

-- /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-28
-- LOGFILE:
/opt/sun/comms/messaging64/install/patch/137204-28/install-newconfig_201305
Stopping services: /opt/sun/comms/messaging64/bin/stop-msg
/opt/sun/comms/messaging64/bin/stop-msg
Connecting to watcher ...
Warning: Cannot connect to watcher
job_controller server is not running
dispatcher server is not running
sched server is not running
http server is not running
pop server is not running
imap server is not running
purge server is not running
store server is not running
ens server is not running
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/msg.conf.def
/opt/sun/comms/messaging64/config/msg.conf.defaults
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/mappings.loc
/opt/sun/comms/messaging64/config/mappings.locale
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/internet.rul
/opt/sun/comms/messaging64/config/internet.rules
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/imta.cnf.new
/opt/sun/comms/messaging64/config/imta.cnf
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/data/install/ugdir_
/opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
unlink /opt/sun/comms/messaging64/config/ImapProxyAService-def.cfg
unlink /opt/sun/comms/messaging64/config/PopProxyAService-def.cfg
unlink /opt/sun/comms/messaging64/config/SmtpProxyAService-def.cfg
-- Number of different files: 5
-- Number of deleted files: 3
-- Original files are backed up under
/opt/sun/comms/messaging64/install/patch/137204-28/config_20130507194112
-- The final step is to apply the ldif file
-- /opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
-- to the user/group Directory
-- This is not performed automatically, you must do this manually
============================================================
```

```
Done Upgrading Messaging Server (64bit) to 7u5 (7.5-28.21) at
/opt/sun/comms/messaging64

============================================================
Upgrading Comms DSsetup 6.4 (6.4-23.01) at /opt/sun/comms/dssetup...

============================================================
Installing patch 118245-24 for Comms DSsetup...
------ Executing Task 7 of 7 ...
============================================================
Done Upgrading Comms DSsetup to 6.4 (6.4-24.03) at
/opt/sun/comms/dssetup
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SUMMARY:

-- Output of Task 6: postupgrade
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
7.4-23.01 /opt/sun/comms/messaging64 0 "137204-28"
-- /opt/sun/comms/messaging64/bin/patch-config
/opt/sun/comms/messaging64/install/patch/137204-28
-- LOGFILE:
/opt/sun/comms/messaging64/install/patch/137204-28/patch-config_20130507194
New: /opt/sun/comms/messaging64/config/msg.conf.defaults
-- New: /opt/sun/comms/messaging64/config/mappings.locale
-- New: /opt/sun/comms/messaging64/config/internet.rules
-- New: /opt/sun/comms/messaging64/config/imta.cnf
-- New: /opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
-- Del: /opt/sun/comms/messaging64/config/ImapProxyAService-def.cfg
-- Del: /opt/sun/comms/messaging64/config/PopProxyAService-def.cfg
-- Del: /opt/sun/comms/messaging64/config/SmtpProxyAService-def.cfg
--
-- Number of new config files: 5
-- Number of config files to delete: 3
-- Number of config files with conflicts: 0
-- Number of config files that are images (gif png ico or jpg): 0
-- The list of new config files are in:
    /opt/sun/comms/messaging64/install/patch/137204-28/newconfig.list
-- The list of config files to be deleted are in:
    /opt/sun/comms/messaging64/install/patch/137204-28/delconfig.list

--
-- Please review the changes in the new config files before installing
them.
-- To install the updated config files, run
-- /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-28

-- /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-28
-- LOGFILE:
/opt/sun/comms/messaging64/install/patch/137204-28/install-newconfig_201305
Stopping services: /opt/sun/comms/messaging64/bin/stop-msg
/opt/sun/comms/messaging64/bin/stop-msg
Connecting to watcher ...
Warning: Cannot connect to watcher
job_controller server is not running
```

```
dispatcher server is not running
sched server is not running
http server is not running
pop server is not running
imap server is not running
purge server is not running
store server is not running
ens server is not running
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/msg.conf.def
/opt/sun/comms/messaging64/config/msg.conf.defaults
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/mappings.loc
/opt/sun/comms/messaging64/config/mappings.locale
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/internet.rul
/opt/sun/comms/messaging64/config/internet.rules
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/imta.cnf.new
/opt/sun/comms/messaging64/config/imta.cnf
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/data/install/ugdir_
/opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
unlink /opt/sun/comms/messaging64/config/ImapProxyAService-def.cfg
unlink /opt/sun/comms/messaging64/config/PopProxyAService-def.cfg
unlink /opt/sun/comms/messaging64/config/SmtpProxyAService-def.cfg
-- Number of different files: 5
-- Number of deleted files: 3
-- Original files are backed up under
/opt/sun/comms/messaging64/install/patch/137204-28/config_20130507194112
-- The final step is to apply the ldif file
-- /opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
-- to the user/group Directory
-- This is not performed automatically, you must do this manually
-- End of command output--

All tasks PASSED
Checking JES java symlink...
INFO: no update to /etc/softlist.xml required

Hit Return to Continue:
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NOTICE: silent file created in:

/var/opt/CommsInstaller/logs/silent_CommsInstaller_20130507193917
NOTICE: LOGFILE  created in:
        /var/opt/CommsInstaller/logs/CommsInstaller_20130507193917.log
[1006 Tue May 07 19:42:10 root@host1% /home/user/wspace/releases/ci74# ]
# cat cvat
cat: cannot open cvat
[1007 Tue May 07 19:42:19 root@host1% /home/user/wspace/releases/ci74# ]
# cat /var/opt/CommsInstaller/logs/silent_CommsInstaller_20130507193917
#
# Silent File for CommsInstaller 7.0.4.0.0 (7.4-0.05)
# Generated on 20130507193917
```

```
#

#
# verb used to create this silent file
VERB=upgrade

#
# alternate distro path if not found where commpkg resides
#    and no --distro switch specified is
#
ALTDISTROPATH=/net/comms-nfs.example.com/export/megan/wspace/dl111122/relea
flag to indicate whether to perform pkg overwrite if the pkg already
exists
#
PKGOVERWRITE=no

#
# flag to indicate whether to exclude OS patches
#
EXCLUDEOS=no

#
# flag to indicate whether to exclude shared components
#
EXCLUDESC=no

#
# flag to indicate that all SC should or should not be upgraded without
prompting
#
UPGRADESC=no

#
# INSTALLROOT friendly name
#
INSTALLNAME=

#
# flag to indicate whether to perform upgrade using pkgrm/pkgadd
#
USEPKGUPGRADE=no

#
# flag to indicate whether to skip OS Level Check
#
SKIPOSLEVELCHECK=no

#
# list of components (using mnemonics)
#
COMPONENTS=MS64 DSSETUP
COMPONENT_VERSIONS= 7.5 6.4
[1008 Tue May 07 19:42:28 root@host1% /home/user/wspace/releases/ci74# ]
# cat /var/opt/CommsInstaller/logs/CommsInstaller_20130507193917.log
============ LOGFILE started Tue May  7 19:39:17 2013 ==========
LOGFILE = /tmp/CommsInstaller_20130507193917.log
```

```
Running /usr/bin/perl ./commpkg
-- /usr/bin/perl ./commpkg upgrade
-- ARGS:
   upgrade
-- perl version: 5.008004 pid: 24033
-- basetime: 1367980757 Tue May  7 19:39:17 2013
-- scriptDir:
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74
-- LOGFILE: /tmp/CommsInstaller_20130507193917.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013
-- UNAME = SunOS ARCH = sparc OS_VERS = 5.10 BITS = 64
uname -a 2>&1
SunOS host1 5.10 Generic_147440-12 sun4v sparc sun4v
-- Exit status: 0
!!! ENV
$VAR1 = {
          'HOME' => '/',
          'PS1' => '[\\! \\d \\t \\u@\\h% \\w\\$ ]
\\$ ',
          'LC_COLLATE' => '',
          'LC_ALL' => '',
          'CDPATH' => ':..:/home/user',
          'LC_NUMERIC' => '',
          'MAIL' => '/var/mail/uadmin',
          'TZ' => 'PST8PDT',
          'PWD' => '/home/user/wspace/releases/ci74',
          'LC_TIME' => '',
          'LANG' => 'C',
          'LC_MESSAGES' => '',
          'LC_CTYPE' => '',
          'LOGNAME' => 'uadmin',
          'SHLVL' => '1',
          'OLDPWD' => '/home/user/wspace/releases/ci72',
          'LC_MONETARY' => '',
          '_' => './commpkg',
          'PATH' =>
'/bin:/usr/bin:/usr/sbin:/sbin:/usr/etc::~user/bin:/usr/sbin:/usr/bin',
          'SHELL' => '/bin/sh',
          'HZ' => '',
          'TERM' => 'dumb'
        };
cat /etc/release 2>&1
                   Oracle Solaris 10 8/11 s10s_u10wos_17b SPARC
  Copyright (c) 1983, 2011, Oracle and/or its affiliates. All rights
reserved.
                            Assembled 23 August 2011
-- Exit status: 0
-- Recognized OS_VERS
!!! comms products found in distro
$VAR1 = [
          'MS64',
          'DSSETUP',
          'DAV',
          'IM',
          'IWC',
```

```
          'JISS',
          'DA',
          'MS_SCHA',
          'IM_SCHA'
        ];
!!! products found in distro, distrProds
$VAR1 = {
          'ST' => {
                    'Packages' => 1
                  },
          'SASL' => {
                      'Packages' => 1,
                      'Patches' => 1
                    },
          'IWC' => {
                     'Packages' => 1,
                     'Patches' => 1
                   },
          'IM' => {
                    'Packages' => 1,
                    'Patches' => 1
                  },
          'DSSETUP' => {
                         'Packages' => 1,
                         'Patches' => 1
                       },
          'LDAPJDK' => {
                         'Packages' => 1,
                         'Patches' => 1
                       },
          'MQ_L10N' => {
                         'Packages' => 1
                       },
          'MYSQL_MARKER' => {
                              'Packages' => 1
                            },
          'BZIP' => {
                      'Patches' => 1
                    },
          'ICU' => {
                     'Packages' => 1,
                     'Patches' => 1
                   },
          'IM_SCHA' => {
                         'Packages' => 1,
                         'Patches' => 1
                       },
          'MS64' => {
                      'Packages' => 1,
                      'Patches' => 1
                    },
          'LIBCPLUSPLUS' => {
                              'Patches' => 1
                            },
          'DAV' => {
                     'Packages' => 1,
```

```
                      'Patches' => 1
                    },
          'LDAPCSDK6' => {
                           'Packages' => 1
                         },
          'MS_SCHA' => {
                         'Packages' => 1
                       },
          'MQ' => {
                    'Packages' => 1
                  },
          'PATCHUTILS' => {
                            'Patches' => 1
                          },
          'JHRT' => {
                      'Packages' => 1
                    },
          'CI' => {
                    'Packages' => 1
                  },
          'IMAPI' => {
                       'Packages' => 1,
                       'Patches' => 1
                     },
          'DA' => {
                    'Packages' => 1,
                    'Patches' => 1
                  },
          'LDAPCSDK6_TOOLS' => {
                                 'Packages' => 1,
                                 'Patches' => 1
                               },
          'JISS' => {
                      'Packages' => 1,
                      'Patches' => 1
                    },
          'NSS' => {
                     'Packages' => 1,
                     'Patches' => 1
                   }
        };
/usr/bin/pkgcond -n is_what 2>&1
can_add_driver=0
can_remove_driver=0
can_update_driver=0
is_alternative_root=0
is_boot_environment=0
is_diskless_client=0
is_global_zone=1
is_mounted_miniroot=0
is_netinstall_image=0
is_nonglobal_zone=0
is_path_writable=1
is_running_system=1
is_sparse_root_nonglobal_zone=0
is_whole_root_nonglobal_zone=0
```

```
-- Exit status: 1
/usr/bin/pkgcond -n is_global_zone 2>&1
-- Exit status: 1
/usr/bin/pkgcond -n is_sparse_root_nonglobal_zone 2>&1
-- Exit status: 0
Reading Product Files...
Reading
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
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no mapFile
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
```

```
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
Reading OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
QQQ findGetVersion ======
!!! getVersion
$VAR1 = {
          'SASL' => 'none',
          'IWC' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'MS64_L10N' => 'none',
          'MS' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'DSSETUP' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'MQ_L10N' => 'none',
          'ICU' => 'none',
          'MS64' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'DAV' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'LDAPCSDK6' => 'none',
          'CE' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'JDK' => 'none',
          'MYSQL' => 'none',
          'PATCHUTILS' => 'none',
          'MQ' => 'none',
          'IMAPI' => 'none',
          'CI' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.ins
'LDAPCSDK6_TOOLS' => 'none',
          'JISS' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'NSS' => 'none',
          'CS_L10N' => 'none',
          'IM' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'ST' => 'none',
          'RECOMMENDED' => 'none',
          'IM_L10N' => 'none',
          'CS_SCHA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'LDAPJDK' => 'none',
          'BZIP' => 'none',
          'MYSQL_MARKER' => 'none',
          'IM_SCHA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'MS_L10N' => 'none',
```

```
          'LIBCPLUSPLUS' => 'none',
          'MS_SCHA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'CS' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'JHRT' => 'none',
          'CE_L10N' => 'none',
          'DA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
};
!!! prod_getVers
$VAR1 = {
          'SASL' => 0,
          'IWC' => '2.0-6.01',
          'MS64_L10N' => 0,
          'MS' => '7.2-7.02',
          'DSSETUP' => '6.4-24.03',
          'MQ_L10N' => 0,
          'ICU' => 0,
          'MS64' => '7.5-28.21',
          'DAV' => '7.3-10.10',
          'LDAPCSDK6' => 0,
          'CE' => '6.3-13.01',
          'JDK' => 0,
          'MYSQL' => 0,
          'PATCHUTILS' => 0,
          'MQ' => 0,
          'IMAPI' => 0,
          'CI' => '7.4-0.05',
          'LDAPCSDK6_TOOLS' => 0,
          'JISS' => '1.4-16.9301',
          'NSS' => 0,
          'CS_L10N' => 0,
          'IM' => '9.0-03.02',
          'ST' => 0,
          'RECOMMENDED' => 0,
          'IM_L10N' => 0,
          'CS_SCHA' => '6.3-1.01',
          'LDAPJDK' => 0,
          'BZIP' => 0,
          'MYSQL_MARKER' => 0,
          'IM_SCHA' => '7.3-01.02',
          'MS_L10N' => 0,
          'LIBCPLUSPLUS' => 0,
          'MS_SCHA' => '7.0-0.03',
          'CS' => '6.3-32.01',
          'JHRT' => 0,
          'CE_L10N' => 0,
          'DA' => '7.0-7.00'
        };
!!! prod_orclVers
$VAR1 = {
          'SASL' => 0,
          'IWC' => '\'Unrecognized Parameter\'',
          'MS64_L10N' => 0,
          'MS' => '\'Unrecognized Parameter\'',
```

```
          'DSSETUP' => '\'Unrecognized Parameter\'',
          'MQ_L10N' => 0,
          'ICU' => 0,
          'MS64' => '\'Unrecognized Parameter\'',
          'DAV' => '7.0.3.10.0',
          'LDAPCSDK6' => 0,
          'CE' => '\'Unrecognized Parameter\'',
          'JDK' => 0,
          'MYSQL' => 0,
          'PATCHUTILS' => 0,
          'MQ' => 0,
          'IMAPI' => 0,
          'CI' => '7.0.4.0.0',
          'LDAPCSDK6_TOOLS' => 0,
          'JISS' => '1.0.4.16.0',
          'NSS' => 0,
          'CS_L10N' => 0,
          'IM' => '9.0.0.3.0',
          'ST' => 0,
          'RECOMMENDED' => 0,
          'IM_L10N' => 0,
          'CS_SCHA' => '\'Unrecognized Parameter\'',
          'LDAPJDK' => 0,
          'BZIP' => 0,
          'MYSQL_MARKER' => 0,
          'IM_SCHA' => '\'Unrecognized Parameter\'',
          'MS_L10N' => 0,
          'LIBCPLUSPLUS' => 0,
          'MS_SCHA' => '\'Unrecognized Parameter\'',
          'CS' => '\'Unrecognized Parameter\'',
          'JHRT' => 0,
          'CE_L10N' => 0,
          'DA' => '\'Unrecognized Parameter\''
        };
!!! prod_builddate
$VAR1 = {
          'SASL' => 'none',
          'IWC' => '20130402',
          'MS64_L10N' => 'none',
          'MS' => '20090416',
          'DSSETUP' => '20120611',
          'MQ_L10N' => 'none',
          'ICU' => 'none',
          'MS64' => '20130408',
          'DAV' => '20130328',
          'LDAPCSDK6' => 'none',
          'CE' => '20090327',
          'JDK' => 'none',
          'MYSQL' => 'none',
          'PATCHUTILS' => 'none',
          'MQ' => 'none',
          'IMAPI' => 'none',
          'CI' => '20130409',
          'LDAPCSDK6_TOOLS' => 'none',
          'JISS' => '20130320',
          'NSS' => 'none',
```

```
          'CS_L10N' => 'none',
          'IM' => '20130405',
          'ST' => 'none',
          'RECOMMENDED' => 'none',
          'IM_L10N' => 'none',
          'CS_SCHA' => '20080331',
          'LDAPJDK' => 'none',
          'BZIP' => 'none',
          'MYSQL_MARKER' => 'none',
          'IM_SCHA' => '20080403',
          'MS_L10N' => 'none',
          'LIBCPLUSPLUS' => 'none',
          'MS_SCHA' => '20080519',
          'CS' => '20120921',
          'JHRT' => 'none',
          'CE_L10N' => 'none',
          'DA' => '20130319'
        };
====== End QQQ findGetVersion ======
INFO: prod_mktVers{NSS} (no map) = 4.8.8
INFO: prod_mktVers{SASL} (no map) = 2.19
INFO: prod_mktVers{LDAPCSDK6} (no map) = 6.0
INFO: prod_mktVers{LDAPCSDK6_TOOLS} (no map) = 6.0
INFO: prod_mktVers{ICU} (no map) = ICU2,ICU3
INFO: prod_mktVers{JDK} (no map) = 1.6.0
INFO: prod_mktVers{JHRT} (no map) = 2.0
INFO: prod_mktVers{MQ} (no map) = 4.4
INFO: prod_mktVers{MQ_L10N} (no map) = 4.4
INFO: prod_mktVers{LDAPJDK} (no map) = 4.21
INFO: prod_mktVers{IMAPI} (w/ map) = 9
INFO: prod_mktVers{LIBCPLUSPLUS} (no map) = 5.9
INFO: prod_mktVers{PATCHUTILS} (no map) = Unknown
INFO: prod_mktVers{BZIP} (no map) = 11.10
INFO: prod_mktVers{RECOMMENDED} (no map) = 2013.02.19
INFO: prod_mktVers{MYSQL_MARKER} (w/ map) = 1.1
INFO: prod_mktVers{MYSQL} (w/ map) = 5.5.8
INFO: prod_mktVers{ST} (no map) = 1.1.4
INFO: prod_mktVers{CI} (w/ map) = 7u4
INFO: prod_mktVers{MS64} (w/ map) = 7u5
INFO: prod_mktVers{DSSETUP} (w/ map) = 6.4
INFO: prod_mktVers{DAV} (w/ map) = 7u3
INFO: prod_mktVers{IM} (w/ map) = 9
INFO: prod_mktVers{IWC} (w/ map) = 2
INFO: prod_mktVers{JISS} (w/ map) = 1u4
INFO: prod_mktVers{DA} (w/ map) = 7
INFO: prod_mktVers{MS_SCHA} (no map) = 7.0
INFO: prod_mktVers{IM_SCHA} (no map) = 7.3

Welcome to the Oracle Communications Unified Communications Suite
Product Installer
This program will install selected components of the Communications
Suite
on your computer. Do note that the installer lays down the
bits, but does not do configuration. Separate configuration
steps for each individual product will be required.
```

```
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=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Checking LIBCPLUSPLUS 5.9 ...
  Checking pkg SUNWlibC... present.
  LIBCPLUSPLUS 5.9 is already present.
Checking PATCHUTILS Unknown ...
  Checking pkg SUNWpkgcmdsu... present.
  Checking pkg SUNWswmt... present.
  Checking pkg SUNWinstall-patch-utils-root... present.
  Checking pkg SUNWcsr... present.
  Checking pkg SUNWdtrc... present.
  Checking pkg SUNWzoneu... present.
  PATCHUTILS Unknown is already present.
Checking BZIP 11.10 ...
  Checking pkg SUNWbzip... present.
  BZIP 11.10 is already present.
Checking RECOMMENDED 2013.02.19 ...
  RECOMMENDED 2013.02.19 is not present.
Checking MYSQL_MARKER 1.1 ...
  Checking pkg SUNWcomms-mysql-marker... not present.
  MYSQL_MARKER 1.1 is not present.
Checking MYSQL_MARKER 1.0 ...
  Checking pkg SUNWcomms-mysql-marker... not present.
  MYSQL_MARKER 1.0 is not present.
Checking MYSQL 5.5.8 ...
  Checking pkg mysql... not present.
  MYSQL 5.5.8 is not present.
Checking MYSQL 5.1.36 ...
  Checking pkg mysql... not present.
  MYSQL 5.1.36 is not present.
Checking ST 1.1.4 ...
  Checking pkg SUNWservicetagr... present.
  Checking pkg SUNWservicetagu... present.
  Checking pkg SUNWstosreg... present.
  ST 1.1.4 is already present.
Checking NSS 4.8.8 ...
  Checking pkg SUNWjss... present.
  Checking pkg SUNWpr... present.
  Checking pkg SUNWprd... present.
  Checking pkg SUNWtls... present.
  Checking pkg SUNWtlsd... present.
  Checking pkg SUNWtlsu... present.
  NSS 4.8.8 is already present.
Checking SASL 2.19 ...
  Checking pkg SUNWsasl... present.
  SASL 2.19 is already present.
Checking LDAPCSDK6 6.0 ...
  Checking pkg SUNWldapcsdk-libs... present.
  Checking pkg SUNWldapcsdk-dev... present.
  LDAPCSDK6 6.0 is already present.
Checking LDAPCSDK6_TOOLS 6.0 ...
  Checking pkg SUNWldapcsdk-tools... present.
  LDAPCSDK6_TOOLS 6.0 is already present.
```

```
Checking ICU ICU2,ICU3 ...
  Checking pkg SUNWicu... present.
  ICU ICU2,ICU3 is already present.
Checking JDK 1.6.0 ...
  Checking pkg SUNWj6rt... present.
  Checking pkg SUNWj6rtx... present.
  Checking pkg SUNWj6dev... present.
  Checking pkg SUNWj6dvx... present.
  Checking pkg SUNWj6cfg... present.
  JDK 1.6.0 is already present.
Checking JDK 1.5.0 ...
  Checking pkg SUNWj5rt... present.
  Checking pkg SUNWj5rtx... present.
  Checking pkg SUNWj5cfg... present.
  JDK 1.5.0 is already present.
Checking JHRT 2.0 ...
  Checking pkg SUNWjhrt... present.
  Checking pkg SUNWjhdev... present.
  Checking pkg SUNWjhdem... present.
  Checking pkg SUNWjhdoc... present.
  JHRT 2.0 is already present.
Checking MQ 4.4 ...
  Checking pkg SUNWiqr... present.
  Checking pkg SUNWiqu... present.
  Checking pkg SUNWiqdoc... present.
  Checking pkg SUNWiquc... present.
  Checking pkg SUNWiqum... present.
  Checking pkg SUNWiqjx... present.
  Checking pkg SUNWiqfs... present.
  Checking pkg SUNWiqcrt... present.
  Checking pkg SUNWiqcdv... present.
  Checking pkg SUNWiqlen... present.
  MQ 4.4 is already present.
Checking MQ 3.7 ...
  Checking pkg SUNWiqr... present but with a different pkg VERSION.
    checking SUNWiqr 3.7,REV=2006.06.18.22.34
  Checking pkg SUNWiqu... present but with a different pkg VERSION.
    checking SUNWiqu 3.7,REV=2006.06.18.22.34
  Checking pkg SUNWiqlpl... not present.
  Checking pkg SUNWiqdoc... present but with a different pkg VERSION.
    checking SUNWiqdoc 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiquc... present but with a different pkg VERSION.
    checking SUNWiquc 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiqum... present but with a different pkg VERSION.
    checking SUNWiqum 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiqjx... present but with a different pkg VERSION.
    checking SUNWiqjx 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiqfs... present but with a different pkg VERSION.
    checking SUNWiqfs 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiqcrt... present but with a different pkg VERSION.
    checking SUNWiqcrt 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiqcdv... present but with a different pkg VERSION.
    checking SUNWiqcdv 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiqlen... present but with a different pkg VERSION.
    checking SUNWiqlen 3.7,REV=2006.06.18.22.35
  NOTICE: Message Queue is present with a different pkg VERSION.
```

```
Checking MQ 4.1 ...
  Checking pkg SUNWiqr... present but with a different pkg VERSION.
    checking SUNWiqr 4.1,REV=2007.07.26.10.58
  Checking pkg SUNWiqu... present but with a different pkg VERSION.
    checking SUNWiqu 4.1,REV=2007.07.26.10.58
  Checking pkg SUNWiqdoc... present but with a different pkg VERSION.
    checking SUNWiqdoc 4.1,REV=2007.07.26.10.58
  Checking pkg SUNWiquc... present but with a different pkg VERSION.
    checking SUNWiquc 4.1,REV=2007.07.26.10.59
  Checking pkg SUNWiqum... present but with a different pkg VERSION.
    checking SUNWiqum 4.1,REV=2007.07.26.10.59
  Checking pkg SUNWiqjx... present but with a different pkg VERSION.
    checking SUNWiqjx 4.1,REV=2007.07.26.10.59
  Checking pkg SUNWiqfs... present but with a different pkg VERSION.
    checking SUNWiqfs 4.1,REV=2007.07.26.10.59
  Checking pkg SUNWiqcrt... present but with a different pkg VERSION.
    checking SUNWiqcrt 4.1,REV=2007.07.26.10.59
  Checking pkg SUNWiqcdv... present but with a different pkg VERSION.
    checking SUNWiqcdv 4.1,REV=2007.07.26.10.59
  NOTICE: Message Queue is present with a different pkg VERSION.
Checking MQ 4.3 ...
  Checking pkg SUNWiqr... present but with a different pkg VERSION.
    checking SUNWiqr 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqu... present but with a different pkg VERSION.
    checking SUNWiqu 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqdoc... present but with a different pkg VERSION.
    checking SUNWiqdoc 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiquc... present but with a different pkg VERSION.
    checking SUNWiquc 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqum... present but with a different pkg VERSION.
    checking SUNWiqum 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqjx... present but with a different pkg VERSION.
    checking SUNWiqjx 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqfs... present but with a different pkg VERSION.
    checking SUNWiqfs 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqcrt... present but with a different pkg VERSION.
    checking SUNWiqcrt 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqcdv... present but with a different pkg VERSION.
    checking SUNWiqcdv 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqlen... present but with a different pkg VERSION.
    checking SUNWiqlen 4.3,REV=2008.11.07.18.45
  NOTICE: Message Queue is present with a different pkg VERSION.
Checking MQ_L10N 4.4 ...
  Checking pkg SUNWfiqu... present.
  Checking pkg SUNWfiquc... present.
  Checking pkg SUNWdiqu... present.
  Checking pkg SUNWdiquc... present.
  Checking pkg SUNWjiqu... present.
  Checking pkg SUNWjiquc... present.
  Checking pkg SUNWeiqu... present.
  Checking pkg SUNWeiquc... present.
  Checking pkg SUNWkiqu... present.
  Checking pkg SUNWkiquc... present.
  Checking pkg SUNWciqu... present.
  Checking pkg SUNWciquc... present.
  Checking pkg SUNWhiqu... present.
```

```
  Checking pkg SUNWhiquc... present.
  MQ_L10N 4.4 is already present.
Checking MQ_L10N 3.7 ...
  Checking pkg SUNWfiqu... present but with a different pkg VERSION.
    checking SUNWfiqu 3.7,REV=2006.09.28.02.20.49
  Checking pkg SUNWfiquc... present but with a different pkg VERSION.
    checking SUNWfiquc 3.7,REV=2006.09.28.02.21.13
  Checking pkg SUNWdiqu... present but with a different pkg VERSION.
    checking SUNWdiqu 3.7,REV=2006.09.28.02.20.38
  Checking pkg SUNWdiquc... present but with a different pkg VERSION.
    checking SUNWdiquc 3.7,REV=2006.09.28.02.21.09
  Checking pkg SUNWjiqu... present but with a different pkg VERSION.
    checking SUNWjiqu 3.7,REV=2006.09.02.02.06.39
  Checking pkg SUNWjiquc... present but with a different pkg VERSION.
    checking SUNWjiquc 3.7,REV=2006.09.02.02.07.00
  Checking pkg SUNWeiqu... present but with a different pkg VERSION.
    checking SUNWeiqu 3.7,REV=2006.09.28.02.20.43
  Checking pkg SUNWeiquc... present but with a different pkg VERSION.
    checking SUNWeiquc 3.7,REV=2006.09.28.02.21.11
  Checking pkg SUNWkiqu... present but with a different pkg VERSION.
    checking SUNWkiqu 3.7,REV=2006.09.28.02.20.59
  Checking pkg SUNWkiquc... present but with a different pkg VERSION.
    checking SUNWkiquc 3.7,REV=2006.09.28.02.21.19
  Checking pkg SUNWciqu... present but with a different pkg VERSION.
    checking SUNWciqu 3.7,REV=2006.09.02.02.06.49
  Checking pkg SUNWciquc... present but with a different pkg VERSION.
    checking SUNWciquc 3.7,REV=2006.09.02.02.07.03
  Checking pkg SUNWhiqu... present but with a different pkg VERSION.
    checking SUNWhiqu 3.7,REV=2006.10.28.02.59.24
  Checking pkg SUNWhiquc... present but with a different pkg VERSION.
    checking SUNWhiquc 3.7,REV=2006.10.28.02.59.36
  NOTICE: Message Queue Localization is present with a different pkg
VERSION.
Checking MQ_L10N 4.1 ...
  Checking pkg SUNWfiqu... present but with a different pkg VERSION.
    checking SUNWfiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWfiquc... present but with a different pkg VERSION.
    checking SUNWfiquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWdiqu... present but with a different pkg VERSION.
    checking SUNWdiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWdiquc... present but with a different pkg VERSION.
    checking SUNWdiquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWjiqu... present but with a different pkg VERSION.
    checking SUNWjiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWjiquc... present but with a different pkg VERSION.
    checking SUNWjiquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWeiqu... present but with a different pkg VERSION.
    checking SUNWeiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWeiquc... present but with a different pkg VERSION.
    checking SUNWeiquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWkiqu... present but with a different pkg VERSION.
    checking SUNWkiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWkiquc... present but with a different pkg VERSION.
    checking SUNWkiquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWciqu... present but with a different pkg VERSION.
    checking SUNWciqu 4.1,REV=2007.08.02.12.38
```

```
  Checking pkg SUNWciquc... present but with a different pkg VERSION.
    checking SUNWciquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWhiqu... present but with a different pkg VERSION.
    checking SUNWhiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWhiquc... present but with a different pkg VERSION.
    checking SUNWhiquc 4.1,REV=2007.08.02.12.38
  NOTICE: Message Queue Localization is present with a different pkg
VERSION.
Checking MQ_L10N 4.3 ...
  Checking pkg SUNWfiqu... present but with a different pkg VERSION.
    checking SUNWfiqu 4.3,REV=2008.10.27.08.57.02
  Checking pkg SUNWfiquc... present but with a different pkg VERSION.
    checking SUNWfiquc 4.3,REV=2008.10.27.08.57.05
  Checking pkg SUNWdiqu... present but with a different pkg VERSION.
    checking SUNWdiqu 4.3,REV=2008.10.27.08.57.55
  Checking pkg SUNWdiquc... present but with a different pkg VERSION.
    checking SUNWdiquc 4.3,REV=2008.10.27.08.57.58
  Checking pkg SUNWjiqu... present but with a different pkg VERSION.
    checking SUNWjiqu 4.3,REV=2008.10.27.09.00.27
  Checking pkg SUNWjiquc... present but with a different pkg VERSION.
    checking SUNWjiquc 4.3,REV=2008.10.27.09.00.28
  Checking pkg SUNWeiqu... present but with a different pkg VERSION.
    checking SUNWeiqu 4.3,REV=2008.10.27.08.58.45
  Checking pkg SUNWeiquc... present but with a different pkg VERSION.
    checking SUNWeiquc 4.3,REV=2008.10.27.08.58.48
  Checking pkg SUNWkiqu... present but with a different pkg VERSION.
    checking SUNWkiqu 4.3,REV=2008.10.27.08.59.36
  Checking pkg SUNWkiquc... present but with a different pkg VERSION.
    checking SUNWkiquc 4.3,REV=2008.10.27.08.59.38
  Checking pkg SUNWciqu... present but with a different pkg VERSION.
    checking SUNWciqu 4.3,REV=2008.10.27.09.01.18
  Checking pkg SUNWciquc... present but with a different pkg VERSION.
    checking SUNWciquc 4.3,REV=2008.10.27.09.01.19
  Checking pkg SUNWhiqu... present but with a different pkg VERSION.
    checking SUNWhiqu 4.3,REV=2008.10.27.09.02.09
  Checking pkg SUNWhiquc... present but with a different pkg VERSION.
    checking SUNWhiquc 4.3,REV=2008.10.27.09.02.10
  NOTICE: Message Queue Localization is present with a different pkg
VERSION.
Checking LDAPJDK 4.21 ...
  Checking pkg SUNWljdk... not present.
  LDAPJDK 4.21 is not present.
Checking IMAPI 9.0 ...
  Checking pkg SUNWiimdv... not present.
  IMAPI 9.0 is not present.
Checking IMAPI 7.0 ...
  Checking pkg SUNWiimdv... not present.
  IMAPI 7.0 is not present.
Checking IMAPI 7.3 ...
  Checking pkg SUNWiimdv... not present.
  IMAPI 7.3 is not present.
Checking IMAPI 8.0 ...
  Checking pkg SUNWiimdv... not present.
  IMAPI 8.0 is not present.
Checking CI 7.4 ...
  Checking pkg SUNWcomms...
```

```
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-v --installed /opt/sun/comms/CommsInstaller 2>&1
VERSION='7.2-0.36'
BUILDDATE='20110909'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
ORCL_VERSION='7.0.2.0.0'
-- Exit status: 0

/opt/sun/comms/CommsInstaller/lib/getVersion -v 2>&1
VERSION='7.2-0.36'
BUILDDATE='20110909'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0
INFO fillInstalledProd: making pkglist for prod=CI
installed_version=7.2-0.36 v=7.2,REV=2011.09.09 using prodVersFamily 7.4
 present but with a different pkg VERSION.
    checking SUNWcomms 7.4,REV=2013.04.09
  NOTICE: CommsInstaller is present with a different pkg VERSION.
Checking MS64 7.5 ...
  Checking pkg SUNWmessaging-server-64...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/sun/comms/messaging64 2>&1
VERSION='7.4-23.01'
BUILDDATE='20110810'
UNAME='SunOS'
ARCH='sparc'
BITS='64'
-- Exit status: 0

/opt/sun/comms/messaging64/lib/getVersion -v 2>&1
VERSION='7.4-23.01'
BUILDDATE='20110810'
UNAME='SunOS'
ARCH='sparc'
BITS='64'
-- Exit status: 0
 present.
  MS64 7.5 is already present.
Checking MS64 6.3 ...
  Checking pkg SUNWmessaging-server-64... present but with a different
pkg VERSION.
    checking SUNWmessaging-server-64 6.3,REV=2007.02.26
  NOTICE: Messaging Server (64bit) is present with a different pkg
VERSION.
Checking MS64 6.3_32 ...
  Checking pkg SUNWmsgin... not present.
  Checking pkg SUNWmsgen... not present.
  Checking pkg SUNWmsglb... not present.
  Checking pkg SUNWmsgco... not present.
  Checking pkg SUNWmsgmt... not present.
  Checking pkg SUNWmsgst... not present.
  Checking pkg SUNWmsgmp... not present.
```

```
  Checking pkg SUNWmsgwm... not present.
  Checking pkg SUNWmsgmf... not present.
  MS64 6.3_32 is not present.
Checking MS64 7.2_32 ...
  Checking pkg SUNWmessaging-server... not present.
  MS64 7.2_32 is not present.
Checking MS64 7.3_32 ...
  MS64 7.3_32 is not present.
Checking MS64 7.5_32 ...
  MS64 7.5_32 is not present.
Checking DSSETUP 6.4 ...
  Checking pkg SUNWcomds...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/sun/comms/dssetup 2>&1
VERSION='6.4-23.01'
BUILDDATE='20110713'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0

/opt/sun/comms/dssetup/lib/getVersion -v 2>&1
VERSION='6.4-23.01'
BUILDDATE='20110713'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0
 present.
  DSSETUP 6.4 is already present.
Checking DAV 7.3 ...
  Checking pkg SUNWdavserver... not present.
  DAV 7.3 is not present.
Checking IM 9.0 ...
  Checking pkg SUNWiim... not present.
  Checking pkg SUNWiimin... not present.
  Checking pkg SUNWiimm... not present.
  Checking pkg SUNWiimjd... not present.
  Checking pkg SUNWiimid... not present.
  Checking pkg SUNWiimgw... not present.
  Checking pkg SUNWiimw... not present.
  Checking pkg SUNWiimfed... not present.
  IM 9.0 is not present.
Checking IM 7.0 ...
  Checking pkg SUNWiimin... not present.
  Checking pkg SUNWiim... not present.
  Checking pkg SUNWiimm... not present.
  Checking pkg SUNWiimjd... not present.
  Checking pkg SUNWiimid... not present.
  Checking pkg SUNWiimc... not present.
  Checking pkg SUNWiimd... not present.
  IM 7.0 is not present.
Checking IM 7.3 ...
  Checking pkg SUNWiim... not present.
  Checking pkg SUNWiimin... not present.
  Checking pkg SUNWiimm... not present.
```

```
  Checking pkg SUNWiimjd... not present.
  Checking pkg SUNWiimid... not present.
  Checking pkg SUNWiimc... not present.
  Checking pkg SUNWiimd... not present.
  IM 7.3 is not present.
Checking IM 8.3 ...
  Checking pkg SUNWiim... not present.
  Checking pkg SUNWiimin... not present.
  Checking pkg SUNWiimm... not present.
  Checking pkg SUNWiimjd... not present.
  Checking pkg SUNWiimid... not present.
  Checking pkg SUNWiimc... not present.
  Checking pkg SUNWiimd... not present.
  Checking pkg SUNWiimgw... not present.
  IM 8.3 is not present.
Checking IWC 2.0 ...
  Checking pkg SUNWiwc... not present.
  IWC 2.0 is not present.
Checking IWC 1.0 ...
  Checking pkg SUNWiwc... not present.
  IWC 1.0 is not present.
Checking JISS 1.4 ...
  Checking pkg SUNWjiss... not present.
  JISS 1.4 is not present.
Checking JISS 0.9 ...
  Checking pkg SUNWjiss-common... not present.
  Checking pkg SUNWjiss-conf... not present.
  Checking pkg SUNWjiss-extjars... not present.
  Checking pkg SUNWjiss-indexapi... not present.
  Checking pkg SUNWjiss-jmqc... not present.
  Checking pkg SUNWjiss-rest... not present.
  Checking pkg SUNWjiss-search... not present.
  Checking pkg SUNWjiss-searchui... not present.
  Checking pkg SUNWjiss-store... not present.
  Checking pkg SUNWjiss-storeui... not present.
  JISS 0.9 is not present.
Checking DA 7.0 ...
  Checking pkg SUNWcommda... not present.
  DA 7.0 is not present.
Checking DA 6.4 ...
  Checking pkg SUNWcomic... not present.
  Checking pkg SUNWcomis... not present.
  DA 6.4 is not present.
Checking MS_SCHA 7.0 ...
  Checking pkg SUNWmessaging-server-scha... not present.
  MS_SCHA 7.0 is not present.
Checking MS_SCHA 6.0 ...
  Checking pkg SUNWscims... not present.
  MS_SCHA 6.0 is not present.
Checking IM_SCHA 7.3 ...
  Checking pkg SUNWiimsc... not present.
  IM_SCHA 7.3 is not present.
Checking IM_SCHA 7.0 ...
  Checking pkg SUNWiimsc... not present.
  IM_SCHA 7.0 is not present.
Checking MS 7.5_32 ...
```

```
  MS 7.5_32 is not present.
Checking MS 6.3_32 ...
  Checking pkg SUNWmsgin... not present.
  Checking pkg SUNWmsgen... not present.
  Checking pkg SUNWmsglb... not present.
  Checking pkg SUNWmsgco... not present.
  Checking pkg SUNWmsgmt... not present.
  Checking pkg SUNWmsgst... not present.
  Checking pkg SUNWmsgmp... not present.
  Checking pkg SUNWmsgwm... not present.
  Checking pkg SUNWmsgmf... not present.
  MS 6.3_32 is not present.
Checking MS 7.2_32 ...
  Checking pkg SUNWmessaging-server... not present.
  MS 7.2_32 is not present.
Checking MS 7.3_32 ...
  MS 7.3_32 is not present.
Checking MS_L10N 6.2 ...
  Checking pkg SUNWmsgde... not present.
  Checking pkg SUNWmsges... not present.
  Checking pkg SUNWmsgfr... not present.
  Checking pkg SUNWmsgja... not present.
  Checking pkg SUNWmsgko... not present.
  Checking pkg SUNWmsgzh... not present.
  Checking pkg SUNWmsgtw... not present.
  MS_L10N 6.2 is not present.
Checking MS_L10N 6.3 ...
  Checking pkg SUNWmsg-l10n... not present.
  MS_L10N 6.3 is not present.
Checking MS64_L10N 6.3 ...
  Checking pkg SUNWmessaging-server-l10n-64... not present.
  MS64_L10N 6.3 is not present.
Checking CS 6.3 ...
  Checking pkg SUNWics5... not present.
  Checking pkg SUNWica5... not present.
  CS 6.3 is not present.
Checking CS_L10N 6.2 ...
  Checking pkg SUNWdeics... not present.
  Checking pkg SUNWesics... not present.
  Checking pkg SUNWfrics... not present.
  Checking pkg SUNWjaics... not present.
  Checking pkg SUNWkoics... not present.
  Checking pkg SUNWzhics... not present.
  Checking pkg SUNWtwics... not present.
  CS_L10N 6.2 is not present.
Checking CS_L10N 6.3 ...
  Checking pkg SUNWics-l10n... not present.
  CS_L10N 6.3 is not present.
Checking IM_L10N 7.0 ...
  Checking pkg SUNWdiimc... not present.
  Checking pkg SUNWdiimd... not present.
  Checking pkg SUNWdimid... not present.
  Checking pkg SUNWeiimc... not present.
  Checking pkg SUNWeiimd... not present.
  Checking pkg SUNWeiimin... not present.
  Checking pkg SUNWeimid... not present.
```

```
  Checking pkg SUNWfiimc... not present.
  Checking pkg SUNWfiimd... not present.
  Checking pkg SUNWfiimin... not present.
  Checking pkg SUNWfimid... not present.
  Checking pkg SUNWjiimc... not present.
  Checking pkg SUNWjiimd... not present.
  Checking pkg SUNWjiimin... not present.
  Checking pkg SUNWjimid... not present.
  Checking pkg SUNWkiimc... not present.
  Checking pkg SUNWkiimd... not present.
  Checking pkg SUNWkiimin... not present.
  Checking pkg SUNWkimid... not present.
  Checking pkg SUNWciimc... not present.
  Checking pkg SUNWciimd... not present.
  Checking pkg SUNWciimin... not present.
  Checking pkg SUNWcimid... not present.
  Checking pkg SUNWhiimc... not present.
  Checking pkg SUNWhiimd... not present.
  Checking pkg SUNWhiimin... not present.
  Checking pkg SUNWhimid... not present.
  IM_L10N 7.0 is not present.
Checking IM_L10N 7.2 ...
  Checking pkg SUNWiimc-l10n... not present.
  Checking pkg SUNWiimd-l10n... not present.
  Checking pkg SUNWiimid-l10n... not present.
  Checking pkg SUNWiimin-l10n... not present.
  IM_L10N 7.2 is not present.
Checking CE 6.3 ...
  Checking pkg SUNWuwc... not present.
  CE 6.3 is not present.
Checking CE_L10N 6.2 ...
  Checking pkg SUNWduwc... not present.
  Checking pkg SUNWeuwc... not present.
  Checking pkg SUNWfuwc... not present.
  Checking pkg SUNWjuwc... not present.
  Checking pkg SUNWkuwc... not present.
  Checking pkg SUNWcuwc... not present.
  Checking pkg SUNWhuwc... not present.
  CE_L10N 6.2 is not present.
Checking CE_L10N 6.3 ...
  Checking pkg SUNWuwc-l10n... not present.
  CE_L10N 6.3 is not present.
Checking CS_SCHA 6.0 ...
  Checking pkg SUNWscics... not present.
  CS_SCHA 6.0 is not present.
Checking CS_SCHA 6.3 ...
  Checking pkg SUNWscics... not present.
  CS_SCHA 6.3 is not present.
Detecting Installed Patches...
-- chk4patch 119963-27 /tmp/.patchout_20130507193917.24033
-- Running patchadd  -p report...
--   Generating /tmp/.patchout_20130507193917.24033
patchadd  -p > /tmp/.patchout_20130507193917.24033 2>>
/tmp/CommsInstaller_20130507193917.log
-- Exit status: 0
--  older version at lineno 481 found 119963-24 - not acceptable
```

```
--  Exact match found at line 482
--  Final return status: 1
  LIBCPLUSPLUS patch 119963-27 is already present.
-- chk4patch 120900-04 /tmp/.patchout_20130507193917.24033
--  Exact match found at line 52
--  Final return status: 1
  PATCHUTILS patch 120900-04 is already present.
-- chk4patch 121133-02 /tmp/.patchout_20130507193917.24033
--  Exact match found at line 53
--  Final return status: 1
  PATCHUTILS patch 121133-02 is already present.
-- chk4patch 119254-88 /tmp/.patchout_20130507193917.24033
--  older version at lineno 229 found 119254-81 - not acceptable
--  Exact match found at line 232
--  Final return status: 1
  PATCHUTILS patch 119254-88 is already present.
-- chk4patch 126868-04 /tmp/.patchout_20130507193917.24033
--  Exact match found at line 558
--  Final return status: 1
  BZIP patch 126868-04 is already present.
-- chk4patch 137321-01 /tmp/.patchout_20130507193917.24033
--  Exact match found at line 559
--  Final return status: 1
  BZIP patch 137321-01 is already present.
-- chk4patch 119254-88 /tmp/.patchout_20130507193917.24033
--  older version at lineno 229 found 119254-81 - not acceptable
--  Exact match found at line 232
--  Final return status: 1
  RECOMMENDED patch 119254-88 is already present.
-- chk4patch 120272-28 /tmp/.patchout_20130507193917.24033
--  Newer version at line 300 found 120272-31
--  Final return status: 1
  RECOMMENDED patch 120272-28 is already present.
-- chk4patch 147147-26 /tmp/.patchout_20130507193917.24033
--  Final return status: 0
  RECOMMENDED patch 147147-26 is not present.
-- chk4patch 125358-15 /tmp/.patchout_20130507193917.24033
--  older version at lineno 449 found 125358-14 - not acceptable
--  Final return status: 0
  NSS patch 125358-15 is not present.
-- chk4patch 119345-08 /tmp/.patchout_20130507193917.24033
--  Exact match found at line 666
--  Final return status: 1
  SASL patch 119345-08 is already present.
-- chk4patch 136798-03 /tmp/.patchout_20130507193917.24033
--  Exact match found at line 363
--  Final return status: 1
  LDAPCSDK6_TOOLS patch 136798-03 is already present.
-- chk4patch 119810-07 /tmp/.patchout_20130507193917.24033
--  older version at lineno 436 found 119810-05 - not acceptable
--  older version at lineno 733 found 119810-06 - not acceptable
--  Exact match found at line 734
--  Final return status: 1
  ICU patch 119810-07 is already present.
-- chk4patch 125136-35 /tmp/.patchout_20130507193917.24033
--  older version at lineno 225 found 125136-28 - not acceptable
```

```
--  older version at lineno 226 found 125136-19 - not acceptable
--  older version at lineno 589 found 125136-31 - not acceptable
--  Final return status: 0
  JDK patch 125136-35 is not present.
-- chk4patch 125137-35 /tmp/.patchout_20130507193917.24033
--  older version at lineno 298 found 125137-28 - not acceptable
--  older version at lineno 299 found 125137-19 - not acceptable
--  older version at lineno 792 found 125137-31 - not acceptable
--  Final return status: 0
  JDK patch 125137-35 is not present.
-- chk4patch 119725-06 /tmp/.patchout_20130507193917.24033
--  Final return status: 0
  LDAPJDK patch 119725-06 is not present.
-- chk4patch 148582-03 /tmp/.patchout_20130507193917.24033
--  Final return status: 0
  IMAPI patch 148582-03 is not present.
-- chk4patch 137204-28 /tmp/.patchout_20130507193917.24033
--  older version at lineno 692 found 137204-23 - not acceptable
--  Final return status: 0
  MS64 patch 137204-28 is not present.
-- chk4patch 118242-03 /tmp/.patchout_20130507193917.24033
--  Exact match found at line 359
--  Final return status: 1
  DSSETUP patch 118242-03 is already present.
-- chk4patch 118245-24 /tmp/.patchout_20130507193917.24033
--  older version at lineno 358 found 118245-23 - not acceptable
--  Final return status: 0
  DSSETUP patch 118245-24 is not present.
-- chk4patch 142785-10 /tmp/.patchout_20130507193917.24033
--  Final return status: 0
  DAV patch 142785-10 is not present.
-- chk4patch 148579-03 /tmp/.patchout_20130507193917.24033
--  Final return status: 0
  IM patch 148579-03 is not present.
-- chk4patch 145711-06 /tmp/.patchout_20130507193917.24033
--  Final return status: 0
  IWC patch 145711-06 is not present.
-- chk4patch 142824-16 /tmp/.patchout_20130507193917.24033
--  Final return status: 0
  JISS patch 142824-16 is not present.
-- chk4patch 124581-07 /tmp/.patchout_20130507193917.24033
--  Final return status: 0
  DA patch 124581-07 is not present.
-- chk4patch 137571-01 /tmp/.patchout_20130507193917.24033
--  Final return status: 0
  IM_SCHA patch 137571-01 is not present.
====== QQQ detectProducts ======
QQQ Dumper
!!! present
$VAR1 = {
          '148579-03' => 'NOT_PRESENT',
          '142785-10' => 'NOT_PRESENT',
          'IWC' => {
                     '2.0' => 'NOT_PRESENT',
                     '1.0' => 'NOT_PRESENT'
                   },
```

```
          'SASL' => {
                      '2.19' => 'PRESENT'
                    },
          '119345-08' => 'PRESENT',
          'MS64_L10N' => {
                           '6.3' => 'NOT_PRESENT'
                         },
          '142824-16' => 'NOT_PRESENT',
          '119725-06' => 'NOT_PRESENT',
          '119810-07' => 'PRESENT',
          'MS' => {
                    '7.3_32' => 'NOT_PRESENT',
                    '7.2_32' => 'NOT_PRESENT',
                    '7.5_32' => 'NOT_PRESENT',
                    '6.3_32' => 'NOT_PRESENT'
                  },
          '137571-01' => 'NOT_PRESENT',
          'DSSETUP' => {
                         '6.4' => 'PRESENT'
                       },
          '126868-04' => 'PRESENT',
          '119254-88' => 'PRESENT',
          '120900-04' => 'PRESENT',
          '119963-27' => 'PRESENT',
          'MQ_L10N' => {
                         '4.3' => 'DIFF_VERSION',
                         '3.7' => 'DIFF_VERSION',
                         '4.1' => 'DIFF_VERSION',
                         '4.4' => 'PRESENT'
                       },
          'ICU' => {
                     'ICU2,ICU3' => 'PRESENT'
                   },
          '120272-28' => 'PRESENT',
          'MS64' => {
                      '7.5' => 'PRESENT',
                      '7.3_32' => 'NOT_PRESENT',
                      '7.5_32' => 'NOT_PRESENT',
                      '7.2_32' => 'NOT_PRESENT',
                      '6.3' => 'DIFF_VERSION',
                      '6.3_32' => 'NOT_PRESENT'
                    },
          'DAV' => {
                     '7.3' => 'NOT_PRESENT'
                   },
          'LDAPCSDK6' => {
                           '6.0' => 'PRESENT'
                         },
          'CE' => {
                    '6.3' => 'NOT_PRESENT'
                  },
          'JDK' => {
                     '1.6.0' => 'PRESENT',
                     '1.5.0' => 'PRESENT'
                   },
          '125137-35' => 'NOT_PRESENT',
```

```
'MYSQL' => {
             '5.1.36' => 'NOT_PRESENT',
             '5.5.8' => 'NOT_PRESENT'
           },
'PATCHUTILS' => {
                  'Unknown' => 'PRESENT'
                },
'MQ' => {
          '4.3' => 'DIFF_VERSION',
          '3.7' => 'DIFF_VERSION',
          '4.1' => 'DIFF_VERSION',
          '4.4' => 'PRESENT'
        },
'125358-15' => 'NOT_PRESENT',
'CI' => {
          '7.4' => 'DIFF_VERSION'
        },
'IMAPI' => {
             '8.0' => 'NOT_PRESENT',
             '7.0' => 'NOT_PRESENT',
             '9.0' => 'NOT_PRESENT',
             '7.3' => 'NOT_PRESENT'
           },
'137321-01' => 'PRESENT',
'LDAPCSDK6_TOOLS' => {
                       '6.0' => 'PRESENT'
                     },
'125136-35' => 'NOT_PRESENT',
'JISS' => {
            '0.9' => 'NOT_PRESENT',
            '1.4' => 'NOT_PRESENT'
          },
'NSS' => {
           '4.8.8' => 'PRESENT'
         },
'CS_L10N' => {
               '6.2' => 'NOT_PRESENT',
               '6.3' => 'NOT_PRESENT'
             },
'ST' => {
          '1.1.4' => 'PRESENT'
        },
'IM' => {
          '8.3' => 'NOT_PRESENT',
          '7.0' => 'NOT_PRESENT',
          '9.0' => 'NOT_PRESENT',
          '7.3' => 'NOT_PRESENT'
        },
'RECOMMENDED' => {
                   '2013.02.19' => 'NOT_PRESENT'
                 },
'IM_L10N' => {
               '7.2' => 'NOT_PRESENT',
               '7.0' => 'NOT_PRESENT'
             },
'136798-03' => 'PRESENT',
```

```
          'CS_SCHA' => {
                          '6.0' => 'NOT_PRESENT',
                          '6.3' => 'NOT_PRESENT'
                        },
          'LDAPJDK' => {
                          '4.21' => 'NOT_PRESENT'
                        },
          'MYSQL_MARKER' => {
                               '1.1' => 'NOT_PRESENT',
                               '1.0' => 'NOT_PRESENT'
                             },
          'BZIP' => {
                      '11.10' => 'PRESENT'
                    },
          '145711-06' => 'NOT_PRESENT',
          'IM_SCHA' => {
                          '7.0' => 'NOT_PRESENT',
                          '7.3' => 'NOT_PRESENT'
                        },
          '148582-03' => 'NOT_PRESENT',
          'MS_L10N' => {
                          '6.2' => 'NOT_PRESENT',
                          '6.3' => 'NOT_PRESENT'
                        },
          'LIBCPLUSPLUS' => {
                               '5.9' => 'PRESENT'
                             },
          '121133-02' => 'PRESENT',
          '118245-24' => 'NOT_PRESENT',
          '118242-03' => 'PRESENT',
          'MS_SCHA' => {
                          '6.0' => 'NOT_PRESENT',
                          '7.0' => 'NOT_PRESENT'
                        },
          '147147-26' => 'NOT_PRESENT',
          'CS' => {
                    '6.3' => 'NOT_PRESENT'
                  },
          '124581-07' => 'NOT_PRESENT',
          'JHRT' => {
                      '2.0' => 'PRESENT'
                    },
          'CE_L10N' => {
                          '6.2' => 'NOT_PRESENT',
                          '6.3' => 'NOT_PRESENT'
                        },
          'DA' => {
                    '6.4' => 'NOT_PRESENT',
                    '7.0' => 'NOT_PRESENT'
                  },
          '137204-28' => 'NOT_PRESENT'
        };
!!! pkgparams
$VAR1 = {
          'SUNWica5' => {},
          'SUNWmsgja' => {},
```

```
          'SUNWcomic' => {},
          'SUNWservicetagu' => {
                                  '1.1.4,REV=2008.03.21.07.54' => [

'SUNWservicetagu',
                                                                      '/',

'1.1.4.1',
                                                                      ''
                                                                    ]
                                 },
          'SUNWjimid' => {},
          'SUNWdiquc' => {
                            '4.4,REV=2009.10.01.09.43.03' => [

'SUNWdiquc',
                                                                        '/',
                                                                        '4.4.1.0',
                                                                        ''
                                                                      ]
                          },
          'SUNWmsgko' => {},
          'SUNWics5' => {},
          'SUNWmessaging-server-l10n-64' => {},
          'SUNWiqlpl' => {},
          'SUNWmsgco' => {},
          'SUNWfiquc' => {
                            '4.4,REV=2009.10.01.09.42.16' => [

'SUNWfiquc',
                                                                        '/',
                                                                        '4.4.1.0',
                                                                        ''
                                                                      ]
                          },
          'SUNWjiss-extjars' => {},
          'SUNWjhdem' => {
                            '2.0,REV=2006.10.04' => [
                                                       'SUNWjhdem',
                                                       '/usr',
                                                       '2.0/FCS',
                                                       ''
                                                     ]
                          },
          'SUNWiqfs' => {
                           '4.4,REV=2009.08.27.08.33' => [
                                                            'SUNWiqfs',
                                                            '/',
                                                            '4.4.0.0',
                                                            ''
                                                          ]
                         },
          'SUNWfimid' => {},
          'SUNWcomds' => {
                            '6.3,REV=2004.08.12' => [
                                                       'SUNWcomds',
```

```
'/opt/sun/comms/dssetup',
                                                        '6.4-23.01',
                                                        ''
                                                      ]
                          },
          'SUNWjhdev' => {
                            '2.0,REV=2006.10.04' => [
                                                        'SUNWjhdev',
                                                        '/usr',
                                                        '2.0/FCS',
                                                        ''
                                                      ]
                          },
          'SUNWj6rtx' => {
                            '1.6.0,REV=2006.11.29.04.58' => [

'SUNWj6rtx',
                                                            '/usr',

'1.6.0_26/1.6.0_26-b03',
                                                            ''
                                                          ]
                          },
          'SUNWiqum' => {
                             '4.4,REV=2009.08.27.08.33' => [
                                                             'SUNWiqum',
                                                             '/',
                                                             '4.4.1.0',
                                                             ''
                                                           ]
                         },
          'SUNWduwc' => {},
          'SUNWhiimin' => {},
          'SUNWkiimin' => {},
          'SUNWeiimd' => {},
          'SUNWj6rt' => {
                             '1.6.0,REV=2006.11.29.05.57' => [
                                                               'SUNWj6rt',
                                                               '/usr',

'1.6.0_26/1.6.0_26-b03',
                                                               ''
                                                             ]
                         },
          'SUNWj5rt' => {
                             '1.5.0,REV=2004.12.07.00.07' => [
                                                               'SUNWj5rt',
                                                               '/usr',

'1.5.0_12/1.5.0_12-b04',
                                                               ''
                                                             ]
                         },
          'SUNWiimc-l10n' => {},
          'SUNWhiimc' => {},
```

```
          'SUNWmsg-l10n' => {},
          'SUNWfrics' => {},
          'SUNWciqu' => {
                         '4.4,REV=2009.10.01.09.46.01' => [
                                                            'SUNWciqu',
                                                            '/',
                                                            '4.4.1.0',
                                                            ''
                                                          ]
                       },
          'SUNWkoics' => {},
          'SUNWdimid' => {},
          'SUNWjiquc' => {
                          '4.4,REV=2009.10.01.09.45.18' => [

'SUNWjiquc',
                                                             '/',
                                                             '4.4.1.0',
                                                             ''
                                                           ]
                        },
          'SUNWiimgw' => {},
          'SUNWiimd-l10n' => {},
          'SUNWhiquc' => {
                          '4.4,REV=2009.10.01.09.46.50' => [

'SUNWhiquc',
                                                             '/',
                                                             '4.4.1.0',
                                                             ''
                                                           ]
                        },
          'SUNWzhics' => {},
          'SUNWkiimd' => {},
          'SUNWiimfed' => {},
          'SUNWmsgmp' => {},
          'SUNWuwc' => {},
          'SUNWscics' => {},
          'SUNWiimc' => {},
          'SUNWhiimd' => {},
          'SUNWmessaging-server-scha' => {},
          'SUNWmsglb' => {},
          'SUNWtls' => {
                        '3.11.4,REV=2006.11.16.20.40' => [
                                                           'SUNWtls',
                                                           '/',
                                                           '3.12.10',
                                                           ''
                                                         ]
                       },
          'SUNWj6dvx' => {
                          '1.6.0,REV=2006.11.29.04.58' => [

'SUNWj6dvx',
                                                            '/usr',
```

```
'1.6.0_26/1.6.0_26-b03',
                                                                  ''
                                                                ]
                          },
          'SUNWfuwc' => {},
          'SUNWlibC' => {
                           '5.10,REV=2004.12.22' => [
                                                       'SUNWlibC',
                                                       '/',
                                                       '5.10',
                                                       ''
                                                     ]
                         },
          'SUNWjiss-searchui' => {},
          'SUNWjiimin' => {},
          'SUNWcomms-mysql-marker' => {},
          'SUNWscims' => {},
          'SUNWiimjd' => {},
          'SUNWciimd' => {},
          'SUNWldapcsdk-dev' => {
                                  '6.00,REV=2006.12.11.00.08' => [

'SUNWldapcsdk-dev',
                                                                      '/',

'6.03',
                                                                      ''
                                                                    ]
                                 },
          'SUNWiqlen' => {
                            '4.4,REV=2009.08.27.08.33' => [
                                                            'SUNWiqlen',
                                                            '/',
                                                            '4.4.1.0',
                                                            ''
                                                          ]
                          },
          'SUNWiimid-l10n' => {},
          'SUNWiqr' => {
                          '4.4,REV=2009.08.27.08.32' => [
                                                          'SUNWiqr',
                                                          '/',
                                                          '4.4.1.0',
                                                          ''
                                                        ]
                        },
          'SUNWdiimc' => {},
          'SUNWmsgwm' => {},
          'SUNWiimw' => {},
          'SUNWmessaging-server-64' => {
                                          '7.0,REV=2008.06.20' => [

'SUNWmessaging-server-64',

'/opt/sun/comms/messaging64',
```

```
'7.4-23.01',
                                                                    ''
                                                                  ]
                                        },
          'SUNWeiquc' => {
                           '4.4,REV=2009.10.01.09.43.47' => [

'SUNWeiquc',
                                                                '/',
                                                                '4.4.1.0',
                                                                ''
                                                              ]
                         },
          'SUNWj5cfg' => {
                           '1.5.0,REV=2004.12.07.00.07' => [

'SUNWj5cfg',
                                                                '/',

'1.5.0_12/1.5.0_12-b04',
                                                                ''
                                                              ]
                         },
          'SUNWhiqu' => {
                          '4.4,REV=2009.10.01.09.46.48' => [
                                                                'SUNWhiqu',
                                                                '/',
                                                                '4.4.1.0',
                                                                ''
                                                              ]
                        },
          'SUNWjiss-search' => {},
          'SUNWiimdv' => {},
          'SUNWfiimd' => {},
          'SUNWj5rtx' => {
                           '1.5.0,REV=2004.12.06.22.09' => [

'SUNWj5rtx',
                                                                '/usr',

'1.5.0_12/1.5.0_12-b04',
                                                                ''
                                                              ]
                         },
          'SUNWiquc' => {
                          '4.4,REV=2009.08.27.08.33' => [
                                                            'SUNWiquc',
                                                            '/',
                                                            '4.4.1.0',
                                                            ''
                                                          ]
                        },
          'SUNWiimid' => {},
          'SUNWmsgmt' => {},
          'SUNWljdk' => {},
          'SUNWcuwc' => {},
```

```
          'SUNWldapcsdk-libs' => {
                                  '6.00,REV=2006.12.11.00.08' => [

'SUNWldapcsdk-libs',
                                                                    '/',

'6.03',
                                                                    ''
                                                                  ]
                                 },
          'SUNWservicetagr' => {
                                 '1.1.4,REV=2008.03.21.07.54' => [

'SUNWservicetagr',
                                                                    '/',

'1.1.4.1',
                                                                    ''
                                                                  ]
                                },
          'SUNWciimc' => {},
          'SUNWjhrt' => {
                          '2.0,REV=2006.10.31' => [
                                                    'SUNWjhrt',
                                                    '/usr',
                                                    '2.0/FCS',
                                                    ''
                                                   ]
                         },
          'SUNWtlsd' => {
                          '3.11.4,REV=2006.11.16.20.40' => [
                                                             'SUNWtlsd',
                                                             '/',
                                                             '3.12.10',
                                                             ''
                                                            ]
                         },
          'SUNWmsgin' => {},
          'SUNWdtrc' => {
                          '11.10.0,REV=2005.01.21.15.53' => [

'SUNWdtrc',
                                                               '/',

'5.10/Generic',
                                                               ''
                                                              ]
                         },
          'SUNWhuwc' => {},
          'mysql' => {},
          'SUNWiqdoc' => {
                           '4.4,REV=2009.08.27.08.32' => [
                                                           'SUNWiqdoc',
                                                           '/',
                                                           '4.4.0.0',
                                                           ''
```

```
                                                          ]
                          },
          'SUNWjiimd' => {},
          'SUNWjuwc' => {},
          'SUNWiimd' => {},
          'SUNWiqcrt' => {
                            '4.4,REV=2009.08.27.08.33' => [
                                                            'SUNWiqcrt',
                                                            '/opt',
                                                            '4.4.1.0',
                                                            ''
                                                          ]
                          },
          'SUNWmsgzh' => {},
          'SUNWprd' => {
                          '4.6.4,REV=2006.11.16.20.40' => [
                                                            'SUNWprd',
                                                            '/',
                                                            '4.8.8',
                                                            ''
                                                          ]
                        },
          'SUNWjiss-conf' => {},
          'SUNWcommda' => {},
          'SUNWmsgen' => {},
          'SUNWjiss-store' => {},
          'SUNWiwc' => {},
          'SUNWjiss-storeui' => {},
          'SUNWiimin-l10n' => {},
          'SUNWiimsc' => {},
          'SUNWinstall-patch-utils-root' => {

'11.10,REV=2005.01.09.23.05' => [

'SUNWinstall-patch-utils-root',

'/',

'5.10',

''

]
                                                  },
          'SUNWiimin' => {},
          'SUNWuwc-l10n' => {},
          'SUNWmsgst' => {},
          'SUNWiqu' => {
                          '4.4,REV=2009.08.27.08.32' => [
                                                          'SUNWiqu',
                                                          '/',
                                                          '4.4.1.0',
                                                          ''
                                                        ]
                        },
          'SUNWkiimc' => {},
```

```
          'SUNWiim' => {},
          'SUNWeiimin' => {},
          'SUNWcimid' => {},
          'SUNWiqcdv' => {
                          '4.4,REV=2009.08.27.08.33' => [
                                                          'SUNWiqcdv',
                                                          '/opt',
                                                          '4.4.1.0',
                                                          ''
                                                        ]
                        },
          'SUNWldapcsdk-tools' => {
                                   '6.00,REV=2006.12.11.00.08' => [

'SUNWldapcsdk-tools',

'/opt/SUNWdsee',

'6.03',
                                                                      ''
                                                                    ]
                                 },
          'SUNWjss' => {
                        '4.2.4,REV=2006.11.16.20.40' => [
                                                          'SUNWjss',
                                                          '/',
                                                          '4.3.2',
                                                          ''
                                                        ]
                      },
          'SUNWdiqu' => {
                         '4.4,REV=2009.10.01.09.42.59' => [
                                                            'SUNWdiqu',
                                                            '/',
                                                            '4.4.1.0',
                                                            ''
                                                          ]
                       },
          'SUNWjiss' => {},
          'SUNWj6cfg' => {
                          '1.6.0,REV=2006.11.29.05.57' => [

'SUNWj6cfg',
                                                            '/',

'1.6.0_26/1.6.0_26-b03',
                                                            ''
                                                          ]
                        },
          'SUNWhimid' => {},
          'SUNWciquc' => {
                          '4.4,REV=2009.10.01.09.46.03' => [

'SUNWciquc',
                                                             '/',
                                                             '4.4.1.0',
```

```
                                                                  ''
                                                                ]
                        },
          'SUNWcomms' => {
                          '7.2,REV=2011.09.09' => [
                                                      'SUNWcomms',

'/opt/sun/comms/CommsInstaller',
                                                      '7.2-0.36',
                                                      ''
                                                    ]
                        },
          'SUNWjiqu' => {
                          '4.4,REV=2009.10.01.09.45.16' => [
                                                              'SUNWjiqu',
                                                              '/',
                                                              '4.4.1.0',
                                                              ''
                                                            ]
                        },
          'SUNWkiqu' => {
                          '4.4,REV=2009.10.01.09.44.30' => [
                                                              'SUNWkiqu',
                                                              '/',
                                                              '4.4.1.0',
                                                              ''
                                                            ]
                        },
          'SUNWkuwc' => {},
          'SUNWics-l10n' => {},
          'SUNWeiqu' => {
                          '4.4,REV=2009.10.01.09.43.44' => [
                                                              'SUNWeiqu',
                                                              '/',
                                                              '4.4.1.0',
                                                              ''
                                                            ]
                        },
          'SUNWmessaging-server' => {},
          'SUNWdavserver' => {},
          'SUNWmsgtw' => {},
          'SUNWeiimc' => {},
          'SUNWjaics' => {},
          'SUNWpkgcmdsu' => {
                              '11.11,REV=2005.01.09.23.05' => [

'SUNWpkgcmdsu',
                                                                  '/',
                                                                  '5.10',
                                                                  ''
                                                                ]
                            },
          'SUNWjiimc' => {},
          'SUNWeimid' => {},
          'SUNWiqjx' => {
                          '4.4,REV=2009.08.27.08.33' => [
```

```
                                                        'SUNWiqjx',
                                                        '/',
                                                        '4.4.1.0',
                                                        ''
                                                      ]
                        },
          'SUNWjhdoc' => {
                          '2.0,REV=2006.10.04' => [
                                                    'SUNWjhdoc',
                                                    '/usr',
                                                    '2.0/FCS',
                                                    ''
                                                  ]
                        },
          'SUNWj6dev' => {
                          '1.6.0,REV=2006.11.29.05.57' => [

'SUNWj6dev',
                                                          '/usr',

'1.6.0_26/1.6.0_26-b03',
                                                          ''
                                                        ]
                        },
          'SUNWmsges' => {},
          'SUNWpr' => {
                       '4.6.4,REV=2006.11.16.20.40' => [
                                                        'SUNWpr',
                                                        '/',
                                                        '4.8.8',
                                                        ''
                                                      ]
                      },
          'SUNWmsgmf' => {},
          'SUNWkimid' => {},
          'SUNWicu' => {
                        '1.2,REV=2005.01.06.14.13' => [
                                                       'SUNWicu',
                                                       '/usr',
                                                       '10/Generic',
                                                       ''
                                                     ]
                       },
          'SUNWjiss-rest' => {},
          'SUNWfiimin' => {},
          'SUNWswmt' => {
                         '11.10,REV=2005.01.10.17.19' => [
                                                          'SUNWswmt',
                                                          '/',
                                                          '5.10',
                                                          ''
                                                        ]
                        },
          'SUNWcomis' => {},
          'SUNWdeics' => {},
          'SUNWtwics' => {},
```

```
          'SUNWciimin' => {},
          'SUNWmsgfr' => {},
          'SUNWdiimd' => {},
          'SUNWjiss-common' => {},
          'SUNWeuwc' => {},
          'SUNWkiquc' => {
                          '4.4,REV=2009.10.01.09.44.32' => [

'SUNWkiquc',
                                                              '/',
                                                              '4.4.1.0',
                                                              ''
                                                            ]
                        },
          'SUNWstosreg' => {
                            '1.1.4,REV=2008.03.21.07.54' => [

'SUNWstosreg',
                                                               '/',

'1.1.4.1',
                                                               ''
                                                             ]
                          },
          'SUNWmsgde' => {},
          'SUNWjiss-jmqc' => {},
          'SUNWjiss-indexapi' => {},
          'SUNWbzip' => {
                         '11.10.0,REV=2005.01.08.05.16' => [

'SUNWbzip',
                                                              '/',

'5.10/SunOS Development',
                                                              ''
                                                            ]
                       },
          'SUNWtlsu' => {
                         '3.11.4,REV=2006.11.16.20.40' => [
                                                              'SUNWtlsu',
                                                              '/',
                                                              '3.12.10',
                                                              ''
                                                           ]
                       },
          'SUNWfiqu' => {
                         '4.4,REV=2009.10.01.09.42.14' => [
                                                              'SUNWfiqu',
                                                              '/',
                                                              '4.4.1.0',
                                                              ''
                                                           ]
                       },
          'SUNWsasl' => {
                         '2.17,REV=2004.04.06.15.24' => [
                                                           'SUNWsasl',
```

```
                                                                '/',
                                                                '2.19',
                                                                ''
                                                              ]
                        },
          'SUNWfiimc' => {},
          'SUNWzoneu' => {
                          '11.10.0,REV=2005.01.21.15.53' => [

'SUNWzoneu',
                                                                  '/',

'5.10/Generic',
                                                                  ''
                                                                ]
                        },
          'SUNWcsr' => {
                        '11.10.0,REV=2005.01.21.15.53' => [
                                                                'SUNWcsr',
                                                                '/',

'5.10/Generic',
                                                                ''
                                                              ]
                        },
          'SUNWesics' => {},
          'SUNWiimm' => {}
        };
!!! installedprod
$VAR1 = {
          'MS64' => {
                      '7.5' => [
                                  '/opt/sun/comms/messaging64',
                                  '7.4-23.01',
                                  '20110810',
                                  '7u4',
                                  'SunOS',
                                  'sparc',
                                  '64',
                                  '',
                                  'Not Found'
                                ]
                    },
          'SASL' => {
                      '2.19' => [
                                   '/',
                                   '2.19',
                                   'Not Found',
                                   '2.19',
                                   'Not Found',
                                   'Not Found',
                                   'Not Found',
                                   '',
                                   'Not Found'
                                 ]
                    },
```

```
            'ST' => {
                      '1.1.4' => [
                                    '/',
                                    '1.1.4.1',
                                    'Not Found',
                                    '1.1.4',
                                    'Not Found',
                                    'Not Found',
                                    'Not Found',
                                    '',
                                    'Not Found'
                                  ]
                    },
            'LDAPCSDK6' => {
                             '6.0' => [
                                         '/',
                                         '6.03',
                                         'Not Found',
                                         '6.0',
                                         'Not Found',
                                         'Not Found',
                                         'Not Found',
                                         '',
                                         'Not Found'
                                       ]
                           },
            'LIBCPLUSPLUS' => {
                                '5.9' => [
                                            '/',
                                            '5.10',
                                            'Not Found',
                                            '5.9',
                                            'Not Found',
                                            'Not Found',
                                            'Not Found',
                                            '',
                                            'Not Found'
                                          ]
                              },
            'DSSETUP' => {
                           '6.4' => [
                                       '/opt/sun/comms/dssetup',
                                       '6.4-23.01',
                                       '20110713',
                                       '6.4',
                                       'SunOS',
                                       'sparc',
                                       '32',
                                       '',
                                       'Not Found'
                                     ]
                         },
            'JDK' => {
                      '1.6.0' => [
                                    '/usr',
                                    '1.6.0_26/1.6.0_26-b03',
```

```
                                 'Not Found',
                                 '1.6.0',
                                 'Not Found',
                                 'Not Found',
                                 'Not Found',
                                 '',
                                 'Not Found'
                               ]
                    },
          'MQ' => {
                    '4.4' => [
                               '/',
                               '4.4.1.0',
                               'Not Found',
                               '4.4',
                               'Not Found',
                               'Not Found',
                               'Not Found',
                               '',
                               'Not Found'
                             ]
                  },
          'PATCHUTILS' => {
                            'Unknown' => [
                                           '/',
                                           '5.10',
                                           'Not Found',
                                           'Unknown',
                                           'Not Found',
                                           'Not Found',
                                           'Not Found',
                                           '',
                                           'Not Found'
                                         ]
                          },
          'JHRT' => {
                      '2.0' => [
                                 '/usr',
                                 '2.0/FCS',
                                 'Not Found',
                                 '2.0',
                                 'Not Found',
                                 'Not Found',
                                 'Not Found',
                                 '',
                                 'Not Found'
                               ]
                    },
          'CI' => {
                    '7.2,REV=2011.09.09' => [

'/opt/sun/comms/CommsInstaller',
                                                 '7.2-0.36',
                                                 '20110909',
                                                 '7u2',
                                                 'SunOS',
```

```
                                        'sparc',
                                        '32',
                                        '',
                                        '7.0.2.0.0'
                                      ]
                 },
        'MQ_L10N' => {
                       '4.4' => [
                                  '/',
                                  '4.4.1.0',
                                  'Not Found',
                                  '4.4',
                                  'Not Found',
                                  'Not Found',
                                  'Not Found',
                                  '',
                                  'Not Found'
                                ]
                     },
        'BZIP' => {
                    '11.10' => [
                                 '/',
                                 '5.10/SunOS Development',
                                 'Not Found',
                                 '11.10',
                                 'Not Found',
                                 'Not Found',
                                 'Not Found',
                                 '',
                                 'Not Found'
                               ]
                   },
        'LDAPCSDK6_TOOLS' => {
                               '6.0' => [
                                          '/opt/SUNWdsee',
                                          '6.03',
                                          'Not Found',
                                          '6.0',
                                          'Not Found',
                                          'Not Found',
                                          'Not Found',
                                          '',
                                          'Not Found'
                                        ]
                              },
        'ICU' => {
                   'ICU2,ICU3' => [
                                    '/usr',
                                    '10/Generic',
                                    'Not Found',
                                    'ICU2,ICU3',
                                    'Not Found',
                                    'Not Found',
                                    'Not Found',
                                    '',
                                    'Not Found'
```

```
                                    ]
                    },
          'NSS' => {
                      '4.8.8' => [
                                    '/',
                                    '4.3.2',
                                    'Not Found',
                                    '4.8.8',
                                    'Not Found',
                                    'Not Found',
                                    'Not Found',
                                    '',
                                    'Not Found'
                                  ]
                    }
        };
====== End QQQ detectProducts ======
-- Checking for RECOMMENDED patch 119254-88
   patch is PRESENT
-- Checking for RECOMMENDED patch 120272-28
   patch is PRESENT
-- Checking for RECOMMENDED patch 147147-26
   patch 147147-26: NOT_PRESENT
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: You must apply the latest OS Recommended Patchset
          Some products will not work properly without it
Do you want to continue ? [no] : yes
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
INFO: isUpgradable MS64 7.5: 1
      Cmd:
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
7.4-23.01 /opt/sun/comms/messaging64 0
      This version is upgradable to distro version (7.5-28.21)

INFO: isUpgradable DSSETUP 6.4: 1
      Cmd:
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
6.4-23.01 /opt/sun/comms/dssetup 0
      This version is upgradable to distro version (6.4-24.03)

====== QQQ ======
QQQ Dumper
!!! isUpgradable
$VAR1 = {
          'MS64' => {
                      '7.5' => {
                                  'status' => '1'
                                }
                    },
          'DSSETUP' => {
                        '6.4' => {
                                    'status' => '1'
                                  }
```

```
                        }
        };
!!! usePkgUpgradeFlag
$VAR1 = {
          'MS64' => {
                      '7.5' => 0
                    },
          'DSSETUP' => {
                         '6.4' => 0
                        }
        };
Product Selection:

Communication Products:

    Item  Description
    ----  -----------
       1  Messaging Server (64bit) 7u5 (7.5-28.21)
          Installed Version 7u4 (7.4-23.01) at
/opt/sun/comms/messaging64
       2  Comms DSsetup 6.4 (6.4-24.03)
          Installed Version 6.4 (6.4-23.01) at /opt/sun/comms/dssetup

Enter the items you wish to upgrade. Enter q to quit.
You can enter multiple items using commas to separate them.
For example: 1,2

Please select the products you wish to upgrade [1, 2]:
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
QQQ selections: MS64 7.5 DSSETUP 6.4
INFO: sc_dependencies - PATCHUTILS ICU SASL LDAPCSDK6_TOOLS NSS
LDAPCSDK6 BZIP LIBCPLUSPLUS CI
Checking for Shared Component Upgrade Requirements...
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
  WILL INSTALL: patch 125358-15 for NSS/NSPR/JSS
  Task: patchadd
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
NOTICE: CommsInstaller will be upgraded...
          Removing the old version is an irreversible process.
  WILL REMOVE EXISTING: CommsInstaller 7.0.2.0.0
-- QQQ30 removeProductPkgs (product=CI pkg=SUNWcomms 7.2,REV=2011.09.09
i=0: realpkg=SUNWcomms base=/opt/sun/comms/CommsInstaller
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWcomms
  WILL INSTALL: CommsInstaller 7.0.4.0.0
                to /opt/sun/comms/CommsInstaller
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_CI_20130507193917 SUNWcomms
  NOTICE: Upgrading Messaging Server (64bit) 7u4 (7.4-23.01)
          to 7u5 (7.5-28.21) at /opt/sun/comms/messaging64
          Upgrade will be done by applying a patch
  WILL INSTALL: patch 137204-28 for Messaging Server (64bit)
```

```
  Task: patchadd
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
NOTICE: Upgrading Comms DSsetup 6.4 (6.4-23.01)
          to 6.4 (6.4-24.03) at /opt/sun/comms/dssetup
          Upgrade will be done by applying a patch
  WILL INSTALL: patch 118245-24 for Comms DSsetup
  Task: patchadd
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
to upgrade

Do you want to continue ? [yes] :

============================================================
Installing patch 125358-15 for NSS/NSPR/JSS...
------ Executing Task 1 of 7 ...
patchadd
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
2>&1
Validating patches...

Loading patches installed on the system...

Done!

Loading patches requested to install.

Done!

Checking patches that you specified for installation.

Done!


Approved patches will be installed in this order:

125358-15


Checking installed patches...
Executing prepatch script...
Installing patch packages...

Patch 125358-15 has been successfully installed.
See /var/sadm/patch/125358-15/log for details
Executing postpatch script...

Patch packages installed:
  SUNWjss
  SUNWpr
  SUNWprd
  SUNWtls
  SUNWtlsd
  SUNWtlsu

-- Exit status: 0
```

```
============================================================
Removing existing CommsInstaller 7.0.2.0.0...
------ Executing Task 2 of 7 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWcomms 2>&1

Removal of <SUNWcomms> was successful.
-- Exit status: 0

============================================================
Installing CommsInstaller 7.0.4.0.0...
------ Executing Task 3 of 7 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_CI_20130507193917 SUNWcomms 2>&1
Copyright (c) 2007, 2013, Oracle and/or its affiliates. All rights
reserved.
Use is subject to license terms.

Installation of <SUNWcomms> was successful.
-- Exit status: 0

============================================================
Upgrading Messaging Server (64bit) 7u4 (7.4-23.01) at
/opt/sun/comms/messaging64...
-- INFO: TaskGroup Upgrade Start
------ Executing Task 4 of 7 ...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
7.4-23.01 /opt/sun/comms/messaging64 0 "137204-28" 2>&1
-- Exit status: 0
--
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
7.4-23.01 /opt/sun/comms/messaging64 0 "137204-28"

============================================================
Installing patch 137204-28 for Messaging Server (64bit)...
------ Executing Task 5 of 7 ...
patchadd
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
2>&1
Validating patches...

Loading patches installed on the system...

Done!

Loading patches requested to install.

Done!

Checking patches that you specified for installation.

Done!
```

```
Approved patches will be installed in this order:

137204-28


Checking installed patches...
Executing prepatch script...
-- Stopping Messaging Server...
Installing patch packages...

Patch 137204-28 has been successfully installed.
See /var/sadm/patch/137204-28/log for details
Executing postpatch script...
--
-- To generate updated config files, run
-- /opt/sun/comms/messaging64/bin/patch-config
/opt/sun/comms/messaging64/install/patch/137204-28
-- After that, to install the updated config files, run
-- /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-28

Patch packages installed:
  SUNWmessaging-server-64

-- Exit status: 0
------ Executing Task 6 of 7 ...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
7.4-23.01 /opt/sun/comms/messaging64 0 "137204-28" 2>&1
-- /opt/sun/comms/messaging64/bin/patch-config
/opt/sun/comms/messaging64/install/patch/137204-28
-- LOGFILE:
/opt/sun/comms/messaging64/install/patch/137204-28/patch-config_20130507194
New: /opt/sun/comms/messaging64/config/msg.conf.defaults
-- New: /opt/sun/comms/messaging64/config/mappings.locale
-- New: /opt/sun/comms/messaging64/config/internet.rules
-- New: /opt/sun/comms/messaging64/config/imta.cnf
-- New: /opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
-- Del: /opt/sun/comms/messaging64/config/ImapProxyAService-def.cfg
-- Del: /opt/sun/comms/messaging64/config/PopProxyAService-def.cfg
-- Del: /opt/sun/comms/messaging64/config/SmtpProxyAService-def.cfg
--
-- Number of new config files: 5
-- Number of config files to delete: 3
-- Number of config files with conflicts: 0
-- Number of config files that are images (gif png ico or jpg): 0
-- The list of new config files are in:
    /opt/sun/comms/messaging64/install/patch/137204-28/newconfig.list
-- The list of config files to be deleted are in:
    /opt/sun/comms/messaging64/install/patch/137204-28/delconfig.list

--
-- Please review the changes in the new config files before installing
them.
-- To install the updated config files, run
```

```
-- /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-28

-- /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-28
-- LOGFILE:
/opt/sun/comms/messaging64/install/patch/137204-28/install-newconfig_201305
Stopping services: /opt/sun/comms/messaging64/bin/stop-msg
/opt/sun/comms/messaging64/bin/stop-msg
Connecting to watcher ...
Warning: Cannot connect to watcher
job_controller server is not running
dispatcher server is not running
sched server is not running
http server is not running
pop server is not running
imap server is not running
purge server is not running
store server is not running
ens server is not running
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/msg.conf.def
/opt/sun/comms/messaging64/config/msg.conf.defaults
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/mappings.loc
/opt/sun/comms/messaging64/config/mappings.locale
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/internet.rul
/opt/sun/comms/messaging64/config/internet.rules
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/imta.cnf.new
/opt/sun/comms/messaging64/config/imta.cnf
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/data/install/ugdir_
/opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
unlink /opt/sun/comms/messaging64/config/ImapProxyAService-def.cfg
unlink /opt/sun/comms/messaging64/config/PopProxyAService-def.cfg
unlink /opt/sun/comms/messaging64/config/SmtpProxyAService-def.cfg
-- Number of different files: 5
-- Number of deleted files: 3
-- Original files are backed up under
/opt/sun/comms/messaging64/install/patch/137204-28/config_20130507194112
-- The final step is to apply the ldif file
-- /opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
-- to the user/group Directory
-- This is not performed automatically, you must do this manually
-- Exit status: 0
--
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
7.4-23.01 /opt/sun/comms/messaging64 0 "137204-28"
-- /opt/sun/comms/messaging64/bin/patch-config
/opt/sun/comms/messaging64/install/patch/137204-28
-- LOGFILE:
/opt/sun/comms/messaging64/install/patch/137204-28/patch-config_20130507194
New: /opt/sun/comms/messaging64/config/msg.conf.defaults
-- New: /opt/sun/comms/messaging64/config/mappings.locale
```

```
-- New: /opt/sun/comms/messaging64/config/internet.rules
-- New: /opt/sun/comms/messaging64/config/imta.cnf
-- New: /opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
-- Del: /opt/sun/comms/messaging64/config/ImapProxyAService-def.cfg
-- Del: /opt/sun/comms/messaging64/config/PopProxyAService-def.cfg
-- Del: /opt/sun/comms/messaging64/config/SmtpProxyAService-def.cfg
--
-- Number of new config files: 5
-- Number of config files to delete: 3
-- Number of config files with conflicts: 0
-- Number of config files that are images (gif png ico or jpg): 0
-- The list of new config files are in:
    /opt/sun/comms/messaging64/install/patch/137204-28/newconfig.list
-- The list of config files to be deleted are in:
    /opt/sun/comms/messaging64/install/patch/137204-28/delconfig.list

--
-- Please review the changes in the new config files before installing
them.
-- To install the updated config files, run
-- /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-28

-- /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-28
-- LOGFILE:
/opt/sun/comms/messaging64/install/patch/137204-28/install-newconfig_201305
Stopping services: /opt/sun/comms/messaging64/bin/stop-msg
/opt/sun/comms/messaging64/bin/stop-msg
Connecting to watcher ...
Warning: Cannot connect to watcher
job_controller server is not running
dispatcher server is not running
sched server is not running
http server is not running
pop server is not running
imap server is not running
purge server is not running
store server is not running
ens server is not running
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/msg.conf.def
/opt/sun/comms/messaging64/config/msg.conf.defaults
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/mappings.loc
/opt/sun/comms/messaging64/config/mappings.locale
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/internet.rul
/opt/sun/comms/messaging64/config/internet.rules
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/imta.cnf.new
/opt/sun/comms/messaging64/config/imta.cnf
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/data/install/ugdir_
/opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
unlink /opt/sun/comms/messaging64/config/ImapProxyAService-def.cfg
```

```
unlink /opt/sun/comms/messaging64/config/PopProxyAService-def.cfg
unlink /opt/sun/comms/messaging64/config/SmtpProxyAService-def.cfg
-- Number of different files: 5
-- Number of deleted files: 3
-- Original files are backed up under
/opt/sun/comms/messaging64/install/patch/137204-28/config_20130507194112
-- The final step is to apply the ldif file
-- /opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
-- to the user/group Directory
-- This is not performed automatically, you must do this manually
-- INFO: TaskGroup Upgrade End
============================================================
Done Upgrading Messaging Server (64bit) to 7u5 (7.5-28.21) at
/opt/sun/comms/messaging64

============================================================
Upgrading Comms DSsetup 6.4 (6.4-23.01) at /opt/sun/comms/dssetup...
-- INFO: TaskGroup Upgrade Start

============================================================
Installing patch 118245-24 for Comms DSsetup...
------ Executing Task 7 of 7 ...
patchadd
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
2>&1
Validating patches...

Loading patches installed on the system...

Done!

Loading patches requested to install.

Done!

Checking patches that you specified for installation.

Done!


Approved patches will be installed in this order:

118245-24


Checking installed patches...
Installing patch packages...

Patch 118245-24 has been successfully installed.
See /var/sadm/patch/118245-24/log for details

Patch packages installed:
  SUNWcomds

-- Exit status: 0
-- INFO: TaskGroup Upgrade End
```

```
============================================================
Done Upgrading Comms DSsetup to 6.4 (6.4-24.03) at
/opt/sun/comms/dssetup
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
SUMMARY:

PASSED: Task 1: patchadd
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
Task 2: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWcomms
PASSED: Task 3: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_CI_20130507193917 SUNWcomms
PASSED: Task 4: preupgrade
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
7.4-23.01 /opt/sun/comms/messaging64 0 "137204-28"
PASSED: Task 5: patchadd
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
Task 6: postupgrade
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
7.4-23.01 /opt/sun/comms/messaging64 0 "137204-28"
-- Output of Task 6: postupgrade
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
7.4-23.01 /opt/sun/comms/messaging64 0 "137204-28"
-- /opt/sun/comms/messaging64/bin/patch-config
/opt/sun/comms/messaging64/install/patch/137204-28
-- LOGFILE:
/opt/sun/comms/messaging64/install/patch/137204-28/patch-config_20130507194
New: /opt/sun/comms/messaging64/config/msg.conf.defaults
-- New: /opt/sun/comms/messaging64/config/mappings.locale
-- New: /opt/sun/comms/messaging64/config/internet.rules
-- New: /opt/sun/comms/messaging64/config/imta.cnf
-- New: /opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
-- Del: /opt/sun/comms/messaging64/config/ImapProxyAService-def.cfg
-- Del: /opt/sun/comms/messaging64/config/PopProxyAService-def.cfg
-- Del: /opt/sun/comms/messaging64/config/SmtpProxyAService-def.cfg
--
-- Number of new config files: 5
-- Number of config files to delete: 3
-- Number of config files with conflicts: 0
-- Number of config files that are images (gif png ico or jpg): 0
-- The list of new config files are in:
    /opt/sun/comms/messaging64/install/patch/137204-28/newconfig.list
-- The list of config files to be deleted are in:
    /opt/sun/comms/messaging64/install/patch/137204-28/delconfig.list

--
-- Please review the changes in the new config files before installing
them.
-- To install the updated config files, run
-- /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-28
```

```
-- /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-28
-- LOGFILE:
/opt/sun/comms/messaging64/install/patch/137204-28/install-newconfig_201305
Stopping services: /opt/sun/comms/messaging64/bin/stop-msg
/opt/sun/comms/messaging64/bin/stop-msg
Connecting to watcher ...
Warning: Cannot connect to watcher
job_controller server is not running
dispatcher server is not running
sched server is not running
http server is not running
pop server is not running
imap server is not running
purge server is not running
store server is not running
ens server is not running
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/msg.conf.def
/opt/sun/comms/messaging64/config/msg.conf.defaults
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/mappings.loc
/opt/sun/comms/messaging64/config/mappings.locale
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/internet.rul
/opt/sun/comms/messaging64/config/internet.rules
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/imta.cnf.new
/opt/sun/comms/messaging64/config/imta.cnf
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/data/install/ugdir_
/opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
unlink /opt/sun/comms/messaging64/config/ImapProxyAService-def.cfg
unlink /opt/sun/comms/messaging64/config/PopProxyAService-def.cfg
unlink /opt/sun/comms/messaging64/config/SmtpProxyAService-def.cfg
-- Number of different files: 5
-- Number of deleted files: 3
-- Original files are backed up under
/opt/sun/comms/messaging64/install/patch/137204-28/config_20130507194112
-- The final step is to apply the ldif file
-- /opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
-- to the user/group Directory
-- This is not performed automatically, you must do this manually
-- End of command output--
PASSED: Task 7: patchadd
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
tasks PASSED
Checking JES java symlink...
ls -l /usr/jdk /usr/java 2>&1
lrwxrwxrwx   1 root     other         15 May  7 19:36 /usr/java ->
jdk/jdk1.6.0_26

/usr/jdk:
total 10
drwxr-xr-x   4 root     bin            4 Jun 12  2012 instances
lrwxrwxrwx   1 root     other          7 Jun 12  2012 j2sdk1.4.2_32 ->
```

```
../j2se
lrwxrwxrwx   1 root     other         18 Feb 26 14:05 jdk1.5.0_12 ->
instances/jdk1.5.0
lrwxrwxrwx   1 root     other         18 May  7 19:36 jdk1.6.0_26 ->
instances/jdk1.6.0
lrwxrwxrwx   1 root     other         11 May  7 19:36 latest ->
jdk1.6.0_26
drwxr-xr-x   8 root     bin            8 May  7 19:37 packages
-- Exit status: 0
ls -l /usr/jdk/entsys-j2se /usr/jdk/latest 2>&1
/usr/jdk/entsys-j2se: No such file or directory
lrwxrwxrwx   1 root     other         11 May  7 19:36 /usr/jdk/latest ->
jdk1.6.0_26
-- Exit status: 2
ls -lL /usr/jdk/entsys-j2se /usr/jdk/latest 2>&1
/usr/jdk/entsys-j2se: No such file or directory
/usr/jdk/latest:
total 38080
-rw-r--r--   1 root     bin         3339 May  4  2011 COPYRIGHT
-rw-r--r--   1 root     bin           40 May  4  2011 LICENSE
-rw-r--r--   1 root     bin          115 May  4  2011 README.html
-rw-r--r--   1 root     bin        20320 Nov 29  2006 README_ja.html
-rw-r--r--   1 root     bin        15160 Nov 29  2006 README_zh_CN.html
-rw-r--r--   1 root     bin       183173 May  4  2011
THIRDPARTYLICENSEREADME.txt
drwxr-xr-x   3 root     bin           49 May  7 19:37 bin
drwxr-xr-x  11 root     bin           12 Jun 12  2012 demo
drwxr-xr-x   3 root     bin            8 May  7 19:36 include
drwxr-xr-x   6 root     bin           11 May  7 19:36 jre
drwxr-xr-x   3 root     bin           11 May  7 19:36 lib
drwxr-xr-x   6 root     bin            6 Jun 12  2012 man
-r--r--r--   1 root     other       6646 May  7 19:36 register.html
-r--r--r--   1 root     other       8092 May  7 19:36 register_ja.html
-r--r--r--   1 root     other       6249 May  7 19:36
register_zh_CN.html
drwxr-xr-x  10 root     bin           10 Jun 12  2012 sample
-rw-r--r--   1 root     bin      19103364 May  4  2011 src.zip
-- Exit status: 2
INFO: no update to /etc/softlist.xml required

Hit Return to Continue:
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
-- unlink /tmp/.response_CI_20130507193917
-- unlink /tmp/.patchout_20130507193917.24033
mkdir -p /var/opt/CommsInstaller/logs 2>&1
-- Exit status: 0

NOTICE: silent file created in:

/var/opt/CommsInstaller/logs/silent_CommsInstaller_20130507193917
-- Closing the log at Tue May  7 19:42:10 2013
[1009 Tue May 07 19:42:35 root@host1% /home/user/wspace/releases/ci74# ]
# ./commpkg info
-- LOGFILE: /tmp/CommsInstaller_20130507194238.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013
```

```
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: It is highly recommended that you apply the
          latest OS Recommended Patch Cluster. commpkg will
          not do this automatically.
ALTROOT: /
  NAME: ""
  Product: Messaging Server (64bit) 7u5 64bit
           Oracle Version: Not Found
           Version: 7.5-28.21
           ALTROOT: /
           Basedir: /opt/sun/comms/messaging64
           Build Date: 20130408
  Product: Comms DSsetup 6.4
           Oracle Version: Not Found
           Version: 6.4-24.03
           ALTROOT: /
           Basedir: /opt/sun/comms/dssetup
           Build Date: 20120611

[1010 Tue May 07 19:42:47 root@host1% /home/user/wspace/releases/ci74# ]
# ./commpkg info --verbose
-- LOGFILE: /tmp/CommsInstaller_20130507194410.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: It is highly recommended that you apply the
          latest OS Recommended Patch Cluster. commpkg will
          not do this automatically.
ALTROOT: /
  NAME: ""
  Product: Messaging Server (64bit) 7u5 64bit
           Oracle Version: Not Found
           Version: 7.5-28.21
           ALTROOT: /
           Basedir: /opt/sun/comms/messaging64
           Build Date: 20130408
           getVersion UNAME: SunOS
           getVersion ARCH: sparc
           getVersion BITS: 64
           Product Installation Status: PRESENT
           Package Status/Name/Version:
             PRESENT  SUNWmessaging-server-64 7.0,REV=2008.06.20
  Product: Comms DSsetup 6.4
           Oracle Version: Not Found
```

```
Version: 6.4-24.03
ALTROOT: /
Basedir: /opt/sun/comms/dssetup
Build Date: 20120611
getVersion UNAME: SunOS
getVersion ARCH: sparc
getVersion BITS: 32
Product Installation Status: PRESENT
Package Status/Name/Version:
  PRESENT  SUNWcomds        6.3,REV=2004.08.12
```

```
[1011 Tue May 07 19:44:19 root@host1% /home/user/wspace/releases/ci74# ]
```

Connector for Microsoft Outlook Upgrade Guide

Upgrading to Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite Version 8

This document describes how to upgrade from Connector for Microsoft Outlook 7.1, 7.2, 7.2 U1, and 7.3 to Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite 8.

This document includes the following sections:

- Upgrading to Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite
- Upgrading Shared Components
- Rolling Back to Previous Version

Upgrading to Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite

This section explains how you can upgrade from Connector for Microsoft Outlook 7.1 and subsequent versions to Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite 8.

Before you upgrade, as a prerequisite, set the Default Mail Client as Microsoft Outlook. For information on setting the default mail client, see Designating Outlook as Default Mail Client.

Upgrading to Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite 8 is a two step process.

Step 1: Upgrading Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite Deployment Configuration Program

1. Double-click `setup.exe` from the Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite package.
2. Choose the preferred language from the drop-down list in the Install/Upgrade wizard.
   The system checks if you wish to upgrade the Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite Deployment Configuration Program.
3. Click Yes to confirm or No to exit.
   The wizard starts the installation.
4. Click OK.

Step 2: Upgrading User Profiles

> **Note:**
> Starting with Connector for Microsoft Outlook 7.2, this step is not required.

1. Invoke Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite Deployment Configuration Program from the desktop.
2. Clear the Create/convert/upgrade user profile option in the Processes tab.
3. Select the Install or upgrade Connector for Microsoft Outlook option.
4. Click File and save it as `filename.ini`.
   The Connector for Microsoft Outlook Deployment Configuration Program creates an executable with the configuration file(.ini) you created.
5. Run the executable to start the upgrade:

```
C:\Program Files\Sun\Deployment Configuration
Program\Packages\filename.exe
```

The Connector for Microsoft Outlook Setup Wizard is displayed.

6. Click Next to start upgrading the user profiles.
7. Click Exit to close the window.
   The user profiles are now upgraded.

Upgrade Scenarios

- If you are using Communications Express address book server and Outlook Connector for Mail Filters and Out of Office Messages, then you may follow the upgrade procedure as mentioned in Step 2.
- If you are using Convergence's address book server and Communications Express for Mail Filters and Out of Office Messages, perform the following steps after creating the configuration file:

1. Open the configuration (`.ini`) file that you created.
2. Enter the value for `Use_UWC_Url` as 1.
3. Enter the value for `UWC_Url` key in the following format:

```
servername:portnumber/relativepath
```

For example, the value of the key may be:

```
UWC_Url=florizel.com:80/uwc
```

4. Invoke the Outlook Connector Deployment Configuration Program.
5. Open the configuration (.ini) file that you modified and click File -> Save to create a new package.
6. Click Yes when prompted to overwrite the existing package.
7. Run the newly created package.

Upgrading Shared Components

See Communications Suite 7 Update 4 Component Dependencies for the possible combinations of current versions of components that are either required or optional for Connector for Microsoft Outlook.

> **Note**
> Calendar Server customers who have deployed previous versions of Calendar Server need to engage with Oracle to enable their data to be converted and migrated to the new format. This migration is required for the use of Outlook, and is necessary because of the underlying changes in the storage and management of recurring events. No migration service is required for new customers of Calendar Server 6 2004Q2 minimum.

Communications Suite 6 Update 1 is compatible with Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite.

For more information on upgrading the Communications Suite 6 Update 1 Components, see Communications Suite Upgrade Guide

Rolling Back to Previous Version

You cannot roll back to the previous version of Connector for Microsoft Outlook. You can uninstall the current version by using Add/Remove Programs from the Control Panel, and then install the required version.

See the Connector for Microsoft Outlook Installation Guide for more information.

Delegated Administrator Upgrade

Upgrading to Delegated Administrator for Oracle Communications Unified Communications Suite Version 7

This information explains how to upgrade to Delegated Administrator for Oracle Communications Unified Communications Suite 7 from Delegated Administrator 6.4. For versions prior to 6.4, you need to first upgrade to version 6.4 before being able to upgrade to version 7. For instructions on how to upgrade to version 6.4, see Sun Java Communications Suite 5 Upgrade Guide, Upgrading Delegated Administrator.

Topics:

- To Upgrade to Delegated Administrator 7 Patch 6
- Preserving Customized Data When You Upgrade Delegated Administrator
- Upgrading to Newer Updates of Delegated Administrator 7

To Upgrade to Delegated Administrator 7 Patch 6

1. Upgrade and run `comm_dssetup.pl` (version 6.4 Patch 24, included in the Communications Suite 7 Update 3 distribution) against the Directory Server.
   See `commdssetup.pl` for more information.
2. Run the `commpkg upgrade` command.

Preserving Customized Data When You Upgrade Delegated Administrator

If you are upgrading to this release of Delegated Administrator, you might have to perform the following tasks before you configure Delegated Administrator with the `config-commda` program:

- Preserving an Existing Customized Configuration
- Upgrading Customized Service Packages in Delegated Administrator

Preserving an Existing Customized Configuration

This section concerns you only if you previously have installed and configured Delegated Administrator and have customized the Delegated Administrator configuration.

If you have a customized configuration and you rerun the Delegated Administrator configuration program, `config-commda`, the properties in the configuration files are reset to their default values. These files are listed in Delegated Administrator Properties Files.

For information about how you can customize Delegated Administrator, see Customizing Delegated Administrator.

You should preserve your customized configuration before you run the Delegated Administrator configuration program, (`config-commda`) for any reason, including:

- Upgrading Delegated Administrator
- Patching Delegated Administrator
- Rerunning the Delegated Administrator configuration program for any other reason

Delegated Administrator Properties Files

Delegated Administrator installs the following properties files:

- Delegated Administrator utility
  - `cli-usrprefs.properties`
    Location: *da-base*`/data/config`
- Delegated Administrator console
  - `daconfig.properties`
  - `logger.properties`
  - `Resources.properties`
  - `Security.properties`
    For the default location of the Delegated Administrator console files, see Configuration Files and Directories.
- Delegated Administrator server
  - `resource.properties`
  - `serverconfig.properties`
    Most of the configuration related properties are moved from `resource.properties` to the `serverconfig.properties` file.

For the default location of the `resource.properties` file, see Configuration Files and Directories.

To Preserve an Existing Customized Configuration

1. Back up the properties files you have customized.
   For a list of the properties files, see Delegated Administrator Properties Files.
2. Run the `config-commda` program, as described in the following sections.
   The remaining steps use the `resource.properties` file as an example. Repeat these steps for each file you have customized.
3. Edit the new `resource.properties` file created by the `config-commda` program, as follows:
   a. Open the new `resource.properties` file.
   b. Open your back-up copy of the `resource.properties` file.
   c. Locate the properties that were customized in the back-up copy. Apply the customized values to the corresponding properties in the new `resource.properties` file.
      Do not simply overwrite the new `resource.properties` file with the entire back-up copy. The new file may contain new properties created to support this release of Delegated Administrator.
4. Redeploy the edited `resource.properties` file to the Web container used by the Delegated Administrator server.
   Before the change can take effect, you must run the script that deploys the customized `resource.properties` file to your Web container.
   For instructions on how to deploy a customized properties file to a particular Web container, see To Deploy a Customized Configuration File.

> **Note**
> If you have customized values in the `resource.properties` file from previous releases, ensure that the same customization is made in the new `serverconfig.properties` file.

Upgrading to Newer Updates of Delegated Administrator 7

After upgrading to Delegated Administrator 7, apply the latest patch. See Delegated Administrator Patches by Release for patch information.

Upgrading Customized Service Packages in Delegated Administrator

Upgrading Customized Service Packages in Delegated Administrator for Oracle Communications Unified Communications Suite Version 7

This information applies only if you are upgrading from Communications Services 6 2005Q4 Delegated Administrator, or a prior version, to Delegated Administrator for Oracle Communications Unified Communications Suite 7, and you created custom service packages in Delegated Administrator 6 2005Q4 or earlier. If you created custom service packages in the Delegated Administrator 6.4 release, you do not have to take the steps described in this section.

In Delegated Administrator 6.4 and 7, service package templates are located in a different node in the directory than they were in the 6 2005Q4 release.

For more information about preserving customized configurations during upgrades, see Preserving Delegated Administrator Customizations During Upgrades.

Topics:

- Sample Class-of-Service Templates
- Customized Service Packages

Sample Class-of-Service Templates

When you run the Delegated Administrator configuration program, the previously installed sample Class-of-Service templates installed by the Delegated Administrator configuration program are upgraded automatically. (In the configuration program, you should select **Load sample service packages** in the **Service Package and Organization Samples** panel.)

If you use only the sample templates to assign service packages to users and groups, no action is required.

Customized Service Packages

The configuration program does not upgrade customized service packages created in the 6 2005Q4 release. You must upgrade your customized service packages manually.

For information on how customized service packages are created, see Creating Your Own Service Packages.

To Upgrade Customized Service Packages

Perform the following operations on the LDAP directory:

1. Copy your service package templates from the `o=cosTemplates,o=`*rootsuffix* directory node to the `o=`*`service_target`*`,o=cosTemplates,o=`*rootsuffix* directory node.
   where *service_target* is one of the following:

   ```
   mailuser
   calendaruser
   mailcalendaruser
   mailgroup
   calendargroup
   mailcalendargroup
   ```

For example, if a service package template is called `myservicepackage`, and it provides mail service to users, the service package template's new `dn` would be:

```
o=myservicepackage,o=mailuser,o=cosTemplates,o=<rootsuffix>
```

2. Remove the entries for your service package templates from the original directory node:

```
o=cosTemplates,o=<rootsuffix>
```

3. Edit each customized service package by adding the following line to the LDIF file defining the service package:

```
daServiceType:<service type> <target>
```

> **Note**
> If your LDIF file already contains the `daServiceType` attribute, you can skip this step.

The `daServiceType` attribute defines the type of service provided by the service package and the target for the service package.
The *service* can be `mail` or `calendar`.
The *target* can be `users` or `groups`.
For example:

```
daServiceType: mail user
```

The following example shows what the edited LDIF file might look like:

```
dn: cn=myservicepackage,o=mailuser,o=cosTemplates,o=mycompanysuffix
changetype: modify
replace: daServiceType
daServiceType: mail user
```

4. Use the LDAP directory tool `ldapmodify` to update the service package in the directory.
For example, you could run the following command:

```
ldapmodify -D <directory manager> -w <password> -f
myservicepackagemodldif
```

where:
directory manager is the name of the Directory Server administrator.
password is the password of the Directory Service administrator.
`myservicepackagemodldif` is the name of the ldif file containing the modifications described in the preceding steps.

Upgrading Customized Service Packages in Delegated Administrator 6.4

Upgrading Customized Service Packages in Delegated Administrator 6.4

This information applies only to upgrading from Communications Services 6 2005Q4 Delegated Administrator to Delegated Administrator 6.4, and you created customized service packages in the previous release (6 2005Q4).

In Delegated Administrator 6.4, service package templates are located in a different node in the directory than they were in the 6 2005Q4 release.

For more information about preserving customized configurations during upgrades, see Upgrading Delegated Administrator.

Topics:

- Sample Class-of-Service Templates
- Customized Service Packages

Sample Class-of-Service Templates

When you run the Delegated Administrator configuration program, the previously installed sample Class-of-Service templates installed by the Delegated Administrator configuration program are upgraded automatically. (In the configuration program, you should select **Load sample service packages** in the **Service Package and Organization Samples** panel.)

If you use only the sample templates to assign service packages to users and groups, no action is required.

Customized Service Packages

The configuration program does not upgrade customized service packages created in the 6 2005Q4 release. You must upgrade your customized service packages manually.

For information on how customized service packages are created, see Creating Your Own Service Packages.

To Upgrade Customized Service Packages

Perform the following operations on the LDAP directory:

1. Copy your service package templates from the `o=cosTemplates,o=`*rootsuffix* directory node to the `o=`*service_target*`,o=cosTemplates,o=`*rootsuffix* directory node, where *service_target* is one of the following:

   ```
   mailuser
   calendaruser
   mailcalendaruser
   mailgroup
   calendargroup
   mailcalendargroup
   ```

   For example, if a service package template is called `myservicepackage`, and it provides mail service to users, the service package template's new `dn` would be

`o=myservicepackage,o=mailuser,o=cosTemplates,o=`*rootsuffix*.

2. Remove the entries for your service package templates from the original directory node:

```
o=cosTemplates,o=<rootsuffix>
```

3. Edit each customized service package by adding the following line to the LDIF file defining the service package:

```
daServiceType:<service type> <target>
```

> **Note**
> If your LDIF file already contains the `daServiceType` attribute, you can skip this step.

The `daServiceType` attribute defines the type of service provided by the service package and the target for the service package. The *service* can be `mail` or `calendar`. The *target* can be `users` or `groups`.
For example:

```
daServiceType: mail user
```

The following example shows what the edited LDIF file might look like:

```
dn: cn=myservicepackage,o=mailuser,o=cosTemplates,o=mycompanysuffix
changetype: modify
replace: daServiceType
daServiceType: mail user
```

4. Use the LDAP `ldapmodify` command to update the service package in the directory.
For example:

```
ldapmodify -D <directory manager> -w <password> -f
myservicepackagemodldif
```

where:
directory manager is the name of the Directory Server administrator.
password is the password of the Directory Service administrator.
`myservicepackagemodldif` is the name of the LDIF file containing the modifications described in the preceding steps.

DSsetup 6.4-24 Sample Session - Upgrade

DSsetup 6.4-24 Sample Session - Upgrade

This section outlines the commands to run and lists a sample session.

Topics:

- Summary of Commands Run
- Comments
- Session

Summary of Commands Run

```
999  ./commpkg install --silent=NONE --comp="MS64 DSSETUP"
 1000  /opt/sun/comms/messaging64/bin/configure -state
~user/wspace/saveStates/worfin
 1001  /opt/sun/comms/messaging64/bin/start-msg
 1002  uname -a
 1003  ./commpkg upgrade
 1004  cd ../ci74
 1005  ./commpkg upgrade

 1007  cat
/var/opt/CommsInstaller/logs/silent_CommsInstaller_20130507193917
 1008  cat
/var/opt/CommsInstaller/logs/CommsInstaller_20130507193917.log
 1009  ./commpkg info
 1010  ./commpkg info --verbose
```

Comments

```
(Carryover from R7u2) Upgrade comments
- Only products that are upgradable are listed. E.g. if MS was already
  at the latest version, then it would not be displayed as a selection
  for upgrade.
- Different products may require additional steps after upgrade.
  - Dssetup in particular requires that you run the new version to
    update the DS. This isn't shown in the sample session.
  - For MS, there are no additional steps required unless you are in a
    cluster.
  - For DA you typically have to upgrade DSsetup first prior to
    upgrading DA, entailing that you have to run commpkg upgrade twice
    (unfortunately)
- Shared components (SCs) will be upgraded as required.
  - If you don't want SCs upgraded use the --excludeSC switch
- Note that upgrade will either do a pkgrm/pkgadd or a patchadd for
  the upgrade depending on what is installed. In the case of MS for
  this session, patchadd is done. If the original MS installation was
  6.3, a pkgrm/pkgadd would have been done. For Dssetup, the new
  version is a  patch, so patchadd is used. Note that you can backout
  a patch with patchrm, but there is no easy way to backout an upgrade
  that uses pkgrm/pkgadd. In either case, it is always advisable to have
a
  backup of your system (e.g. using zfs snapshot)
```

Session

```
[999 Tue May 07 19:35:05 root@host1% /home/user/wspace/releases/ci72# ]
# ./commpkg install --silent=NONE --comp="MS64 DSSETUP"
-- LOGFILE: /tmp/CommsInstaller_20130507193621.log
CommsInstaller version R7u2 (7.2-0.36 [7.0.2.0.0]) built on Fri Sep  9
13:45:27 PDT 2011

Welcome to the Oracle Communications Unified Communications Suite
Product Installer
This program will install selected components of the Communications
Suite
on your computer. Do note that the installer lays down the
bits, but does not do configuration. Separate configuration
steps for each individual product will be required.

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=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Specify Install Location

This program will extract the server files and install them
into a directory you specify. That directory is called the
INSTALLROOT in the product documentation and will contain
the server programs.

To accept the default shown in brackets, press the Enter key.
```

```
Install location [/opt/sun/comms]: -- /opt/sun/comms already exists,
existing data may be overwritten
Accept
Anyway?=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Detecting Installed Patches...
Use of uninitialized value in concatenation (.) or string at
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci72/.inst
line 114, <PATCHADD> line 16.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Product Selection:

Shared Components (not shown) will be installed as required.
  Any required Shared Components upgrade will NOT be performed.
  This may result in products not working.
OS patches (not shown) will be installed as required.

Communication Products:

    Item  Description
    ----  -----------
       1  Messaging Server (64bit) 7u4 (7.4-23.01)
       2  Comms DSsetup 6.4 (6.4-23.01)
       3  Calendar Server 7u2 (7.2-4.19)
       4  Instant Messaging 9 (9.0-00.15)
       5  Convergence 2 (2.0-2.01)
       6  Indexing and Search Service 1u3 (1.3-8.6501)
       7  Comms Delegated Administrator 7 (7.0-4.00)
       8  Messaging Server Sun Cluster HA agent 7.0 (7.0-0.03)
       9  Instant Messaging Sun Cluster HA agent 7.3 (7.3-01.02)


Enter the items you wish to install. Enter q to quit.
Prefix an item with ~ to indicate you only want
  to install shared component dependencies of that product
You can enter multiple items using commas to separate them.
For example: 1,2
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Generating list of things to install...
Checking for Shared Component Upgrade Requirements...
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
  WILL INSTALL: Simple Authentication and Security Layer 2.19
  WILL INSTALL: LDAPCSDK6 Tools 6.0
  WILL INSTALL: International Components for Unicode ICU2,ICU3
  WILL INSTALL: LDAPCSDK6 6.0
  WILL INSTALL: Service Tags 1.1.4
  WILL INSTALL: JDK 1.6.0
  WILL INSTALL: Java Help Runtime 2.0
  WILL INSTALL: Message Queue 4.4
  WILL INSTALL: Message Queue Localization 4.4
  WILL INSTALL: Messaging Server (64bit) 7u4 (7.4-23.01)
                to /opt/sun/comms/messaging64
  WILL INSTALL: Comms DSsetup 6.4 (6.4-23.01)
                to /opt/sun/comms/dssetup
  WILL INSTALL: CommsInstaller 7u2 (7.2-0.36)
```

```
                 to /opt/sun/comms/CommsInstaller
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Ready to install


============================================================
Installing Simple Authentication and Security Layer 2.19...
------ Executing Task 1 of 44 ...

============================================================
Installing LDAPCSDK6 Tools 6.0...
------ Executing Task 2 of 44 ...

============================================================
Installing International Components for Unicode ICU2,ICU3...
------ Executing Task 3 of 44 ...

============================================================
Installing LDAPCSDK6 6.0...
------ Executing Task 4 of 44 ...
------ Executing Task 5 of 44 ...

============================================================
Installing Service Tags 1.1.4...
------ Executing Task 6 of 44 ...
------ Executing Task 7 of 44 ...
------ Executing Task 8 of 44 ...

============================================================
Installing JDK 1.6.0...
------ Executing Task 9 of 44 ...
------ Executing Task 10 of 44 ...
------ Executing Task 11 of 44 ...
------ Executing Task 12 of 44 ...
------ Executing Task 13 of 44 ...

============================================================
Installing Java Help Runtime 2.0...
------ Executing Task 14 of 44 ...
------ Executing Task 15 of 44 ...
------ Executing Task 16 of 44 ...
------ Executing Task 17 of 44 ...

============================================================
Installing Message Queue 4.4...
------ Executing Task 18 of 44 ...
------ Executing Task 19 of 44 ...
------ Executing Task 20 of 44 ...
------ Executing Task 21 of 44 ...
------ Executing Task 22 of 44 ...
------ Executing Task 23 of 44 ...
------ Executing Task 24 of 44 ...
------ Executing Task 25 of 44 ...
------ Executing Task 26 of 44 ...
------ Executing Task 27 of 44 ...
```

```
============================================================
Installing Message Queue Localization 4.4...
------ Executing Task 28 of 44 ...
------ Executing Task 29 of 44 ...
------ Executing Task 30 of 44 ...
------ Executing Task 31 of 44 ...
------ Executing Task 32 of 44 ...
------ Executing Task 33 of 44 ...
------ Executing Task 34 of 44 ...
------ Executing Task 35 of 44 ...
------ Executing Task 36 of 44 ...
------ Executing Task 37 of 44 ...
------ Executing Task 38 of 44 ...
------ Executing Task 39 of 44 ...
------ Executing Task 40 of 44 ...
------ Executing Task 41 of 44 ...

============================================================
Installing Messaging Server (64bit) 7u4 (7.4-23.01)...
------ Executing Task 42 of 44 ...

============================================================
Installing Comms DSsetup 6.4 (6.4-23.01)...
------ Executing Task 43 of 44 ...

============================================================
Installing CommsInstaller 7u2 (7.2-0.36)...
------ Executing Task 44 of 44 ...
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
SUMMARY:


All tasks PASSED
Checking JES java symlink...
INFO: no update to /etc/softlist.xml required
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=

NOTICE: To undo the installation, run the commands in:
        /var/opt/CommsInstaller/logs/undoCommsInstall_20130507193621

NOTICE: silent file created in:

/var/opt/CommsInstaller/logs/silent_CommsInstaller_20130507193621
NOTICE: LOGFILE  created in:
        /var/opt/CommsInstaller/logs/CommsInstaller_20130507193621.log
[1000 Tue May 07 19:37:24 root@host1% /home/user/wspace/releases/ci72# ]
# /opt/sun/comms/messaging64/bin/configure -state
~user/wspace/saveStates/worfin
WARNING: unknown state file variable: InternalIPlist
WARNING: unknown state file variable: XMLCONFIG
==Creating directories for server data and configuration files
==Checking Directory Server Setup from comm_dssetup
Domain Suffix: o=isp
User/Group Suffix: o=isp
Mail List User Suffix: o=mlusers
Schema Type: 2
```

```
==Creating LDAP domain, group and admin accounts
==Creating Configuration Files
==Writing install/VERSION file
==Compiling MTA character set tables (chbuild)
==Compiling MTA command line tables (clbuild)
==Checking for Common Configuration Warnings
==Writing Save State File
 /var/opt/sun/comms/messaging64/setup/saveState
==Disabling sendmail
  sendmail is already disabled.
Next Steps:
* Disable any other active mail servers on this host
* Configure sendmail client (see documentation for details)
* Make sure nsswitch.conf (or equivalent) has 'hosts: files dns'
* Make sure DNS MX/A record is present for 'company33.com'
* Make sure DNS A record for 'host1.example.com' points to this machine
* Generate/Install SSL Certificate if SSL services desired
* Enable/Disable required services:
 Service          Port  Change Port          Enable/Disable Service
 -------          ----  -----------          ----------------------
 Message Store                               local.store.enable (1)
  IMAP Server     143   service.imap.port     service.imap.enable (1)
  POP Server      110   service.pop.port      service.pop.enable (1)
  IMAPS Server    993   service.imap.sslport  service.imap.enablesslport
(0)
  POPS Server     995   service.pop.sslport   service.pop.enablesslport
(0)
  LMTP Server     225   dispatcher.cnf       dispatcher.cnf (disabled)
 MTA                                         local.imta.enable (1)
  SMTP Relay      25    dispatcher.cnf        dispatcher.cnf (enabled)
  SMTP Submit     587   dispatcher.cnf        dispatcher.cnf (enabled)
  SMTPS Submit    465   dispatcher.cnf        dispatcher.cnf (disabled)
 http mail proxy  8990  service.http.port    service.http.enable (1)
 https mail proxy 8991  service.http.sslport service.http.enablesslport
(0)
 MMP                                         local.mmp.enable (0)
  IMAP Proxy      143   AService.cfg          AService.cfg (0)
  POP Proxy       110   AService.cfg          AService.cfg (0)
  Submit Proxy    587   AService.cfg          AService.cfg (disabled)
  IMAPS Proxy     993   AService.cfg & ImapProxyAService.cfg (disabled)
  POPS Proxy      995   AService.cfg & PopProxyAService.cfg (disabled)
  Submits Proxy   465   AService.cfg & SmtpProxyAService.cfg (disabled)
Internal Servers
 watcher          49994 local.watcher.port   local.watcher.enable (1)
 job_controller   27442 job_controller.cnf   local.imta.enable (1)
 ENS              7997  local.ens.port       local.ens.enable (1)
* Configure your network firewall to allow/block above services as
appropriate
* Make sure postmaster 'user@example.com' is provisioned and functional
* Enable RBAC non-root support for improved security
* Use 'start-msg' to start servers
  or Enable SMF for Messaging Server (see documentation for details)
Configuration Completed with 2 warnings
See log file for details:
 /var/opt/sun/comms/messaging64/log/configure_20130507193804.log
[1001 Tue May 07 19:38:05 root@host1% /home/user/wspace/releases/ci72# ]
```

```
# /opt/sun/comms/messaging64/bin/start-msg
Connecting to watcher ...
Launching watcher ... 23698
Starting ens server ... 23699
Starting store server .... 23700
Checking store server status .... ready
Starting purge server .... 23701
Starting imap server .... 23702
Starting pop server .... 23703
Starting http server .... 23704
Starting sched server ... 23705
Starting dispatcher server .... 23707
Starting job_controller server .... 23713
[1002 Tue May 07 19:38:18 root@host1% /home/user/wspace/releases/ci72# ]
# uname -a
SunOS host1 5.10 Generic_147440-12 sun4v sparc sun4v
[1003 Tue May 07 19:38:23 root@host1% /home/user/wspace/releases/ci72# ]
# ./commpkg upgrade
-- LOGFILE: /tmp/CommsInstaller_20130507193826.log
CommsInstaller version R7u2 (7.2-0.36 [7.0.2.0.0]) built on Fri Sep  9
13:45:27 PDT 2011

Welcome to the Oracle Communications Unified Communications Suite
Product Installer
This program will install selected components of the Communications
Suite
on your computer. Do note that the installer lays down the
bits, but does not do configuration. Separate configuration
steps for each individual product will be required.

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=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Detecting Installed Patches...
Use of uninitialized value in concatenation (.) or string at
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci72/.inst
line 114, <PATCHADD> line 16.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Product Selection:

Communication Products:

    Item  Description
    ----  -----------

Enter the items you wish to upgrade. Enter q to quit.
You can enter multiple items using commas to separate them.
For example: 1,2


 NOTICE: There are no products available to upgrade
Do you want to continue ? [yes] : no
Exiting....
[1004 Tue May 07 19:39:11 root@host1% /home/user/wspace/releases/ci72# ]
```

```
# cd ../ci74
[1005 Tue May 07 19:39:14 root@host1% /home/user/wspace/releases/ci74# ]
# ./commpkg upgrade
-- LOGFILE: /tmp/CommsInstaller_20130507193917.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013

Welcome to the Oracle Communications Unified Communications Suite
Product Installer
This program will install selected components of the Communications
Suite
on your computer. Do note that the installer lays down the
bits, but does not do configuration. Separate configuration
steps for each individual product will be required.

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=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
  NOTICE: CommsInstaller is present with a different pkg VERSION.
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: You must apply the latest OS Recommended Patchset
          Some products will not work properly without it
Do you want to continue ? [no] : yes
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Product Selection:

Communication Products:

    Item  Description
    ----  -----------
       1  Messaging Server (64bit) 7u5 (7.5-28.21)
          Installed Version 7u4 (7.4-23.01) at
/opt/sun/comms/messaging64
       2  Comms DSsetup 6.4 (6.4-24.03)
          Installed Version 6.4 (6.4-23.01) at /opt/sun/comms/dssetup

Enter the items you wish to upgrade. Enter q to quit.
You can enter multiple items using commas to separate them.
For example: 1,2

Please select the products you wish to upgrade [1, 2]:
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Checking for Shared Component Upgrade Requirements...
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
  WILL INSTALL: patch 125358-15 for NSS/NSPR/JSS
  NOTICE: CommsInstaller will be upgraded...
          Removing the old version is an irreversible process.
  WILL REMOVE EXISTING: CommsInstaller 7.0.2.0.0
  WILL INSTALL: CommsInstaller 7.0.4.0.0
                to /opt/sun/comms/CommsInstaller
```

```
  NOTICE: Upgrading Messaging Server (64bit) 7u4 (7.4-23.01)
          to 7u5 (7.5-28.21) at /opt/sun/comms/messaging64
          Upgrade will be done by applying a patch
  WILL INSTALL: patch 137204-28 for Messaging Server (64bit)
  NOTICE: Upgrading Comms DSsetup 6.4 (6.4-23.01)
          to 6.4 (6.4-24.03) at /opt/sun/comms/dssetup
          Upgrade will be done by applying a patch
  WILL INSTALL: patch 118245-24 for Comms DSsetup
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Ready to upgrade

Do you want to continue ? [yes] :

============================================================
Installing patch 125358-15 for NSS/NSPR/JSS...
------ Executing Task 1 of 7 ...

============================================================
Removing existing CommsInstaller 7.0.2.0.0...
------ Executing Task 2 of 7 ...

============================================================
Installing CommsInstaller 7.0.4.0.0...
------ Executing Task 3 of 7 ...

============================================================
Upgrading Messaging Server (64bit) 7u4 (7.4-23.01) at
/opt/sun/comms/messaging64...
------ Executing Task 4 of 7 ...
--
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
7.4-23.01 /opt/sun/comms/messaging64 0 "137204-28"

============================================================
Installing patch 137204-28 for Messaging Server (64bit)...
------ Executing Task 5 of 7 ...
------ Executing Task 6 of 7 ...
--
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
7.4-23.01 /opt/sun/comms/messaging64 0 "137204-28"
-- /opt/sun/comms/messaging64/bin/patch-config
/opt/sun/comms/messaging64/install/patch/137204-28
-- LOGFILE:
/opt/sun/comms/messaging64/install/patch/137204-28/patch-config_20130507194
New: /opt/sun/comms/messaging64/config/msg.conf.defaults
-- New: /opt/sun/comms/messaging64/config/mappings.locale
-- New: /opt/sun/comms/messaging64/config/internet.rules
-- New: /opt/sun/comms/messaging64/config/imta.cnf
-- New: /opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
-- Del: /opt/sun/comms/messaging64/config/ImapProxyAService-def.cfg
-- Del: /opt/sun/comms/messaging64/config/PopProxyAService-def.cfg
-- Del: /opt/sun/comms/messaging64/config/SmtpProxyAService-def.cfg
--
-- Number of new config files: 5
-- Number of config files to delete: 3
-- Number of config files with conflicts: 0
```

```
-- Number of config files that are images (gif png ico or jpg): 0
-- The list of new config files are in:
    /opt/sun/comms/messaging64/install/patch/137204-28/newconfig.list
-- The list of config files to be deleted are in:
    /opt/sun/comms/messaging64/install/patch/137204-28/delconfig.list

--
-- Please review the changes in the new config files before installing
them.
-- To install the updated config files, run
-- /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-28

-- /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-28
-- LOGFILE:
/opt/sun/comms/messaging64/install/patch/137204-28/install-newconfig_201305
Stopping services: /opt/sun/comms/messaging64/bin/stop-msg
/opt/sun/comms/messaging64/bin/stop-msg
Connecting to watcher ...
Warning: Cannot connect to watcher
job_controller server is not running
dispatcher server is not running
sched server is not running
http server is not running
pop server is not running
imap server is not running
purge server is not running
store server is not running
ens server is not running
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/msg.conf.def
/opt/sun/comms/messaging64/config/msg.conf.defaults
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/mappings.loc
/opt/sun/comms/messaging64/config/mappings.locale
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/internet.rul
/opt/sun/comms/messaging64/config/internet.rules
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/imta.cnf.new
/opt/sun/comms/messaging64/config/imta.cnf
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/data/install/ugdir_
/opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
unlink /opt/sun/comms/messaging64/config/ImapProxyAService-def.cfg
unlink /opt/sun/comms/messaging64/config/PopProxyAService-def.cfg
unlink /opt/sun/comms/messaging64/config/SmtpProxyAService-def.cfg
-- Number of different files: 5
-- Number of deleted files: 3
-- Original files are backed up under
/opt/sun/comms/messaging64/install/patch/137204-28/config_20130507194112
-- The final step is to apply the ldif file
-- /opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
-- to the user/group Directory
-- This is not performed automatically, you must do this manually
```

```
============================================================
Done Upgrading Messaging Server (64bit) to 7u5 (7.5-28.21) at
/opt/sun/comms/messaging64

============================================================
Upgrading Comms DSsetup 6.4 (6.4-23.01) at /opt/sun/comms/dssetup...

============================================================
Installing patch 118245-24 for Comms DSsetup...
------ Executing Task 7 of 7 ...
============================================================
Done Upgrading Comms DSsetup to 6.4 (6.4-24.03) at
/opt/sun/comms/dssetup
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
SUMMARY:

-- Output of Task 6: postupgrade
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
7.4-23.01 /opt/sun/comms/messaging64 0 "137204-28"
-- /opt/sun/comms/messaging64/bin/patch-config
/opt/sun/comms/messaging64/install/patch/137204-28
-- LOGFILE:
/opt/sun/comms/messaging64/install/patch/137204-28/patch-config_20130507194
New: /opt/sun/comms/messaging64/config/msg.conf.defaults
-- New: /opt/sun/comms/messaging64/config/mappings.locale
-- New: /opt/sun/comms/messaging64/config/internet.rules
-- New: /opt/sun/comms/messaging64/config/imta.cnf
-- New: /opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
-- Del: /opt/sun/comms/messaging64/config/ImapProxyAService-def.cfg
-- Del: /opt/sun/comms/messaging64/config/PopProxyAService-def.cfg
-- Del: /opt/sun/comms/messaging64/config/SmtpProxyAService-def.cfg
--
-- Number of new config files: 5
-- Number of config files to delete: 3
-- Number of config files with conflicts: 0
-- Number of config files that are images (gif png ico or jpg): 0
-- The list of new config files are in:
    /opt/sun/comms/messaging64/install/patch/137204-28/newconfig.list
-- The list of config files to be deleted are in:
    /opt/sun/comms/messaging64/install/patch/137204-28/delconfig.list

--
-- Please review the changes in the new config files before installing
them.
-- To install the updated config files, run
-- /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-28

-- /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-28
-- LOGFILE:
/opt/sun/comms/messaging64/install/patch/137204-28/install-newconfig_201305
Stopping services: /opt/sun/comms/messaging64/bin/stop-msg
/opt/sun/comms/messaging64/bin/stop-msg
Connecting to watcher ...
Warning: Cannot connect to watcher
```

```
job_controller server is not running
dispatcher server is not running
sched server is not running
http server is not running
pop server is not running
imap server is not running
purge server is not running
store server is not running
ens server is not running
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/msg.conf.def
/opt/sun/comms/messaging64/config/msg.conf.defaults
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/mappings.loc
/opt/sun/comms/messaging64/config/mappings.locale
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/internet.rul
/opt/sun/comms/messaging64/config/internet.rules
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/imta.cnf.new
/opt/sun/comms/messaging64/config/imta.cnf
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/data/install/ugdir_
/opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
unlink /opt/sun/comms/messaging64/config/ImapProxyAService-def.cfg
unlink /opt/sun/comms/messaging64/config/PopProxyAService-def.cfg
unlink /opt/sun/comms/messaging64/config/SmtpProxyAService-def.cfg
-- Number of different files: 5
-- Number of deleted files: 3
-- Original files are backed up under
/opt/sun/comms/messaging64/install/patch/137204-28/config_20130507194112
-- The final step is to apply the ldif file
-- /opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
-- to the user/group Directory
-- This is not performed automatically, you must do this manually
-- End of command output--

All tasks PASSED
Checking JES java symlink...
INFO: no update to /etc/softlist.xml required

Hit Return to Continue:
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=

NOTICE: silent file created in:

/var/opt/CommsInstaller/logs/silent_CommsInstaller_20130507193917
NOTICE: LOGFILE  created in:
        /var/opt/CommsInstaller/logs/CommsInstaller_20130507193917.log
[1006 Tue May 07 19:42:10 root@host1% /home/user/wspace/releases/ci74# ]
# cat cvat
cat: cannot open cvat
[1007 Tue May 07 19:42:19 root@host1% /home/user/wspace/releases/ci74# ]
# cat /var/opt/CommsInstaller/logs/silent_CommsInstaller_20130507193917
#
# Silent File for CommsInstaller 7.0.4.0.0 (7.4-0.05)
```

```
# Generated on 20130507193917
#

#
# verb used to create this silent file
VERB=upgrade

#
# alternate distro path if not found where commpkg resides
#    and no --distro switch specified is
#
ALTDISTROPATH=/net/comms-nfs.example.com/export/megan/wspace/dl111122/relea
flag to indicate whether to perform pkg overwrite if the pkg already
exists
#
PKGOVERWRITE=no

#
# flag to indicate whether to exclude OS patches
#
EXCLUDEOS=no

#
# flag to indicate whether to exclude shared components
#
EXCLUDESC=no

#
# flag to indicate that all SC should or should not be upgraded without
prompting
#
UPGRADESC=no

#
# INSTALLROOT friendly name
#
INSTALLNAME=

#
# flag to indicate whether to perform upgrade using pkgrm/pkgadd
#
USEPKGUPGRADE=no

#
# flag to indicate whether to skip OS Level Check
#
SKIPOSLEVELCHECK=no

#
# list of components (using mnemonics)
#
COMPONENTS=MS64 DSSETUP
COMPONENT_VERSIONS= 7.5 6.4
[1008 Tue May 07 19:42:28 root@host1% /home/user/wspace/releases/ci74# ]
# cat /var/opt/CommsInstaller/logs/CommsInstaller_20130507193917.log
============ LOGFILE started Tue May  7 19:39:17 2013 ==========
```

```
LOGFILE = /tmp/CommsInstaller_20130507193917.log
Running /usr/bin/perl ./commpkg
-- /usr/bin/perl ./commpkg upgrade
-- ARGS:
   upgrade
-- perl version: 5.008004 pid: 24033
-- basetime: 1367980757 Tue May  7 19:39:17 2013
-- scriptDir:
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74
-- LOGFILE: /tmp/CommsInstaller_20130507193917.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013
-- UNAME = SunOS ARCH = sparc OS_VERS = 5.10 BITS = 64
uname -a 2>&1
SunOS host1 5.10 Generic_147440-12 sun4v sparc sun4v
-- Exit status: 0
!!! ENV
$VAR1 = {
          'HOME' => '/',
          'PS1' => '[\\! \\d \\t \\u@\\h% \\w\\$ ]
\\$ ',
          'LC_COLLATE' => '',
          'LC_ALL' => '',
          'CDPATH' => ':..:/home/user',
          'LC_NUMERIC' => '',
          'MAIL' => '/var/mail/uadmin',
          'TZ' => 'PST8PDT',
          'PWD' => '/home/user/wspace/releases/ci74',
          'LC_TIME' => '',
          'LANG' => 'C',
          'LC_MESSAGES' => '',
          'LC_CTYPE' => '',
          'LOGNAME' => 'uadmin',
          'SHLVL' => '1',
          'OLDPWD' => '/home/user/wspace/releases/ci72',
          'LC_MONETARY' => '',
          '_' => './commpkg',
          'PATH' =>
'/bin:/usr/bin:/usr/sbin:/sbin:/usr/etc::~user/bin:/usr/sbin:/usr/bin',
          'SHELL' => '/bin/sh',
          'HZ' => '',
          'TERM' => 'dumb'
        };
cat /etc/release 2>&1
                   Oracle Solaris 10 8/11 s10s_u10wos_17b SPARC
  Copyright (c) 1983, 2011, Oracle and/or its affiliates. All rights
reserved.
                            Assembled 23 August 2011
-- Exit status: 0
-- Recognized OS_VERS
!!! comms products found in distro
$VAR1 = [
          'MS64',
          'DSSETUP',
          'DAV',
          'IM',
```

```
          'IWC',
          'JISS',
          'DA',
          'MS_SCHA',
          'IM_SCHA'
        ];
!!! products found in distro, distrProds
$VAR1 = {
          'ST' => {
                    'Packages' => 1
                  },
          'SASL' => {
                      'Packages' => 1,
                      'Patches' => 1
                    },
          'IWC' => {
                     'Packages' => 1,
                     'Patches' => 1
                   },
          'IM' => {
                    'Packages' => 1,
                    'Patches' => 1
                  },
          'DSSETUP' => {
                         'Packages' => 1,
                         'Patches' => 1
                       },
          'LDAPJDK' => {
                         'Packages' => 1,
                         'Patches' => 1
                       },
          'MQ_L10N' => {
                         'Packages' => 1
                       },
          'MYSQL_MARKER' => {
                              'Packages' => 1
                            },
          'BZIP' => {
                      'Patches' => 1
                    },
          'ICU' => {
                     'Packages' => 1,
                     'Patches' => 1
                   },
          'IM_SCHA' => {
                         'Packages' => 1,
                         'Patches' => 1
                       },
          'MS64' => {
                      'Packages' => 1,
                      'Patches' => 1
                    },
          'LIBCPLUSPLUS' => {
                              'Patches' => 1
                            },
          'DAV' => {
```

```
                      'Packages' => 1,
                      'Patches' => 1
                    },
          'LDAPCSDK6' => {
                           'Packages' => 1
                         },
          'MS_SCHA' => {
                         'Packages' => 1
                       },
          'MQ' => {
                    'Packages' => 1
                  },
          'PATCHUTILS' => {
                            'Patches' => 1
                          },
          'JHRT' => {
                      'Packages' => 1
                    },
          'CI' => {
                    'Packages' => 1
                  },
          'IMAPI' => {
                       'Packages' => 1,
                       'Patches' => 1
                     },
          'DA' => {
                    'Packages' => 1,
                    'Patches' => 1
                  },
          'LDAPCSDK6_TOOLS' => {
                                 'Packages' => 1,
                                 'Patches' => 1
                               },
          'JISS' => {
                      'Packages' => 1,
                      'Patches' => 1
                    },
          'NSS' => {
                      'Packages' => 1,
                      'Patches' => 1
                    }
        };
/usr/bin/pkgcond -n is_what 2>&1
can_add_driver=0
can_remove_driver=0
can_update_driver=0
is_alternative_root=0
is_boot_environment=0
is_diskless_client=0
is_global_zone=1
is_mounted_miniroot=0
is_netinstall_image=0
is_nonglobal_zone=0
is_path_writable=1
is_running_system=1
is_sparse_root_nonglobal_zone=0
```

```
is_whole_root_nonglobal_zone=0
-- Exit status: 1
/usr/bin/pkgcond -n is_global_zone 2>&1
-- Exit status: 1
/usr/bin/pkgcond -n is_sparse_root_nonglobal_zone 2>&1
-- Exit status: 0
Reading Product Files...
Reading
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
no mapFile
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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not found, skipping...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
not found, skipping...
Reading OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
OLD
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
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/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
QQQ findGetVersion ======
!!! getVersion
$VAR1 = {
          'SASL' => 'none',
          'IWC' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'MS64_L10N' => 'none',
          'MS' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'DSSETUP' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'MQ_L10N' => 'none',
          'ICU' => 'none',
          'MS64' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'DAV' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'LDAPCSDK6' => 'none',
          'CE' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'JDK' => 'none',
          'MYSQL' => 'none',
          'PATCHUTILS' => 'none',
          'MQ' => 'none',
          'IMAPI' => 'none',
          'CI' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.ins
'LDAPCSDK6_TOOLS' => 'none',
          'JISS' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'NSS' => 'none',
          'CS_L10N' => 'none',
          'IM' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'ST' => 'none',
          'RECOMMENDED' => 'none',
          'IM_L10N' => 'none',
          'CS_SCHA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'LDAPJDK' => 'none',
          'BZIP' => 'none',
          'MYSQL_MARKER' => 'none',
          'IM_SCHA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
```

```
'MS_L10N' => 'none',
          'LIBCPLUSPLUS' => 'none',
          'MS_SCHA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'CS' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
'JHRT' => 'none',
          'CE_L10N' => 'none',
          'DA' =>
'/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunO
};
!!! prod_getVers
$VAR1 = {
          'SASL' => 0,
          'IWC' => '2.0-6.01',
          'MS64_L10N' => 0,
          'MS' => '7.2-7.02',
          'DSSETUP' => '6.4-24.03',
          'MQ_L10N' => 0,
          'ICU' => 0,
          'MS64' => '7.5-28.21',
          'DAV' => '7.3-10.10',
          'LDAPCSDK6' => 0,
          'CE' => '6.3-13.01',
          'JDK' => 0,
          'MYSQL' => 0,
          'PATCHUTILS' => 0,
          'MQ' => 0,
          'IMAPI' => 0,
          'CI' => '7.4-0.05',
          'LDAPCSDK6_TOOLS' => 0,
          'JISS' => '1.4-16.9301',
          'NSS' => 0,
          'CS_L10N' => 0,
          'IM' => '9.0-03.02',
          'ST' => 0,
          'RECOMMENDED' => 0,
          'IM_L10N' => 0,
          'CS_SCHA' => '6.3-1.01',
          'LDAPJDK' => 0,
          'BZIP' => 0,
          'MYSQL_MARKER' => 0,
          'IM_SCHA' => '7.3-01.02',
          'MS_L10N' => 0,
          'LIBCPLUSPLUS' => 0,
          'MS_SCHA' => '7.0-0.03',
          'CS' => '6.3-32.01',
          'JHRT' => 0,
          'CE_L10N' => 0,
          'DA' => '7.0-7.00'
        };
!!! prod_orclVers
$VAR1 = {
          'SASL' => 0,
          'IWC' => '\'Unrecognized Parameter\'',
          'MS64_L10N' => 0,
```

```
          'MS' => '\'Unrecognized Parameter\'',
          'DSSETUP' => '\'Unrecognized Parameter\'',
          'MQ_L10N' => 0,
          'ICU' => 0,
          'MS64' => '\'Unrecognized Parameter\'',
          'DAV' => '7.0.3.10.0',
          'LDAPCSDK6' => 0,
          'CE' => '\'Unrecognized Parameter\'',
          'JDK' => 0,
          'MYSQL' => 0,
          'PATCHUTILS' => 0,
          'MQ' => 0,
          'IMAPI' => 0,
          'CI' => '7.0.4.0.0',
          'LDAPCSDK6_TOOLS' => 0,
          'JISS' => '1.0.4.16.0',
          'NSS' => 0,
          'CS_L10N' => 0,
          'IM' => '9.0.0.3.0',
          'ST' => 0,
          'RECOMMENDED' => 0,
          'IM_L10N' => 0,
          'CS_SCHA' => '\'Unrecognized Parameter\'',
          'LDAPJDK' => 0,
          'BZIP' => 0,
          'MYSQL_MARKER' => 0,
          'IM_SCHA' => '\'Unrecognized Parameter\'',
          'MS_L10N' => 0,
          'LIBCPLUSPLUS' => 0,
          'MS_SCHA' => '\'Unrecognized Parameter\'',
          'CS' => '\'Unrecognized Parameter\'',
          'JHRT' => 0,
          'CE_L10N' => 0,
          'DA' => '\'Unrecognized Parameter\''
        };
!!! prod_builddate
$VAR1 = {
          'SASL' => 'none',
          'IWC' => '20130402',
          'MS64_L10N' => 'none',
          'MS' => '20090416',
          'DSSETUP' => '20120611',
          'MQ_L10N' => 'none',
          'ICU' => 'none',
          'MS64' => '20130408',
          'DAV' => '20130328',
          'LDAPCSDK6' => 'none',
          'CE' => '20090327',
          'JDK' => 'none',
          'MYSQL' => 'none',
          'PATCHUTILS' => 'none',
          'MQ' => 'none',
          'IMAPI' => 'none',
          'CI' => '20130409',
          'LDAPCSDK6_TOOLS' => 'none',
          'JISS' => '20130320',
```

```
          'NSS' => 'none',
          'CS_L10N' => 'none',
          'IM' => '20130405',
          'ST' => 'none',
          'RECOMMENDED' => 'none',
          'IM_L10N' => 'none',
          'CS_SCHA' => '20080331',
          'LDAPJDK' => 'none',
          'BZIP' => 'none',
          'MYSQL_MARKER' => 'none',
          'IM_SCHA' => '20080403',
          'MS_L10N' => 'none',
          'LIBCPLUSPLUS' => 'none',
          'MS_SCHA' => '20080519',
          'CS' => '20120921',
          'JHRT' => 'none',
          'CE_L10N' => 'none',
          'DA' => '20130319'
        };
====== End QQQ findGetVersion ======
INFO: prod_mktVers{NSS} (no map) = 4.8.8
INFO: prod_mktVers{SASL} (no map) = 2.19
INFO: prod_mktVers{LDAPCSDK6} (no map) = 6.0
INFO: prod_mktVers{LDAPCSDK6_TOOLS} (no map) = 6.0
INFO: prod_mktVers{ICU} (no map) = ICU2,ICU3
INFO: prod_mktVers{JDK} (no map) = 1.6.0
INFO: prod_mktVers{JHRT} (no map) = 2.0
INFO: prod_mktVers{MQ} (no map) = 4.4
INFO: prod_mktVers{MQ_L10N} (no map) = 4.4
INFO: prod_mktVers{LDAPJDK} (no map) = 4.21
INFO: prod_mktVers{IMAPI} (w/ map) = 9
INFO: prod_mktVers{LIBCPLUSPLUS} (no map) = 5.9
INFO: prod_mktVers{PATCHUTILS} (no map) = Unknown
INFO: prod_mktVers{BZIP} (no map) = 11.10
INFO: prod_mktVers{RECOMMENDED} (no map) = 2013.02.19
INFO: prod_mktVers{MYSQL_MARKER} (w/ map) = 1.1
INFO: prod_mktVers{MYSQL} (w/ map) = 5.5.8
INFO: prod_mktVers{ST} (no map) = 1.1.4
INFO: prod_mktVers{CI} (w/ map) = 7u4
INFO: prod_mktVers{MS64} (w/ map) = 7u5
INFO: prod_mktVers{DSSETUP} (w/ map) = 6.4
INFO: prod_mktVers{DAV} (w/ map) = 7u3
INFO: prod_mktVers{IM} (w/ map) = 9
INFO: prod_mktVers{IWC} (w/ map) = 2
INFO: prod_mktVers{JISS} (w/ map) = 1u4
INFO: prod_mktVers{DA} (w/ map) = 7
INFO: prod_mktVers{MS_SCHA} (no map) = 7.0
INFO: prod_mktVers{IM_SCHA} (no map) = 7.3

Welcome to the Oracle Communications Unified Communications Suite
Product Installer
This program will install selected components of the Communications
Suite
on your computer. Do note that the installer lays down the
bits, but does not do configuration. Separate configuration
steps for each individual product will be required.
```

```
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=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Checking LIBCPLUSPLUS 5.9 ...
  Checking pkg SUNWlibC... present.
  LIBCPLUSPLUS 5.9 is already present.
Checking PATCHUTILS Unknown ...
  Checking pkg SUNWpkgcmdsu... present.
  Checking pkg SUNWswmt... present.
  Checking pkg SUNWinstall-patch-utils-root... present.
  Checking pkg SUNWcsr... present.
  Checking pkg SUNWdtrc... present.
  Checking pkg SUNWzoneu... present.
  PATCHUTILS Unknown is already present.
Checking BZIP 11.10 ...
  Checking pkg SUNWbzip... present.
  BZIP 11.10 is already present.
Checking RECOMMENDED 2013.02.19 ...
  RECOMMENDED 2013.02.19 is not present.
Checking MYSQL_MARKER 1.1 ...
  Checking pkg SUNWcomms-mysql-marker... not present.
  MYSQL_MARKER 1.1 is not present.
Checking MYSQL_MARKER 1.0 ...
  Checking pkg SUNWcomms-mysql-marker... not present.
  MYSQL_MARKER 1.0 is not present.
Checking MYSQL 5.5.8 ...
  Checking pkg mysql... not present.
  MYSQL 5.5.8 is not present.
Checking MYSQL 5.1.36 ...
  Checking pkg mysql... not present.
  MYSQL 5.1.36 is not present.
Checking ST 1.1.4 ...
  Checking pkg SUNWservicetagr... present.
  Checking pkg SUNWservicetagu... present.
  Checking pkg SUNWstosreg... present.
  ST 1.1.4 is already present.
Checking NSS 4.8.8 ...
  Checking pkg SUNWjss... present.
  Checking pkg SUNWpr... present.
  Checking pkg SUNWprd... present.
  Checking pkg SUNWtls... present.
  Checking pkg SUNWtlsd... present.
  Checking pkg SUNWtlsu... present.
  NSS 4.8.8 is already present.
Checking SASL 2.19 ...
  Checking pkg SUNWsasl... present.
  SASL 2.19 is already present.
Checking LDAPCSDK6 6.0 ...
  Checking pkg SUNWldapcsdk-libs... present.
  Checking pkg SUNWldapcsdk-dev... present.
  LDAPCSDK6 6.0 is already present.
Checking LDAPCSDK6_TOOLS 6.0 ...
  Checking pkg SUNWldapcsdk-tools... present.
```

```
  LDAPCSDK6_TOOLS 6.0 is already present.
Checking ICU ICU2,ICU3 ...
  Checking pkg SUNWicu... present.
  ICU ICU2,ICU3 is already present.
Checking JDK 1.6.0 ...
  Checking pkg SUNWj6rt... present.
  Checking pkg SUNWj6rtx... present.
  Checking pkg SUNWj6dev... present.
  Checking pkg SUNWj6dvx... present.
  Checking pkg SUNWj6cfg... present.
  JDK 1.6.0 is already present.
Checking JDK 1.5.0 ...
  Checking pkg SUNWj5rt... present.
  Checking pkg SUNWj5rtx... present.
  Checking pkg SUNWj5cfg... present.
  JDK 1.5.0 is already present.
Checking JHRT 2.0 ...
  Checking pkg SUNWjhrt... present.
  Checking pkg SUNWjhdev... present.
  Checking pkg SUNWjhdem... present.
  Checking pkg SUNWjhdoc... present.
  JHRT 2.0 is already present.
Checking MQ 4.4 ...
  Checking pkg SUNWiqr... present.
  Checking pkg SUNWiqu... present.
  Checking pkg SUNWiqdoc... present.
  Checking pkg SUNWiquc... present.
  Checking pkg SUNWiqum... present.
  Checking pkg SUNWiqjx... present.
  Checking pkg SUNWiqfs... present.
  Checking pkg SUNWiqcrt... present.
  Checking pkg SUNWiqcdv... present.
  Checking pkg SUNWiqlen... present.
  MQ 4.4 is already present.
Checking MQ 3.7 ...
  Checking pkg SUNWiqr... present but with a different pkg VERSION.
    checking SUNWiqr 3.7,REV=2006.06.18.22.34
  Checking pkg SUNWiqu... present but with a different pkg VERSION.
    checking SUNWiqu 3.7,REV=2006.06.18.22.34
  Checking pkg SUNWiqlpl... not present.
  Checking pkg SUNWiqdoc... present but with a different pkg VERSION.
    checking SUNWiqdoc 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiquc... present but with a different pkg VERSION.
    checking SUNWiquc 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiqum... present but with a different pkg VERSION.
    checking SUNWiqum 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiqjx... present but with a different pkg VERSION.
    checking SUNWiqjx 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiqfs... present but with a different pkg VERSION.
    checking SUNWiqfs 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiqcrt... present but with a different pkg VERSION.
    checking SUNWiqcrt 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiqcdv... present but with a different pkg VERSION.
    checking SUNWiqcdv 3.7,REV=2006.06.18.22.35
  Checking pkg SUNWiqlen... present but with a different pkg VERSION.
    checking SUNWiqlen 3.7,REV=2006.06.18.22.35
```

```
  NOTICE: Message Queue is present with a different pkg VERSION.
Checking MQ 4.1 ...
  Checking pkg SUNWiqr... present but with a different pkg VERSION.
    checking SUNWiqr 4.1,REV=2007.07.26.10.58
  Checking pkg SUNWiqu... present but with a different pkg VERSION.
    checking SUNWiqu 4.1,REV=2007.07.26.10.58
  Checking pkg SUNWiqdoc... present but with a different pkg VERSION.
    checking SUNWiqdoc 4.1,REV=2007.07.26.10.58
  Checking pkg SUNWiquc... present but with a different pkg VERSION.
    checking SUNWiquc 4.1,REV=2007.07.26.10.59
  Checking pkg SUNWiqum... present but with a different pkg VERSION.
    checking SUNWiqum 4.1,REV=2007.07.26.10.59
  Checking pkg SUNWiqjx... present but with a different pkg VERSION.
    checking SUNWiqjx 4.1,REV=2007.07.26.10.59
  Checking pkg SUNWiqfs... present but with a different pkg VERSION.
    checking SUNWiqfs 4.1,REV=2007.07.26.10.59
  Checking pkg SUNWiqcrt... present but with a different pkg VERSION.
    checking SUNWiqcrt 4.1,REV=2007.07.26.10.59
  Checking pkg SUNWiqcdv... present but with a different pkg VERSION.
    checking SUNWiqcdv 4.1,REV=2007.07.26.10.59
  NOTICE: Message Queue is present with a different pkg VERSION.
Checking MQ 4.3 ...
  Checking pkg SUNWiqr... present but with a different pkg VERSION.
    checking SUNWiqr 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqu... present but with a different pkg VERSION.
    checking SUNWiqu 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqdoc... present but with a different pkg VERSION.
    checking SUNWiqdoc 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiquc... present but with a different pkg VERSION.
    checking SUNWiquc 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqum... present but with a different pkg VERSION.
    checking SUNWiqum 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqjx... present but with a different pkg VERSION.
    checking SUNWiqjx 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqfs... present but with a different pkg VERSION.
    checking SUNWiqfs 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqcrt... present but with a different pkg VERSION.
    checking SUNWiqcrt 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqcdv... present but with a different pkg VERSION.
    checking SUNWiqcdv 4.3,REV=2008.11.07.18.44
  Checking pkg SUNWiqlen... present but with a different pkg VERSION.
    checking SUNWiqlen 4.3,REV=2008.11.07.18.45
  NOTICE: Message Queue is present with a different pkg VERSION.
Checking MQ_L10N 4.4 ...
  Checking pkg SUNWfiqu... present.
  Checking pkg SUNWfiquc... present.
  Checking pkg SUNWdiqu... present.
  Checking pkg SUNWdiquc... present.
  Checking pkg SUNWjiqu... present.
  Checking pkg SUNWjiquc... present.
  Checking pkg SUNWeiqu... present.
  Checking pkg SUNWeiquc... present.
  Checking pkg SUNWkiqu... present.
  Checking pkg SUNWkiquc... present.
  Checking pkg SUNWciqu... present.
  Checking pkg SUNWciquc... present.
```

```
  Checking pkg SUNWhiqu... present.
  Checking pkg SUNWhiquc... present.
  MQ_L10N 4.4 is already present.
Checking MQ_L10N 3.7 ...
  Checking pkg SUNWfiqu... present but with a different pkg VERSION.
    checking SUNWfiqu 3.7,REV=2006.09.28.02.20.49
  Checking pkg SUNWfiquc... present but with a different pkg VERSION.
    checking SUNWfiquc 3.7,REV=2006.09.28.02.21.13
  Checking pkg SUNWdiqu... present but with a different pkg VERSION.
    checking SUNWdiqu 3.7,REV=2006.09.28.02.20.38
  Checking pkg SUNWdiquc... present but with a different pkg VERSION.
    checking SUNWdiquc 3.7,REV=2006.09.28.02.21.09
  Checking pkg SUNWjiqu... present but with a different pkg VERSION.
    checking SUNWjiqu 3.7,REV=2006.09.02.02.06.39
  Checking pkg SUNWjiquc... present but with a different pkg VERSION.
    checking SUNWjiquc 3.7,REV=2006.09.02.02.07.00
  Checking pkg SUNWeiqu... present but with a different pkg VERSION.
    checking SUNWeiqu 3.7,REV=2006.09.28.02.20.43
  Checking pkg SUNWeiquc... present but with a different pkg VERSION.
    checking SUNWeiquc 3.7,REV=2006.09.28.02.21.11
  Checking pkg SUNWkiqu... present but with a different pkg VERSION.
    checking SUNWkiqu 3.7,REV=2006.09.28.02.20.59
  Checking pkg SUNWkiquc... present but with a different pkg VERSION.
    checking SUNWkiquc 3.7,REV=2006.09.28.02.21.19
  Checking pkg SUNWciqu... present but with a different pkg VERSION.
    checking SUNWciqu 3.7,REV=2006.09.02.02.06.49
  Checking pkg SUNWciquc... present but with a different pkg VERSION.
    checking SUNWciquc 3.7,REV=2006.09.02.02.07.03
  Checking pkg SUNWhiqu... present but with a different pkg VERSION.
    checking SUNWhiqu 3.7,REV=2006.10.28.02.59.24
  Checking pkg SUNWhiquc... present but with a different pkg VERSION.
    checking SUNWhiquc 3.7,REV=2006.10.28.02.59.36
  NOTICE: Message Queue Localization is present with a different pkg
VERSION.
Checking MQ_L10N 4.1 ...
  Checking pkg SUNWfiqu... present but with a different pkg VERSION.
    checking SUNWfiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWfiquc... present but with a different pkg VERSION.
    checking SUNWfiquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWdiqu... present but with a different pkg VERSION.
    checking SUNWdiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWdiquc... present but with a different pkg VERSION.
    checking SUNWdiquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWjiqu... present but with a different pkg VERSION.
    checking SUNWjiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWjiquc... present but with a different pkg VERSION.
    checking SUNWjiquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWeiqu... present but with a different pkg VERSION.
    checking SUNWeiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWeiquc... present but with a different pkg VERSION.
    checking SUNWeiquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWkiqu... present but with a different pkg VERSION.
    checking SUNWkiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWkiquc... present but with a different pkg VERSION.
    checking SUNWkiquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWciqu... present but with a different pkg VERSION.
```

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    checking SUNWciqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWciquc... present but with a different pkg VERSION.
    checking SUNWciquc 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWhiqu... present but with a different pkg VERSION.
    checking SUNWhiqu 4.1,REV=2007.08.02.12.38
  Checking pkg SUNWhiquc... present but with a different pkg VERSION.
    checking SUNWhiquc 4.1,REV=2007.08.02.12.38
  NOTICE: Message Queue Localization is present with a different pkg
VERSION.
Checking MQ_L10N 4.3 ...
  Checking pkg SUNWfiqu... present but with a different pkg VERSION.
    checking SUNWfiqu 4.3,REV=2008.10.27.08.57.02
  Checking pkg SUNWfiquc... present but with a different pkg VERSION.
    checking SUNWfiquc 4.3,REV=2008.10.27.08.57.05
  Checking pkg SUNWdiqu... present but with a different pkg VERSION.
    checking SUNWdiqu 4.3,REV=2008.10.27.08.57.55
  Checking pkg SUNWdiquc... present but with a different pkg VERSION.
    checking SUNWdiquc 4.3,REV=2008.10.27.08.57.58
  Checking pkg SUNWjiqu... present but with a different pkg VERSION.
    checking SUNWjiqu 4.3,REV=2008.10.27.09.00.27
  Checking pkg SUNWjiquc... present but with a different pkg VERSION.
    checking SUNWjiquc 4.3,REV=2008.10.27.09.00.28
  Checking pkg SUNWeiqu... present but with a different pkg VERSION.
    checking SUNWeiqu 4.3,REV=2008.10.27.08.58.45
  Checking pkg SUNWeiquc... present but with a different pkg VERSION.
    checking SUNWeiquc 4.3,REV=2008.10.27.08.58.48
  Checking pkg SUNWkiqu... present but with a different pkg VERSION.
    checking SUNWkiqu 4.3,REV=2008.10.27.08.59.36
  Checking pkg SUNWkiquc... present but with a different pkg VERSION.
    checking SUNWkiquc 4.3,REV=2008.10.27.08.59.38
  Checking pkg SUNWciqu... present but with a different pkg VERSION.
    checking SUNWciqu 4.3,REV=2008.10.27.09.01.18
  Checking pkg SUNWciquc... present but with a different pkg VERSION.
    checking SUNWciquc 4.3,REV=2008.10.27.09.01.19
  Checking pkg SUNWhiqu... present but with a different pkg VERSION.
    checking SUNWhiqu 4.3,REV=2008.10.27.09.02.09
  Checking pkg SUNWhiquc... present but with a different pkg VERSION.
    checking SUNWhiquc 4.3,REV=2008.10.27.09.02.10
  NOTICE: Message Queue Localization is present with a different pkg
VERSION.
Checking LDAPJDK 4.21 ...
  Checking pkg SUNWljdk... not present.
  LDAPJDK 4.21 is not present.
Checking IMAPI 9.0 ...
  Checking pkg SUNWiimdv... not present.
  IMAPI 9.0 is not present.
Checking IMAPI 7.0 ...
  Checking pkg SUNWiimdv... not present.
  IMAPI 7.0 is not present.
Checking IMAPI 7.3 ...
  Checking pkg SUNWiimdv... not present.
  IMAPI 7.3 is not present.
Checking IMAPI 8.0 ...
  Checking pkg SUNWiimdv... not present.
  IMAPI 8.0 is not present.
Checking CI 7.4 ...
```

```
  Checking pkg SUNWcomms...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-v --installed /opt/sun/comms/CommsInstaller 2>&1
VERSION='7.2-0.36'
BUILDDATE='20110909'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
ORCL_VERSION='7.0.2.0.0'
-- Exit status: 0

/opt/sun/comms/CommsInstaller/lib/getVersion -v 2>&1
VERSION='7.2-0.36'
BUILDDATE='20110909'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0
INFO fillInstalledProd: making pkglist for prod=CI
installed_version=7.2-0.36 v=7.2,REV=2011.09.09 using prodVersFamily 7.4
 present but with a different pkg VERSION.
    checking SUNWcomms 7.4,REV=2013.04.09
  NOTICE: CommsInstaller is present with a different pkg VERSION.
Checking MS64 7.5 ...
  Checking pkg SUNWmessaging-server-64...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/sun/comms/messaging64 2>&1
VERSION='7.4-23.01'
BUILDDATE='20110810'
UNAME='SunOS'
ARCH='sparc'
BITS='64'
-- Exit status: 0

/opt/sun/comms/messaging64/lib/getVersion -v 2>&1
VERSION='7.4-23.01'
BUILDDATE='20110810'
UNAME='SunOS'
ARCH='sparc'
BITS='64'
-- Exit status: 0
 present.
  MS64 7.5 is already present.
Checking MS64 6.3 ...
  Checking pkg SUNWmessaging-server-64... present but with a different
pkg VERSION.
    checking SUNWmessaging-server-64 6.3,REV=2007.02.26
  NOTICE: Messaging Server (64bit) is present with a different pkg
VERSION.
Checking MS64 6.3_32 ...
  Checking pkg SUNWmsgin... not present.
  Checking pkg SUNWmsgen... not present.
  Checking pkg SUNWmsglb... not present.
  Checking pkg SUNWmsgco... not present.
  Checking pkg SUNWmsgmt... not present.
  Checking pkg SUNWmsgst... not present.
```

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  Checking pkg SUNWmsgmp... not present.
  Checking pkg SUNWmsgwm... not present.
  Checking pkg SUNWmsgmf... not present.
  MS64 6.3_32 is not present.
Checking MS64 7.2_32 ...
  Checking pkg SUNWmessaging-server... not present.
  MS64 7.2_32 is not present.
Checking MS64 7.3_32 ...
  MS64 7.3_32 is not present.
Checking MS64 7.5_32 ...
  MS64 7.5_32 is not present.
Checking DSSETUP 6.4 ...
  Checking pkg SUNWcomds...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-v --installed /opt/sun/comms/dssetup 2>&1
VERSION='6.4-23.01'
BUILDDATE='20110713'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0

/opt/sun/comms/dssetup/lib/getVersion -v 2>&1
VERSION='6.4-23.01'
BUILDDATE='20110713'
UNAME='SunOS'
ARCH='sparc'
BITS='32'
-- Exit status: 0
 present.
  DSSETUP 6.4 is already present.
Checking DAV 7.3 ...
  Checking pkg SUNWdavserver... not present.
  DAV 7.3 is not present.
Checking IM 9.0 ...
  Checking pkg SUNWiim... not present.
  Checking pkg SUNWiimin... not present.
  Checking pkg SUNWiimm... not present.
  Checking pkg SUNWiimjd... not present.
  Checking pkg SUNWiimid... not present.
  Checking pkg SUNWiimgw... not present.
  Checking pkg SUNWiimw... not present.
  Checking pkg SUNWiimfed... not present.
  IM 9.0 is not present.
Checking IM 7.0 ...
  Checking pkg SUNWiimin... not present.
  Checking pkg SUNWiim... not present.
  Checking pkg SUNWiimm... not present.
  Checking pkg SUNWiimjd... not present.
  Checking pkg SUNWiimid... not present.
  Checking pkg SUNWiimc... not present.
  Checking pkg SUNWiimd... not present.
  IM 7.0 is not present.
Checking IM 7.3 ...
  Checking pkg SUNWiim... not present.
  Checking pkg SUNWiimin... not present.
```

```
  Checking pkg SUNWiimm... not present.
  Checking pkg SUNWiimjd... not present.
  Checking pkg SUNWiimid... not present.
  Checking pkg SUNWiimc... not present.
  Checking pkg SUNWiimd... not present.
  IM 7.3 is not present.
Checking IM 8.3 ...
  Checking pkg SUNWiim... not present.
  Checking pkg SUNWiimin... not present.
  Checking pkg SUNWiimm... not present.
  Checking pkg SUNWiimjd... not present.
  Checking pkg SUNWiimid... not present.
  Checking pkg SUNWiimc... not present.
  Checking pkg SUNWiimd... not present.
  Checking pkg SUNWiimgw... not present.
  IM 8.3 is not present.
Checking IWC 2.0 ...
  Checking pkg SUNWiwc... not present.
  IWC 2.0 is not present.
Checking IWC 1.0 ...
  Checking pkg SUNWiwc... not present.
  IWC 1.0 is not present.
Checking JISS 1.4 ...
  Checking pkg SUNWjiss... not present.
  JISS 1.4 is not present.
Checking JISS 0.9 ...
  Checking pkg SUNWjiss-common... not present.
  Checking pkg SUNWjiss-conf... not present.
  Checking pkg SUNWjiss-extjars... not present.
  Checking pkg SUNWjiss-indexapi... not present.
  Checking pkg SUNWjiss-jmqc... not present.
  Checking pkg SUNWjiss-rest... not present.
  Checking pkg SUNWjiss-search... not present.
  Checking pkg SUNWjiss-searchui... not present.
  Checking pkg SUNWjiss-store... not present.
  Checking pkg SUNWjiss-storeui... not present.
  JISS 0.9 is not present.
Checking DA 7.0 ...
  Checking pkg SUNWcommda... not present.
  DA 7.0 is not present.
Checking DA 6.4 ...
  Checking pkg SUNWcomic... not present.
  Checking pkg SUNWcomis... not present.
  DA 6.4 is not present.
Checking MS_SCHA 7.0 ...
  Checking pkg SUNWmessaging-server-scha... not present.
  MS_SCHA 7.0 is not present.
Checking MS_SCHA 6.0 ...
  Checking pkg SUNWscims... not present.
  MS_SCHA 6.0 is not present.
Checking IM_SCHA 7.3 ...
  Checking pkg SUNWiimsc... not present.
  IM_SCHA 7.3 is not present.
Checking IM_SCHA 7.0 ...
  Checking pkg SUNWiimsc... not present.
  IM_SCHA 7.0 is not present.
```

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Checking MS 7.5_32 ...
  MS 7.5_32 is not present.
Checking MS 6.3_32 ...
  Checking pkg SUNWmsgin... not present.
  Checking pkg SUNWmsgen... not present.
  Checking pkg SUNWmsglb... not present.
  Checking pkg SUNWmsgco... not present.
  Checking pkg SUNWmsgmt... not present.
  Checking pkg SUNWmsgst... not present.
  Checking pkg SUNWmsgmp... not present.
  Checking pkg SUNWmsgwm... not present.
  Checking pkg SUNWmsgmf... not present.
  MS 6.3_32 is not present.
Checking MS 7.2_32 ...
  Checking pkg SUNWmessaging-server... not present.
  MS 7.2_32 is not present.
Checking MS 7.3_32 ...
  MS 7.3_32 is not present.
Checking MS_L10N 6.2 ...
  Checking pkg SUNWmsgde... not present.
  Checking pkg SUNWmsges... not present.
  Checking pkg SUNWmsgfr... not present.
  Checking pkg SUNWmsgja... not present.
  Checking pkg SUNWmsgko... not present.
  Checking pkg SUNWmsgzh... not present.
  Checking pkg SUNWmsgtw... not present.
  MS_L10N 6.2 is not present.
Checking MS_L10N 6.3 ...
  Checking pkg SUNWmsg-l10n... not present.
  MS_L10N 6.3 is not present.
Checking MS64_L10N 6.3 ...
  Checking pkg SUNWmessaging-server-l10n-64... not present.
  MS64_L10N 6.3 is not present.
Checking CS 6.3 ...
  Checking pkg SUNWics5... not present.
  Checking pkg SUNWica5... not present.
  CS 6.3 is not present.
Checking CS_L10N 6.2 ...
  Checking pkg SUNWdeics... not present.
  Checking pkg SUNWesics... not present.
  Checking pkg SUNWfrics... not present.
  Checking pkg SUNWjaics... not present.
  Checking pkg SUNWkoics... not present.
  Checking pkg SUNWzhics... not present.
  Checking pkg SUNWtwics... not present.
  CS_L10N 6.2 is not present.
Checking CS_L10N 6.3 ...
  Checking pkg SUNWics-l10n... not present.
  CS_L10N 6.3 is not present.
Checking IM_L10N 7.0 ...
  Checking pkg SUNWdiimc... not present.
  Checking pkg SUNWdiimd... not present.
  Checking pkg SUNWdimid... not present.
  Checking pkg SUNWeiimc... not present.
  Checking pkg SUNWeiimd... not present.
  Checking pkg SUNWeiimin... not present.
```

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  Checking pkg SUNWeimid... not present.
  Checking pkg SUNWfiimc... not present.
  Checking pkg SUNWfiimd... not present.
  Checking pkg SUNWfiimin... not present.
  Checking pkg SUNWfimid... not present.
  Checking pkg SUNWjiimc... not present.
  Checking pkg SUNWjiimd... not present.
  Checking pkg SUNWjiimin... not present.
  Checking pkg SUNWjimid... not present.
  Checking pkg SUNWkiimc... not present.
  Checking pkg SUNWkiimd... not present.
  Checking pkg SUNWkiimin... not present.
  Checking pkg SUNWkimid... not present.
  Checking pkg SUNWciimc... not present.
  Checking pkg SUNWciimd... not present.
  Checking pkg SUNWciimin... not present.
  Checking pkg SUNWcimid... not present.
  Checking pkg SUNWhiimc... not present.
  Checking pkg SUNWhiimd... not present.
  Checking pkg SUNWhiimin... not present.
  Checking pkg SUNWhimid... not present.
  IM_L10N 7.0 is not present.
Checking IM_L10N 7.2 ...
  Checking pkg SUNWiimc-l10n... not present.
  Checking pkg SUNWiimd-l10n... not present.
  Checking pkg SUNWiimid-l10n... not present.
  Checking pkg SUNWiimin-l10n... not present.
  IM_L10N 7.2 is not present.
Checking CE 6.3 ...
  Checking pkg SUNWuwc... not present.
  CE 6.3 is not present.
Checking CE_L10N 6.2 ...
  Checking pkg SUNWduwc... not present.
  Checking pkg SUNWeuwc... not present.
  Checking pkg SUNWfuwc... not present.
  Checking pkg SUNWjuwc... not present.
  Checking pkg SUNWkuwc... not present.
  Checking pkg SUNWcuwc... not present.
  Checking pkg SUNWhuwc... not present.
  CE_L10N 6.2 is not present.
Checking CE_L10N 6.3 ...
  Checking pkg SUNWuwc-l10n... not present.
  CE_L10N 6.3 is not present.
Checking CS_SCHA 6.0 ...
  Checking pkg SUNWscics... not present.
  CS_SCHA 6.0 is not present.
Checking CS_SCHA 6.3 ...
  Checking pkg SUNWscics... not present.
  CS_SCHA 6.3 is not present.
Detecting Installed Patches...
-- chk4patch 119963-27 /tmp/.patchout_20130507193917.24033
-- Running patchadd  -p report...
--   Generating /tmp/.patchout_20130507193917.24033
patchadd  -p > /tmp/.patchout_20130507193917.24033 2>>
/tmp/CommsInstaller_20130507193917.log
-- Exit status: 0
```

```
--  older version at lineno 481 found 119963-24 - not acceptable
--  Exact match found at line 482
--  Final return status: 1
  LIBCPLUSPLUS patch 119963-27 is already present.
-- chk4patch 120900-04 /tmp/.patchout_20130507193917.24033
--  Exact match found at line 52
--  Final return status: 1
  PATCHUTILS patch 120900-04 is already present.
-- chk4patch 121133-02 /tmp/.patchout_20130507193917.24033
--  Exact match found at line 53
--  Final return status: 1
  PATCHUTILS patch 121133-02 is already present.
-- chk4patch 119254-88 /tmp/.patchout_20130507193917.24033
--  older version at lineno 229 found 119254-81 - not acceptable
--  Exact match found at line 232
--  Final return status: 1
  PATCHUTILS patch 119254-88 is already present.
-- chk4patch 126868-04 /tmp/.patchout_20130507193917.24033
--  Exact match found at line 558
--  Final return status: 1
  BZIP patch 126868-04 is already present.
-- chk4patch 137321-01 /tmp/.patchout_20130507193917.24033
--  Exact match found at line 559
--  Final return status: 1
  BZIP patch 137321-01 is already present.
-- chk4patch 119254-88 /tmp/.patchout_20130507193917.24033
--  older version at lineno 229 found 119254-81 - not acceptable
--  Exact match found at line 232
--  Final return status: 1
  RECOMMENDED patch 119254-88 is already present.
-- chk4patch 120272-28 /tmp/.patchout_20130507193917.24033
--  Newer version at line 300 found 120272-31
--  Final return status: 1
  RECOMMENDED patch 120272-28 is already present.
-- chk4patch 147147-26 /tmp/.patchout_20130507193917.24033
--  Final return status: 0
  RECOMMENDED patch 147147-26 is not present.
-- chk4patch 125358-15 /tmp/.patchout_20130507193917.24033
--  older version at lineno 449 found 125358-14 - not acceptable
--  Final return status: 0
  NSS patch 125358-15 is not present.
-- chk4patch 119345-08 /tmp/.patchout_20130507193917.24033
--  Exact match found at line 666
--  Final return status: 1
  SASL patch 119345-08 is already present.
-- chk4patch 136798-03 /tmp/.patchout_20130507193917.24033
--  Exact match found at line 363
--  Final return status: 1
  LDAPCSDK6_TOOLS patch 136798-03 is already present.
-- chk4patch 119810-07 /tmp/.patchout_20130507193917.24033
--  older version at lineno 436 found 119810-05 - not acceptable
--  older version at lineno 733 found 119810-06 - not acceptable
--  Exact match found at line 734
--  Final return status: 1
  ICU patch 119810-07 is already present.
-- chk4patch 125136-35 /tmp/.patchout_20130507193917.24033
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```
--  older version at lineno 225 found 125136-28 - not acceptable
--  older version at lineno 226 found 125136-19 - not acceptable
--  older version at lineno 589 found 125136-31 - not acceptable
--  Final return status: 0
  JDK patch 125136-35 is not present.
-- chk4patch 125137-35 /tmp/.patchout_20130507193917.24033
--  older version at lineno 298 found 125137-28 - not acceptable
--  older version at lineno 299 found 125137-19 - not acceptable
--  older version at lineno 792 found 125137-31 - not acceptable
--  Final return status: 0
  JDK patch 125137-35 is not present.
-- chk4patch 119725-06 /tmp/.patchout_20130507193917.24033
--  Final return status: 0
  LDAPJDK patch 119725-06 is not present.
-- chk4patch 148582-03 /tmp/.patchout_20130507193917.24033
--  Final return status: 0
  IMAPI patch 148582-03 is not present.
-- chk4patch 137204-28 /tmp/.patchout_20130507193917.24033
--  older version at lineno 692 found 137204-23 - not acceptable
--  Final return status: 0
  MS64 patch 137204-28 is not present.
-- chk4patch 118242-03 /tmp/.patchout_20130507193917.24033
--  Exact match found at line 359
--  Final return status: 1
  DSSETUP patch 118242-03 is already present.
-- chk4patch 118245-24 /tmp/.patchout_20130507193917.24033
--  older version at lineno 358 found 118245-23 - not acceptable
--  Final return status: 0
  DSSETUP patch 118245-24 is not present.
-- chk4patch 142785-10 /tmp/.patchout_20130507193917.24033
--  Final return status: 0
  DAV patch 142785-10 is not present.
-- chk4patch 148579-03 /tmp/.patchout_20130507193917.24033
--  Final return status: 0
  IM patch 148579-03 is not present.
-- chk4patch 145711-06 /tmp/.patchout_20130507193917.24033
--  Final return status: 0
  IWC patch 145711-06 is not present.
-- chk4patch 142824-16 /tmp/.patchout_20130507193917.24033
--  Final return status: 0
  JISS patch 142824-16 is not present.
-- chk4patch 124581-07 /tmp/.patchout_20130507193917.24033
--  Final return status: 0
  DA patch 124581-07 is not present.
-- chk4patch 137571-01 /tmp/.patchout_20130507193917.24033
--  Final return status: 0
  IM_SCHA patch 137571-01 is not present.
====== QQQ detectProducts ======
QQQ Dumper
!!! present
$VAR1 = {
          '148579-03' => 'NOT_PRESENT',
          '142785-10' => 'NOT_PRESENT',
          'IWC' => {
                     '2.0' => 'NOT_PRESENT',
                     '1.0' => 'NOT_PRESENT'
```

```
          },
'SASL' => {
            '2.19' => 'PRESENT'
          },
'119345-08' => 'PRESENT',
'MS64_L10N' => {
                '6.3' => 'NOT_PRESENT'
               },
'142824-16' => 'NOT_PRESENT',
'119725-06' => 'NOT_PRESENT',
'119810-07' => 'PRESENT',
'MS' => {
          '7.3_32' => 'NOT_PRESENT',
          '7.2_32' => 'NOT_PRESENT',
          '7.5_32' => 'NOT_PRESENT',
          '6.3_32' => 'NOT_PRESENT'
        },
'137571-01' => 'NOT_PRESENT',
'DSSETUP' => {
               '6.4' => 'PRESENT'
             },
'126868-04' => 'PRESENT',
'119254-88' => 'PRESENT',
'120900-04' => 'PRESENT',
'119963-27' => 'PRESENT',
'MQ_L10N' => {
               '4.3' => 'DIFF_VERSION',
               '3.7' => 'DIFF_VERSION',
               '4.1' => 'DIFF_VERSION',
               '4.4' => 'PRESENT'
             },
'ICU' => {
           'ICU2,ICU3' => 'PRESENT'
          },
'120272-28' => 'PRESENT',
'MS64' => {
            '7.5' => 'PRESENT',
            '7.3_32' => 'NOT_PRESENT',
            '7.5_32' => 'NOT_PRESENT',
            '7.2_32' => 'NOT_PRESENT',
            '6.3' => 'DIFF_VERSION',
            '6.3_32' => 'NOT_PRESENT'
          },
'DAV' => {
           '7.3' => 'NOT_PRESENT'
          },
'LDAPCSDK6' => {
                '6.0' => 'PRESENT'
               },
'CE' => {
          '6.3' => 'NOT_PRESENT'
        },
'JDK' => {
           '1.6.0' => 'PRESENT',
           '1.5.0' => 'PRESENT'
          },
```

```
'125137-35' => 'NOT_PRESENT',
'MYSQL' => {
             '5.1.36' => 'NOT_PRESENT',
             '5.5.8' => 'NOT_PRESENT'
           },
'PATCHUTILS' => {
                  'Unknown' => 'PRESENT'
                },
'MQ' => {
          '4.3' => 'DIFF_VERSION',
          '3.7' => 'DIFF_VERSION',
          '4.1' => 'DIFF_VERSION',
          '4.4' => 'PRESENT'
        },
'125358-15' => 'NOT_PRESENT',
'CI' => {
          '7.4' => 'DIFF_VERSION'
        },
'IMAPI' => {
             '8.0' => 'NOT_PRESENT',
             '7.0' => 'NOT_PRESENT',
             '9.0' => 'NOT_PRESENT',
             '7.3' => 'NOT_PRESENT'
           },
'137321-01' => 'PRESENT',
'LDAPCSDK6_TOOLS' => {
                       '6.0' => 'PRESENT'
                     },
'125136-35' => 'NOT_PRESENT',
'JISS' => {
            '0.9' => 'NOT_PRESENT',
            '1.4' => 'NOT_PRESENT'
          },
'NSS' => {
           '4.8.8' => 'PRESENT'
         },
'CS_L10N' => {
               '6.2' => 'NOT_PRESENT',
               '6.3' => 'NOT_PRESENT'
             },
'ST' => {
          '1.1.4' => 'PRESENT'
        },
'IM' => {
          '8.3' => 'NOT_PRESENT',
          '7.0' => 'NOT_PRESENT',
          '9.0' => 'NOT_PRESENT',
          '7.3' => 'NOT_PRESENT'
        },
'RECOMMENDED' => {
                   '2013.02.19' => 'NOT_PRESENT'
                 },
'IM_L10N' => {
               '7.2' => 'NOT_PRESENT',
               '7.0' => 'NOT_PRESENT'
             },
```

```
          '136798-03' => 'PRESENT',
          'CS_SCHA' => {
                         '6.0' => 'NOT_PRESENT',
                         '6.3' => 'NOT_PRESENT'
                       },
          'LDAPJDK' => {
                         '4.21' => 'NOT_PRESENT'
                       },
          'MYSQL_MARKER' => {
                              '1.1' => 'NOT_PRESENT',
                              '1.0' => 'NOT_PRESENT'
                            },
          'BZIP' => {
                      '11.10' => 'PRESENT'
                    },
          '145711-06' => 'NOT_PRESENT',
          'IM_SCHA' => {
                         '7.0' => 'NOT_PRESENT',
                         '7.3' => 'NOT_PRESENT'
                       },
          '148582-03' => 'NOT_PRESENT',
          'MS_L10N' => {
                         '6.2' => 'NOT_PRESENT',
                         '6.3' => 'NOT_PRESENT'
                       },
          'LIBCPLUSPLUS' => {
                              '5.9' => 'PRESENT'
                            },
          '121133-02' => 'PRESENT',
          '118245-24' => 'NOT_PRESENT',
          '118242-03' => 'PRESENT',
          'MS_SCHA' => {
                         '6.0' => 'NOT_PRESENT',
                         '7.0' => 'NOT_PRESENT'
                       },
          '147147-26' => 'NOT_PRESENT',
          'CS' => {
                    '6.3' => 'NOT_PRESENT'
                  },
          '124581-07' => 'NOT_PRESENT',
          'JHRT' => {
                      '2.0' => 'PRESENT'
                    },
          'CE_L10N' => {
                         '6.2' => 'NOT_PRESENT',
                         '6.3' => 'NOT_PRESENT'
                       },
          'DA' => {
                    '6.4' => 'NOT_PRESENT',
                    '7.0' => 'NOT_PRESENT'
                  },
          '137204-28' => 'NOT_PRESENT'
        };
!!! pkgparams
$VAR1 = {
          'SUNWica5' => {},
```

```
          'SUNWmsgja' => {},
          'SUNWcomic' => {},
          'SUNWservicetagu' => {
                                '1.1.4,REV=2008.03.21.07.54' => [

'SUNWservicetagu',
                                                                    '/',

'1.1.4.1',
                                                                    ''
                                                                  ]
                                },
          'SUNWjimid' => {},
          'SUNWdiquc' => {
                            '4.4,REV=2009.10.01.09.43.03' => [

'SUNWdiquc',
                                                                '/',
                                                                '4.4.1.0',
                                                                ''
                                                              ]
                          },
          'SUNWmsgko' => {},
          'SUNWics5' => {},
          'SUNWmessaging-server-l10n-64' => {},
          'SUNWiqlpl' => {},
          'SUNWmsgco' => {},
          'SUNWfiquc' => {
                            '4.4,REV=2009.10.01.09.42.16' => [

'SUNWfiquc',
                                                                '/',
                                                                '4.4.1.0',
                                                                ''
                                                              ]
                          },
          'SUNWjiss-extjars' => {},
          'SUNWjhdem' => {
                            '2.0,REV=2006.10.04' => [
                                                      'SUNWjhdem',
                                                      '/usr',
                                                      '2.0/FCS',
                                                      ''
                                                    ]
                          },
          'SUNWiqfs' => {
                           '4.4,REV=2009.08.27.08.33' => [
                                                            'SUNWiqfs',
                                                            '/',
                                                            '4.4.0.0',
                                                            ''
                                                          ]
                         },
          'SUNWfimid' => {},
          'SUNWcomds' => {
                            '6.3,REV=2004.08.12' => [
```

```
                                                        'SUNWcomds',

'/opt/sun/comms/dssetup',
                                                        '6.4-23.01',
                                                        ''
                                                      ]
                          },
          'SUNWjhdev' => {
                            '2.0,REV=2006.10.04' => [
                                                        'SUNWjhdev',
                                                        '/usr',
                                                        '2.0/FCS',
                                                        ''
                                                      ]
                          },
          'SUNWj6rtx' => {
                            '1.6.0,REV=2006.11.29.04.58' => [

'SUNWj6rtx',
                                                                '/usr',

'1.6.0_26/1.6.0_26-b03',
                                                                ''
                                                              ]
                          },
          'SUNWiqum' => {
                            '4.4,REV=2009.08.27.08.33' => [
                                                              'SUNWiqum',
                                                              '/',
                                                              '4.4.1.0',
                                                              ''
                                                            ]
                          },
          'SUNWduwc' => {},
          'SUNWhiimin' => {},
          'SUNWkiimin' => {},
          'SUNWeiimd' => {},
          'SUNWj6rt' => {
                            '1.6.0,REV=2006.11.29.05.57' => [
                                                                'SUNWj6rt',
                                                                '/usr',

'1.6.0_26/1.6.0_26-b03',
                                                                ''
                                                              ]
                          },
          'SUNWj5rt' => {
                            '1.5.0,REV=2004.12.07.00.07' => [
                                                                'SUNWj5rt',
                                                                '/usr',

'1.5.0_12/1.5.0_12-b04',
                                                                ''
                                                              ]
                          },
          'SUNWiimc-l10n' => {},
```

```
          'SUNWhiimc' => {},
          'SUNWmsg-l10n' => {},
          'SUNWfrics' => {},
          'SUNWciqu' => {
                         '4.4,REV=2009.10.01.09.46.01' => [
                                                            'SUNWciqu',
                                                            '/',
                                                            '4.4.1.0',
                                                            ''
                                                          ]
                       },
          'SUNWkoics' => {},
          'SUNWdimid' => {},
          'SUNWjiquc' => {
                          '4.4,REV=2009.10.01.09.45.18' => [

'SUNWjiquc',
                                                             '/',
                                                             '4.4.1.0',
                                                             ''
                                                           ]
                        },
          'SUNWiimgw' => {},
          'SUNWiimd-l10n' => {},
          'SUNWhiquc' => {
                          '4.4,REV=2009.10.01.09.46.50' => [

'SUNWhiquc',
                                                             '/',
                                                             '4.4.1.0',
                                                             ''
                                                           ]
                        },
          'SUNWzhics' => {},
          'SUNWkiimd' => {},
          'SUNWiimfed' => {},
          'SUNWmsgmp' => {},
          'SUNWuwc' => {},
          'SUNWscics' => {},
          'SUNWiimc' => {},
          'SUNWhiimd' => {},
          'SUNWmessaging-server-scha' => {},
          'SUNWmsglb' => {},
          'SUNWtls' => {
                        '3.11.4,REV=2006.11.16.20.40' => [
                                                            'SUNWtls',
                                                            '/',
                                                            '3.12.10',
                                                            ''
                                                          ]
                       },
          'SUNWj6dvx' => {
                          '1.6.0,REV=2006.11.29.04.58' => [

'SUNWj6dvx',
                                                             '/usr',
```

```
'1.6.0_26/1.6.0_26-b03',
                                                                  ''
                                                                ]
                         },
          'SUNWfuwc' => {},
          'SUNWlibC' => {
                          '5.10,REV=2004.12.22' => [
                                                      'SUNWlibC',
                                                      '/',
                                                      '5.10',
                                                      ''
                                                    ]
                        },
          'SUNWjiss-searchui' => {},
          'SUNWjiimin' => {},
          'SUNWcomms-mysql-marker' => {},
          'SUNWscims' => {},
          'SUNWiimjd' => {},
          'SUNWciimd' => {},
          'SUNWldapcsdk-dev' => {
                                  '6.00,REV=2006.12.11.00.08' => [

'SUNWldapcsdk-dev',
                                                                      '/',

'6.03',
                                                                      ''
                                                                    ]
                                },
          'SUNWiqlen' => {
                           '4.4,REV=2009.08.27.08.33' => [
                                                            'SUNWiqlen',
                                                            '/',
                                                            '4.4.1.0',
                                                            ''
                                                          ]
                         },
          'SUNWiimid-l10n' => {},
          'SUNWiqr' => {
                         '4.4,REV=2009.08.27.08.32' => [
                                                          'SUNWiqr',
                                                          '/',
                                                          '4.4.1.0',
                                                          ''
                                                        ]
                       },
          'SUNWdiimc' => {},
          'SUNWmsgwm' => {},
          'SUNWiimw' => {},
          'SUNWmessaging-server-64' => {
                                         '7.0,REV=2008.06.20' => [

'SUNWmessaging-server-64',

'/opt/sun/comms/messaging64',
```

```
'7.4-23.01',
                                                                    ''
                                                                  ]
                                        },
          'SUNWeiquc' => {
                            '4.4,REV=2009.10.01.09.43.47' => [

'SUNWeiquc',
                                                                '/',
                                                                '4.4.1.0',
                                                                ''
                                                              ]
                          },
          'SUNWj5cfg' => {
                            '1.5.0,REV=2004.12.07.00.07' => [

'SUNWj5cfg',
                                                                '/',

'1.5.0_12/1.5.0_12-b04',
                                                                ''
                                                              ]
                          },
          'SUNWhiqu' => {
                           '4.4,REV=2009.10.01.09.46.48' => [
                                                                'SUNWhiqu',
                                                                '/',
                                                                '4.4.1.0',
                                                                ''
                                                              ]
                        },
          'SUNWjiss-search' => {},
          'SUNWiimdv' => {},
          'SUNWfiimd' => {},
          'SUNWj5rtx' => {
                            '1.5.0,REV=2004.12.06.22.09' => [

'SUNWj5rtx',
                                                                '/usr',

'1.5.0_12/1.5.0_12-b04',
                                                                ''
                                                              ]
                          },
          'SUNWiquc' => {
                           '4.4,REV=2009.08.27.08.33' => [
                                                            'SUNWiquc',
                                                            '/',
                                                            '4.4.1.0',
                                                            ''
                                                          ]
                        },
          'SUNWiimid' => {},
          'SUNWmsgmt' => {},
          'SUNWljdk' => {},
```

```
          'SUNWcuwc' => {},
          'SUNWldapcsdk-libs' => {
                                  '6.00,REV=2006.12.11.00.08' => [

'SUNWldapcsdk-libs',
                                                                    '/',

'6.03',
                                                                    ''
                                                                  ]
                                },
          'SUNWservicetagr' => {
                                  '1.1.4,REV=2008.03.21.07.54' => [

'SUNWservicetagr',
                                                                    '/',

'1.1.4.1',
                                                                    ''
                                                                  ]
                                },
          'SUNWciimc' => {},
          'SUNWjhrt' => {
                          '2.0,REV=2006.10.31' => [
                                                    'SUNWjhrt',
                                                    '/usr',
                                                    '2.0/FCS',
                                                    ''
                                                  ]
                        },
          'SUNWtlsd' => {
                          '3.11.4,REV=2006.11.16.20.40' => [
                                                             'SUNWtlsd',
                                                             '/',
                                                             '3.12.10',
                                                             ''
                                                           ]
                        },
          'SUNWmsgin' => {},
          'SUNWdtrc' => {
                          '11.10.0,REV=2005.01.21.15.53' => [

'SUNWdtrc',
                                                              '/',

'5.10/Generic',
                                                              ''
                                                            ]
                        },
          'SUNWhuwc' => {},
          'mysql' => {},
          'SUNWiqdoc' => {
                           '4.4,REV=2009.08.27.08.32' => [
                                                           'SUNWiqdoc',
                                                           '/',
                                                           '4.4.0.0',
```

```
                                                            ''
                                                          ]
                          },
          'SUNWjiimd' => {},
          'SUNWjuwc' => {},
          'SUNWiimd' => {},
          'SUNWiqcrt' => {
                            '4.4,REV=2009.08.27.08.33' => [
                                                            'SUNWiqcrt',
                                                            '/opt',
                                                            '4.4.1.0',
                                                            ''
                                                          ]
                          },
          'SUNWmsgzh' => {},
          'SUNWprd' => {
                          '4.6.4,REV=2006.11.16.20.40' => [
                                                            'SUNWprd',
                                                            '/',
                                                            '4.8.8',
                                                            ''
                                                          ]
                        },
          'SUNWjiss-conf' => {},
          'SUNWcommda' => {},
          'SUNWmsgen' => {},
          'SUNWjiss-store' => {},
          'SUNWiwc' => {},
          'SUNWjiss-storeui' => {},
          'SUNWiimin-l10n' => {},
          'SUNWiimsc' => {},
          'SUNWinstall-patch-utils-root' => {

'11.10,REV=2005.01.09.23.05' => [

'SUNWinstall-patch-utils-root',

'/',

'5.10',

''

]
                                              },
          'SUNWiimin' => {},
          'SUNWuwc-l10n' => {},
          'SUNWmsgst' => {},
          'SUNWiqu' => {
                          '4.4,REV=2009.08.27.08.32' => [
                                                          'SUNWiqu',
                                                          '/',
                                                          '4.4.1.0',
                                                          ''
                                                        ]
                        },
```

```
          'SUNWkiimc' => {},
          'SUNWiim' => {},
          'SUNWeiimin' => {},
          'SUNWcimid' => {},
          'SUNWiqcdv' => {
                          '4.4,REV=2009.08.27.08.33' => [
                                                          'SUNWiqcdv',
                                                          '/opt',
                                                          '4.4.1.0',
                                                          ''
                                                        ]
                        },
          'SUNWldapcsdk-tools' => {
                                   '6.00,REV=2006.12.11.00.08' => [

'SUNWldapcsdk-tools',

'/opt/SUNWdsee',

'6.03',
                                                                      ''
                                                                    ]
                                 },
          'SUNWjss' => {
                        '4.2.4,REV=2006.11.16.20.40' => [
                                                          'SUNWjss',
                                                          '/',
                                                          '4.3.2',
                                                          ''
                                                        ]
                      },
          'SUNWdiqu' => {
                         '4.4,REV=2009.10.01.09.42.59' => [
                                                            'SUNWdiqu',
                                                            '/',
                                                            '4.4.1.0',
                                                            ''
                                                          ]
                       },
          'SUNWjiss' => {},
          'SUNWj6cfg' => {
                          '1.6.0,REV=2006.11.29.05.57' => [

'SUNWj6cfg',
                                                            '/',

'1.6.0_26/1.6.0_26-b03',
                                                            ''
                                                          ]
                        },
          'SUNWhimid' => {},
          'SUNWciquc' => {
                          '4.4,REV=2009.10.01.09.46.03' => [

'SUNWciquc',
                                                             '/',
```

```
                                                                  '4.4.1.0',
                                                                  ''
                                                                ]
                          },
          'SUNWcomms' => {
                            '7.2,REV=2011.09.09' => [
                                                       'SUNWcomms',

'/opt/sun/comms/CommsInstaller',
                                                       '7.2-0.36',
                                                       ''
                                                     ]
                          },
          'SUNWjiqu' => {
                           '4.4,REV=2009.10.01.09.45.16' => [
                                                               'SUNWjiqu',
                                                               '/',
                                                               '4.4.1.0',
                                                               ''
                                                             ]
                         },
          'SUNWkiqu' => {
                           '4.4,REV=2009.10.01.09.44.30' => [
                                                               'SUNWkiqu',
                                                               '/',
                                                               '4.4.1.0',
                                                               ''
                                                             ]
                         },
          'SUNWkuwc' => {},
          'SUNWics-l10n' => {},
          'SUNWeiqu' => {
                           '4.4,REV=2009.10.01.09.43.44' => [
                                                               'SUNWeiqu',
                                                               '/',
                                                               '4.4.1.0',
                                                               ''
                                                             ]
                         },
          'SUNWmessaging-server' => {},
          'SUNWdavserver' => {},
          'SUNWmsgtw' => {},
          'SUNWeiimc' => {},
          'SUNWjaics' => {},
          'SUNWpkgcmdsu' => {
                              '11.11,REV=2005.01.09.23.05' => [

'SUNWpkgcmdsu',
                                                                  '/',
                                                                  '5.10',
                                                                  ''
                                                                ]
                            },
          'SUNWjiimc' => {},
          'SUNWeimid' => {},
          'SUNWiqjx' => {
```

```
                        '4.4,REV=2009.08.27.08.33' => [
                                                        'SUNWiqjx',
                                                        '/',
                                                        '4.4.1.0',
                                                        ''
                                                      ]
                      },
          'SUNWjhdoc' => {
                         '2.0,REV=2006.10.04' => [
                                                   'SUNWjhdoc',
                                                   '/usr',
                                                   '2.0/FCS',
                                                   ''
                                                 ]
                      },
          'SUNWj6dev' => {
                         '1.6.0,REV=2006.11.29.05.57' => [

'SUNWj6dev',
                                                            '/usr',

'1.6.0_26/1.6.0_26-b03',
                                                            ''
                                                          ]
                      },
          'SUNWmsges' => {},
          'SUNWpr' => {
                       '4.6.4,REV=2006.11.16.20.40' => [
                                                        'SUNWpr',
                                                        '/',
                                                        '4.8.8',
                                                        ''
                                                      ]
                     },
          'SUNWmsgmf' => {},
          'SUNWkimid' => {},
          'SUNWicu' => {
                       '1.2,REV=2005.01.06.14.13' => [
                                                       'SUNWicu',
                                                       '/usr',
                                                       '10/Generic',
                                                       ''
                                                     ]
                     },
          'SUNWjiss-rest' => {},
          'SUNWfiimin' => {},
          'SUNWswmt' => {
                        '11.10,REV=2005.01.10.17.19' => [
                                                          'SUNWswmt',
                                                          '/',
                                                          '5.10',
                                                          ''
                                                        ]
                      },
          'SUNWcomis' => {},
          'SUNWdeics' => {},
```

```
          'SUNWtwics' => {},
          'SUNWciimin' => {},
          'SUNWmsgfr' => {},
          'SUNWdiimd' => {},
          'SUNWjiss-common' => {},
          'SUNWeuwc' => {},
          'SUNWkiquc' => {
                          '4.4,REV=2009.10.01.09.44.32' => [

'SUNWkiquc',
                                                              '/',
                                                              '4.4.1.0',
                                                              ''
                                                            ]
                        },
          'SUNWstosreg' => {
                            '1.1.4,REV=2008.03.21.07.54' => [

'SUNWstosreg',
                                                               '/',

'1.1.4.1',
                                                               ''
                                                             ]
                          },
          'SUNWmsgde' => {},
          'SUNWjiss-jmqc' => {},
          'SUNWjiss-indexapi' => {},
          'SUNWbzip' => {
                         '11.10.0,REV=2005.01.08.05.16' => [

'SUNWbzip',
                                                              '/',

'5.10/SunOS Development',
                                                              ''
                                                            ]
                        },
          'SUNWtlsu' => {
                         '3.11.4,REV=2006.11.16.20.40' => [
                                                              'SUNWtlsu',
                                                              '/',
                                                              '3.12.10',
                                                              ''
                                                            ]
                        },
          'SUNWfiqu' => {
                         '4.4,REV=2009.10.01.09.42.14' => [
                                                              'SUNWfiqu',
                                                              '/',
                                                              '4.4.1.0',
                                                              ''
                                                            ]
                        },
          'SUNWsasl' => {
                         '2.17,REV=2004.04.06.15.24' => [
```

```
                                                                    'SUNWsasl',
                                                                    '/',
                                                                    '2.19',
                                                                    ''
                                                                  ]
                          },
          'SUNWfiimc' => {},
          'SUNWzoneu' => {
                            '11.10.0,REV=2005.01.21.15.53' => [

'SUNWzoneu',
                                                                      '/',

'5.10/Generic',
                                                                      ''
                                                                    ]
                          },
          'SUNWcsr' => {
                          '11.10.0,REV=2005.01.21.15.53' => [
                                                                    'SUNWcsr',
                                                                    '/',

'5.10/Generic',
                                                                    ''
                                                                  ]
                         },
          'SUNWesics' => {},
          'SUNWiimm' => {}
        };
!!! installedprod
$VAR1 = {
          'MS64' => {
                      '7.5' => [
                                  '/opt/sun/comms/messaging64',
                                  '7.4-23.01',
                                  '20110810',
                                  '7u4',
                                  'SunOS',
                                  'sparc',
                                  '64',
                                  '',
                                  'Not Found'
                                ]
                    },
          'SASL' => {
                      '2.19' => [
                                   '/',
                                   '2.19',
                                   'Not Found',
                                   '2.19',
                                   'Not Found',
                                   'Not Found',
                                   'Not Found',
                                   '',
                                   'Not Found'
                                 ]
```

```
                    },
          'ST' => {
                    '1.1.4' => [
                                  '/',
                                  '1.1.4.1',
                                  'Not Found',
                                  '1.1.4',
                                  'Not Found',
                                  'Not Found',
                                  'Not Found',
                                  '',
                                  'Not Found'
                                ]
                  },
          'LDAPCSDK6' => {
                           '6.0' => [
                                       '/',
                                       '6.03',
                                       'Not Found',
                                       '6.0',
                                       'Not Found',
                                       'Not Found',
                                       'Not Found',
                                       '',
                                       'Not Found'
                                     ]
                         },
          'LIBCPLUSPLUS' => {
                              '5.9' => [
                                          '/',
                                          '5.10',
                                          'Not Found',
                                          '5.9',
                                          'Not Found',
                                          'Not Found',
                                          'Not Found',
                                          '',
                                          'Not Found'
                                        ]
                            },
          'DSSETUP' => {
                         '6.4' => [
                                     '/opt/sun/comms/dssetup',
                                     '6.4-23.01',
                                     '20110713',
                                     '6.4',
                                     'SunOS',
                                     'sparc',
                                     '32',
                                     '',
                                     'Not Found'
                                   ]
                       },
          'JDK' => {
                     '1.6.0' => [
                                   '/usr',
```

```
                                '1.6.0_26/1.6.0_26-b03',
                                'Not Found',
                                '1.6.0',
                                'Not Found',
                                'Not Found',
                                'Not Found',
                                '',
                                'Not Found'
                              ]
                    },
          'MQ' => {
                    '4.4' => [
                              '/',
                              '4.4.1.0',
                              'Not Found',
                              '4.4',
                              'Not Found',
                              'Not Found',
                              'Not Found',
                              '',
                              'Not Found'
                            ]
                  },
          'PATCHUTILS' => {
                            'Unknown' => [
                                          '/',
                                          '5.10',
                                          'Not Found',
                                          'Unknown',
                                          'Not Found',
                                          'Not Found',
                                          'Not Found',
                                          '',
                                          'Not Found'
                                        ]
                          },
          'JHRT' => {
                      '2.0' => [
                                '/usr',
                                '2.0/FCS',
                                'Not Found',
                                '2.0',
                                'Not Found',
                                'Not Found',
                                'Not Found',
                                '',
                                'Not Found'
                              ]
                    },
          'CI' => {
                    '7.2,REV=2011.09.09' => [

'/opt/sun/comms/CommsInstaller',
                                                '7.2-0.36',
                                                '20110909',
                                                '7u2',
```

```
                                        'SunOS',
                                        'sparc',
                                        '32',
                                        '',
                                        '7.0.2.0.0'
                                      ]
                 },
        'MQ_L10N' => {
                        '4.4' => [
                                   '/',
                                   '4.4.1.0',
                                   'Not Found',
                                   '4.4',
                                   'Not Found',
                                   'Not Found',
                                   'Not Found',
                                   '',
                                   'Not Found'
                                 ]
                      },
        'BZIP' => {
                    '11.10' => [
                                 '/',
                                 '5.10/SunOS Development',
                                 'Not Found',
                                 '11.10',
                                 'Not Found',
                                 'Not Found',
                                 'Not Found',
                                 '',
                                 'Not Found'
                               ]
                   },
        'LDAPCSDK6_TOOLS' => {
                               '6.0' => [
                                          '/opt/SUNWdsee',
                                          '6.03',
                                          'Not Found',
                                          '6.0',
                                          'Not Found',
                                          'Not Found',
                                          'Not Found',
                                          '',
                                          'Not Found'
                                        ]
                              },
        'ICU' => {
                   'ICU2,ICU3' => [
                                    '/usr',
                                    '10/Generic',
                                    'Not Found',
                                    'ICU2,ICU3',
                                    'Not Found',
                                    'Not Found',
                                    'Not Found',
                                    '',
```

```
                                        'Not Found'
                                      ]
                    },
          'NSS' => {
                      '4.8.8' => [
                                    '/',
                                    '4.3.2',
                                    'Not Found',
                                    '4.8.8',
                                    'Not Found',
                                    'Not Found',
                                    'Not Found',
                                    '',
                                    'Not Found'
                                  ]
                    }
        };
====== End QQQ detectProducts ======
-- Checking for RECOMMENDED patch 119254-88
   patch is PRESENT
-- Checking for RECOMMENDED patch 120272-28
   patch is PRESENT
-- Checking for RECOMMENDED patch 147147-26
   patch 147147-26: NOT_PRESENT
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: You must apply the latest OS Recommended Patchset
          Some products will not work properly without it
Do you want to continue ? [no] : yes
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
INFO: isUpgradable MS64 7.5: 1
      Cmd:
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
7.4-23.01 /opt/sun/comms/messaging64 0
      This version is upgradable to distro version (7.5-28.21)

INFO: isUpgradable DSSETUP 6.4: 1
      Cmd:
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
6.4-23.01 /opt/sun/comms/dssetup 0
      This version is upgradable to distro version (6.4-24.03)

====== QQQ ======
QQQ Dumper
!!! isUpgradable
$VAR1 = {
          'MS64' => {
                      '7.5' => {
                                  'status' => '1'
                                }
                    },
          'DSSETUP' => {
                        '6.4' => {
                                    'status' => '1'
```

```
                                    }
                          }
        };
!!! usePkgUpgradeFlag
$VAR1 = {
          'MS64' => {
                       '7.5' => 0
                     },
          'DSSETUP' => {
                         '6.4' => 0
                       }
        };
Product Selection:

Communication Products:

    Item  Description
    ----  -----------
       1  Messaging Server (64bit) 7u5 (7.5-28.21)
          Installed Version 7u4 (7.4-23.01) at
/opt/sun/comms/messaging64
       2  Comms DSsetup 6.4 (6.4-24.03)
          Installed Version 6.4 (6.4-23.01) at /opt/sun/comms/dssetup

Enter the items you wish to upgrade. Enter q to quit.
You can enter multiple items using commas to separate them.
For example: 1,2

Please select the products you wish to upgrade [1, 2]:
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
QQQ selections: MS64 7.5 DSSETUP 6.4
INFO: sc_dependencies - PATCHUTILS ICU SASL LDAPCSDK6_TOOLS NSS
LDAPCSDK6 BZIP LIBCPLUSPLUS CI
Checking for Shared Component Upgrade Requirements...
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
  WILL INSTALL: patch 125358-15 for NSS/NSPR/JSS
  Task: patchadd
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
NOTICE: CommsInstaller will be upgraded...
          Removing the old version is an irreversible process.
  WILL REMOVE EXISTING: CommsInstaller 7.0.2.0.0
-- QQQ30 removeProductPkgs (product=CI pkg=SUNWcomms 7.2,REV=2011.09.09
i=0: realpkg=SUNWcomms base=/opt/sun/comms/CommsInstaller
  Task: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWcomms
  WILL INSTALL: CommsInstaller 7.0.4.0.0
                to /opt/sun/comms/CommsInstaller
  Task: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_CI_20130507193917 SUNWcomms
  NOTICE: Upgrading Messaging Server (64bit) 7u4 (7.4-23.01)
          to 7u5 (7.5-28.21) at /opt/sun/comms/messaging64
          Upgrade will be done by applying a patch
```

```
  WILL INSTALL: patch 137204-28 for Messaging Server (64bit)
  Task: patchadd
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
NOTICE: Upgrading Comms DSsetup 6.4 (6.4-23.01)
          to 6.4 (6.4-24.03) at /opt/sun/comms/dssetup
          Upgrade will be done by applying a patch
  WILL INSTALL: patch 118245-24 for Comms DSsetup
  Task: patchadd
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
to upgrade

Do you want to continue ? [yes] :

============================================================
Installing patch 125358-15 for NSS/NSPR/JSS...
------ Executing Task 1 of 7 ...
patchadd
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
2>&1
Validating patches...

Loading patches installed on the system...

Done!

Loading patches requested to install.

Done!

Checking patches that you specified for installation.

Done!


Approved patches will be installed in this order:

125358-15


Checking installed patches...
Executing prepatch script...
Installing patch packages...

Patch 125358-15 has been successfully installed.
See /var/sadm/patch/125358-15/log for details
Executing postpatch script...

Patch packages installed:
  SUNWjss
  SUNWpr
  SUNWprd
  SUNWtls
  SUNWtlsd
  SUNWtlsu

-- Exit status: 0
```

```
============================================================
Removing existing CommsInstaller 7.0.2.0.0...
------ Executing Task 2 of 7 ...
pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWcomms 2>&1

Removal of <SUNWcomms> was successful.
-- Exit status: 0

============================================================
Installing CommsInstaller 7.0.4.0.0...
------ Executing Task 3 of 7 ...
pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_CI_20130507193917 SUNWcomms 2>&1
Copyright (c) 2007, 2013, Oracle and/or its affiliates. All rights
reserved.
Use is subject to license terms.

Installation of <SUNWcomms> was successful.
-- Exit status: 0

============================================================
Upgrading Messaging Server (64bit) 7u4 (7.4-23.01) at
/opt/sun/comms/messaging64...
-- INFO: TaskGroup Upgrade Start
------ Executing Task 4 of 7 ...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
7.4-23.01 /opt/sun/comms/messaging64 0 "137204-28" 2>&1
-- Exit status: 0
--
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
7.4-23.01 /opt/sun/comms/messaging64 0 "137204-28"

============================================================
Installing patch 137204-28 for Messaging Server (64bit)...
------ Executing Task 5 of 7 ...
patchadd
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
2>&1
Validating patches...

Loading patches installed on the system...

Done!

Loading patches requested to install.

Done!

Checking patches that you specified for installation.
```

```
Done!


Approved patches will be installed in this order:

137204-28


Checking installed patches...
Executing prepatch script...
-- Stopping Messaging Server...
Installing patch packages...

Patch 137204-28 has been successfully installed.
See /var/sadm/patch/137204-28/log for details
Executing postpatch script...
--
-- To generate updated config files, run
-- /opt/sun/comms/messaging64/bin/patch-config
/opt/sun/comms/messaging64/install/patch/137204-28
-- After that, to install the updated config files, run
-- /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-28

Patch packages installed:
  SUNWmessaging-server-64

-- Exit status: 0
------ Executing Task 6 of 7 ...
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
7.4-23.01 /opt/sun/comms/messaging64 0 "137204-28" 2>&1
-- /opt/sun/comms/messaging64/bin/patch-config
/opt/sun/comms/messaging64/install/patch/137204-28
-- LOGFILE:
/opt/sun/comms/messaging64/install/patch/137204-28/patch-config_20130507194
New: /opt/sun/comms/messaging64/config/msg.conf.defaults
-- New: /opt/sun/comms/messaging64/config/mappings.locale
-- New: /opt/sun/comms/messaging64/config/internet.rules
-- New: /opt/sun/comms/messaging64/config/imta.cnf
-- New: /opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
-- Del: /opt/sun/comms/messaging64/config/ImapProxyAService-def.cfg
-- Del: /opt/sun/comms/messaging64/config/PopProxyAService-def.cfg
-- Del: /opt/sun/comms/messaging64/config/SmtpProxyAService-def.cfg
--
-- Number of new config files: 5
-- Number of config files to delete: 3
-- Number of config files with conflicts: 0
-- Number of config files that are images (gif png ico or jpg): 0
-- The list of new config files are in:
    /opt/sun/comms/messaging64/install/patch/137204-28/newconfig.list
-- The list of config files to be deleted are in:
    /opt/sun/comms/messaging64/install/patch/137204-28/delconfig.list


--
-- Please review the changes in the new config files before installing
them.
```

```
-- To install the updated config files, run
-- /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-28

-- /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-28
-- LOGFILE:
/opt/sun/comms/messaging64/install/patch/137204-28/install-newconfig_201305
Stopping services: /opt/sun/comms/messaging64/bin/stop-msg
/opt/sun/comms/messaging64/bin/stop-msg
Connecting to watcher ...
Warning: Cannot connect to watcher
job_controller server is not running
dispatcher server is not running
sched server is not running
http server is not running
pop server is not running
imap server is not running
purge server is not running
store server is not running
ens server is not running
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/msg.conf.def
/opt/sun/comms/messaging64/config/msg.conf.defaults
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/mappings.loc
/opt/sun/comms/messaging64/config/mappings.locale
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/internet.rul
/opt/sun/comms/messaging64/config/internet.rules
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/imta.cnf.new
/opt/sun/comms/messaging64/config/imta.cnf
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/data/install/ugdir_
/opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
unlink /opt/sun/comms/messaging64/config/ImapProxyAService-def.cfg
unlink /opt/sun/comms/messaging64/config/PopProxyAService-def.cfg
unlink /opt/sun/comms/messaging64/config/SmtpProxyAService-def.cfg
-- Number of different files: 5
-- Number of deleted files: 3
-- Original files are backed up under
/opt/sun/comms/messaging64/install/patch/137204-28/config_20130507194112
-- The final step is to apply the ldif file
-- /opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
-- to the user/group Directory
-- This is not performed automatically, you must do this manually
-- Exit status: 0
--
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
7.4-23.01 /opt/sun/comms/messaging64 0 "137204-28"
-- /opt/sun/comms/messaging64/bin/patch-config
/opt/sun/comms/messaging64/install/patch/137204-28
-- LOGFILE:
/opt/sun/comms/messaging64/install/patch/137204-28/patch-config_20130507194
New: /opt/sun/comms/messaging64/config/msg.conf.defaults
```

```
-- New: /opt/sun/comms/messaging64/config/mappings.locale
-- New: /opt/sun/comms/messaging64/config/internet.rules
-- New: /opt/sun/comms/messaging64/config/imta.cnf
-- New: /opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
-- Del: /opt/sun/comms/messaging64/config/ImapProxyAService-def.cfg
-- Del: /opt/sun/comms/messaging64/config/PopProxyAService-def.cfg
-- Del: /opt/sun/comms/messaging64/config/SmtpProxyAService-def.cfg
--
-- Number of new config files: 5
-- Number of config files to delete: 3
-- Number of config files with conflicts: 0
-- Number of config files that are images (gif png ico or jpg): 0
-- The list of new config files are in:
    /opt/sun/comms/messaging64/install/patch/137204-28/newconfig.list
-- The list of config files to be deleted are in:
    /opt/sun/comms/messaging64/install/patch/137204-28/delconfig.list

--
-- Please review the changes in the new config files before installing
them.
-- To install the updated config files, run
-- /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-28

-- /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-28
-- LOGFILE:
/opt/sun/comms/messaging64/install/patch/137204-28/install-newconfig_201305
Stopping services: /opt/sun/comms/messaging64/bin/stop-msg
/opt/sun/comms/messaging64/bin/stop-msg
Connecting to watcher ...
Warning: Cannot connect to watcher
job_controller server is not running
dispatcher server is not running
sched server is not running
http server is not running
pop server is not running
imap server is not running
purge server is not running
store server is not running
ens server is not running
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/msg.conf.def
/opt/sun/comms/messaging64/config/msg.conf.defaults
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/mappings.loc
/opt/sun/comms/messaging64/config/mappings.locale
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/internet.rul
/opt/sun/comms/messaging64/config/internet.rules
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/imta.cnf.new
/opt/sun/comms/messaging64/config/imta.cnf
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/data/install/ugdir_
/opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
```

```
unlink /opt/sun/comms/messaging64/config/ImapProxyAService-def.cfg
unlink /opt/sun/comms/messaging64/config/PopProxyAService-def.cfg
unlink /opt/sun/comms/messaging64/config/SmtpProxyAService-def.cfg
-- Number of different files: 5
-- Number of deleted files: 3
-- Original files are backed up under
/opt/sun/comms/messaging64/install/patch/137204-28/config_20130507194112
-- The final step is to apply the ldif file
-- /opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
-- to the user/group Directory
-- This is not performed automatically, you must do this manually
-- INFO: TaskGroup Upgrade End
============================================================
Done Upgrading Messaging Server (64bit) to 7u5 (7.5-28.21) at
/opt/sun/comms/messaging64

============================================================
Upgrading Comms DSsetup 6.4 (6.4-23.01) at /opt/sun/comms/dssetup...
-- INFO: TaskGroup Upgrade Start

============================================================
Installing patch 118245-24 for Comms DSsetup...
------ Executing Task 7 of 7 ...
patchadd
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
2>&1
Validating patches...

Loading patches installed on the system...

Done!

Loading patches requested to install.

Done!

Checking patches that you specified for installation.

Done!


Approved patches will be installed in this order:

118245-24


Checking installed patches...
Installing patch packages...

Patch 118245-24 has been successfully installed.
See /var/sadm/patch/118245-24/log for details

Patch packages installed:
  SUNWcomds

-- Exit status: 0
```

```
-- INFO: TaskGroup Upgrade End
============================================================
Done Upgrading Comms DSsetup to 6.4 (6.4-24.03) at
/opt/sun/comms/dssetup
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
SUMMARY:

PASSED: Task 1: patchadd
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
Task 2: pkgrm -n -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
SUNWcomms
PASSED: Task 3: pkgadd -G -a
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/.inst
-n  -d
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
-r /tmp/.response_CI_20130507193917 SUNWcomms
PASSED: Task 4: preupgrade
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
7.4-23.01 /opt/sun/comms/messaging64 0 "137204-28"
PASSED: Task 5: patchadd
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
Task 6: postupgrade
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
7.4-23.01 /opt/sun/comms/messaging64 0 "137204-28"
-- Output of Task 6: postupgrade
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
7.4-23.01 /opt/sun/comms/messaging64 0 "137204-28"
-- /opt/sun/comms/messaging64/bin/patch-config
/opt/sun/comms/messaging64/install/patch/137204-28
-- LOGFILE:
/opt/sun/comms/messaging64/install/patch/137204-28/patch-config_20130507194
New: /opt/sun/comms/messaging64/config/msg.conf.defaults
-- New: /opt/sun/comms/messaging64/config/mappings.locale
-- New: /opt/sun/comms/messaging64/config/internet.rules
-- New: /opt/sun/comms/messaging64/config/imta.cnf
-- New: /opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
-- Del: /opt/sun/comms/messaging64/config/ImapProxyAService-def.cfg
-- Del: /opt/sun/comms/messaging64/config/PopProxyAService-def.cfg
-- Del: /opt/sun/comms/messaging64/config/SmtpProxyAService-def.cfg
--
-- Number of new config files: 5
-- Number of config files to delete: 3
-- Number of config files with conflicts: 0
-- Number of config files that are images (gif png ico or jpg): 0
-- The list of new config files are in:
    /opt/sun/comms/messaging64/install/patch/137204-28/newconfig.list
-- The list of config files to be deleted are in:
    /opt/sun/comms/messaging64/install/patch/137204-28/delconfig.list

--
-- Please review the changes in the new config files before installing
them.
-- To install the updated config files, run
-- /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-28
```

```
-- /opt/sun/comms/messaging64/bin/install-newconfig -f
/opt/sun/comms/messaging64/install/patch/137204-28
-- LOGFILE:
/opt/sun/comms/messaging64/install/patch/137204-28/install-newconfig_201305
Stopping services: /opt/sun/comms/messaging64/bin/stop-msg
/opt/sun/comms/messaging64/bin/stop-msg
Connecting to watcher ...
Warning: Cannot connect to watcher
job_controller server is not running
dispatcher server is not running
sched server is not running
http server is not running
pop server is not running
imap server is not running
purge server is not running
store server is not running
ens server is not running
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/msg.conf.def
/opt/sun/comms/messaging64/config/msg.conf.defaults
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/mappings.loc
/opt/sun/comms/messaging64/config/mappings.locale
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/internet.rul
/opt/sun/comms/messaging64/config/internet.rules
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/config/imta.cnf.new
/opt/sun/comms/messaging64/config/imta.cnf
copy
/opt/sun/comms/messaging64/install/patch/137204-28/save/data/install/ugdir_
/opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
unlink /opt/sun/comms/messaging64/config/ImapProxyAService-def.cfg
unlink /opt/sun/comms/messaging64/config/PopProxyAService-def.cfg
unlink /opt/sun/comms/messaging64/config/SmtpProxyAService-def.cfg
-- Number of different files: 5
-- Number of deleted files: 3
-- Original files are backed up under
/opt/sun/comms/messaging64/install/patch/137204-28/config_20130507194112
-- The final step is to apply the ldif file
-- /opt/sun/comms/messaging64/data/install/ugdir_diff.ldif
-- to the user/group Directory
-- This is not performed automatically, you must do this manually
-- End of command output--
PASSED: Task 7: patchadd
/net/comms-nfs.example.com/export/megan/wspace/dl111122/releases/ci74/SunOS
tasks PASSED
Checking JES java symlink...
ls -l /usr/jdk /usr/java 2>&1
lrwxrwxrwx   1 root     other         15 May  7 19:36 /usr/java ->
jdk/jdk1.6.0_26

/usr/jdk:
total 10
drwxr-xr-x   4 root     bin            4 Jun 12  2012 instances
```

```
lrwxrwxrwx   1 root     other          7 Jun 12  2012 j2sdk1.4.2_32 ->
../j2se
lrwxrwxrwx   1 root     other         18 Feb 26 14:05 jdk1.5.0_12 ->
instances/jdk1.5.0
lrwxrwxrwx   1 root     other         18 May  7 19:36 jdk1.6.0_26 ->
instances/jdk1.6.0
lrwxrwxrwx   1 root     other         11 May  7 19:36 latest ->
jdk1.6.0_26
drwxr-xr-x   8 root     bin            8 May  7 19:37 packages
-- Exit status: 0
ls -l /usr/jdk/entsys-j2se /usr/jdk/latest 2>&1
/usr/jdk/entsys-j2se: No such file or directory
lrwxrwxrwx   1 root     other         11 May  7 19:36 /usr/jdk/latest ->
jdk1.6.0_26
-- Exit status: 2
ls -lL /usr/jdk/entsys-j2se /usr/jdk/latest 2>&1
/usr/jdk/entsys-j2se: No such file or directory
/usr/jdk/latest:
total 38080
-rw-r--r--   1 root     bin         3339 May  4  2011 COPYRIGHT
-rw-r--r--   1 root     bin           40 May  4  2011 LICENSE
-rw-r--r--   1 root     bin          115 May  4  2011 README.html
-rw-r--r--   1 root     bin        20320 Nov 29  2006 README_ja.html
-rw-r--r--   1 root     bin        15160 Nov 29  2006 README_zh_CN.html
-rw-r--r--   1 root     bin       183173 May  4  2011
THIRDPARTYLICENSEREADME.txt
drwxr-xr-x   3 root     bin           49 May  7 19:37 bin
drwxr-xr-x  11 root     bin           12 Jun 12  2012 demo
drwxr-xr-x   3 root     bin            8 May  7 19:36 include
drwxr-xr-x   6 root     bin           11 May  7 19:36 jre
drwxr-xr-x   3 root     bin           11 May  7 19:36 lib
drwxr-xr-x   6 root     bin            6 Jun 12  2012 man
-r--r--r--   1 root     other       6646 May  7 19:36 register.html
-r--r--r--   1 root     other       8092 May  7 19:36 register_ja.html
-r--r--r--   1 root     other       6249 May  7 19:36
register_zh_CN.html
drwxr-xr-x  10 root     bin           10 Jun 12  2012 sample
-rw-r--r--   1 root     bin      19103364 May  4  2011 src.zip
-- Exit status: 2
INFO: no update to /etc/softlist.xml required

Hit Return to Continue:
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
-- unlink /tmp/.response_CI_20130507193917
-- unlink /tmp/.patchout_20130507193917.24033
mkdir -p /var/opt/CommsInstaller/logs 2>&1
-- Exit status: 0

NOTICE: silent file created in:

/var/opt/CommsInstaller/logs/silent_CommsInstaller_20130507193917
-- Closing the log at Tue May  7 19:42:10 2013
[1009 Tue May 07 19:42:35 root@host1% /home/user/wspace/releases/ci74# ]
# ./commpkg info
-- LOGFILE: /tmp/CommsInstaller_20130507194238.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
```

```
PDT 2013
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: It is highly recommended that you apply the
          latest OS Recommended Patch Cluster. commpkg will
          not do this automatically.
ALTROOT: /
  NAME: ""
  Product: Messaging Server (64bit) 7u5 64bit
           Oracle Version: Not Found
           Version: 7.5-28.21
           ALTROOT: /
           Basedir: /opt/sun/comms/messaging64
           Build Date: 20130408
  Product: Comms DSsetup 6.4
           Oracle Version: Not Found
           Version: 6.4-24.03
           ALTROOT: /
           Basedir: /opt/sun/comms/dssetup
           Build Date: 20120611

[1010 Tue May 07 19:42:47 root@host1% /home/user/wspace/releases/ci74# ]
# ./commpkg info --verbose
-- LOGFILE: /tmp/CommsInstaller_20130507194410.log
CommsInstaller version 7.0.4.0.0 (7.4-0.05) built on Tue Apr  9 08:16:37
PDT 2013
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Detecting Installed Products...
Detecting Installed Patches...
  NOTICE: The OS Recommended Patch Cluster (as of 2013.02.19)
          has not been applied. Specifically the following
          patches are missing:
          147147-26
  NOTICE: It is highly recommended that you apply the
          latest OS Recommended Patch Cluster. commpkg will
          not do this automatically.
ALTROOT: /
  NAME: ""
  Product: Messaging Server (64bit) 7u5 64bit
           Oracle Version: Not Found
           Version: 7.5-28.21
           ALTROOT: /
           Basedir: /opt/sun/comms/messaging64
           Build Date: 20130408
           getVersion UNAME: SunOS
           getVersion ARCH: sparc
           getVersion BITS: 64
           Product Installation Status: PRESENT
           Package Status/Name/Version:
             PRESENT  SUNWmessaging-server-64 7.0,REV=2008.06.20
  Product: Comms DSsetup 6.4
```

```
Oracle Version: Not Found
Version: 6.4-24.03
ALTROOT: /
Basedir: /opt/sun/comms/dssetup
Build Date: 20120611
getVersion UNAME: SunOS
getVersion ARCH: sparc
getVersion BITS: 32
Product Installation Status: PRESENT
Package Status/Name/Version:
```

```
              PRESENT  SUNWcomds        6.3,REV=2004.08.12

[1011 Tue May 07 19:44:19 root@host1% /home/user/wspace/releases/ci74# ]
```

Installation Scenario - Directory Server

Installation Scenario - Oracle Directory Server Enterprise Edition

Topics:

- Assumptions
- Which Software Components and Downloads Do You Need?
- To Install Directory Server Enterprise Edition 11g R1

Assumptions

This scenario shows how to install Directory Server on a separate host using the following assumptions:

- You are deploying Communications Suite on multiple hosts or Solaris zones.
- This Directory Server installation is one functional component of your multi-host deployment.
- You are installing Directory Server on a separate host or Solaris zone. You are not bundling Directory Server with Communication Suite products on the same host.
- If you are deploying multiple instances of Directory Server across several hosts or zones, you can follow these instructions for each host on which you install Directory Server.

Which Software Components and Downloads Do You Need?

- Oracle Directory Server Enterprise Edition 11g Release 1
- Communications Suite--for the Directory Server setup script, `comm_dssetup.pl`

For details on downloading these components, see Get the Software.

To Install Directory Server Enterprise Edition 11g R1

Oracle Directory Server Enterprise Edition 11g Release 1 is the preferred version for Communications Suite. This task assumes you have downloaded the Directory Server software and unzipped it into the temporary directory, `/var/tmp/DS`. Choose a "scratch" directory that makes sense in your own environment.

1. Run the Communications Suite installer.
   When the Communications Suite installer lists the components to install, select the Directory Server setup script, `comm_dssetup.pl`. Do not select other components unless you also plan to install them on this host or zone.
2. Check for the existence of the `/opt/SUNWdsee` directory. If this directory does not exist, create it:

   ```
   mkdir /opt/SUNWdsee
   ```

3. Unzip the Directory Server software and run the Directory Server installer.

   ```
   cd /var/tmp/DS
   unzip -qq sun-dsee7.zip -d /opt/SUNWdsee
   ```

   The installation installs the Directory Server bits in the specified location, `/opt/SUNWdsee`.

4. Create the Directory Server instance.

```
mkdir /var/opt/SUNWdsee
cd /opt/SUNWdsee/dsee7/bin
./dsadm create -p 389 -P 636 /var/opt/SUNWdsee/dsins1
Choose the Directory Manager password: <password>
Confirm the Directory Manager password: <password>
```

5. Start the Directory Server instance.

```
./dsadm start /var/opt/SUNWdsee/dsins1
```

6. If you need more information about installing Directory Server, see Installing Directory Server Enterprise Edition 11g Release 1 (11.1.1.7.0).
7. Run the Directory Server setup script, `comm_dssetup.pl`.
   The `comm_dssetup.pl` script modifies Directory Server with schema needed by Communications Suite products.

Instant Messaging Upgrade

Upgrading to Oracle Communications Instant Messaging Server Version 9 Patch 3

This information describes how to upgrade to Oracle Communications Instant Messaging Server 9 Patch 3, from previous versions of Instant Messaging starting with Instant Messaging 7.3.

- For information on how to upgrade from the 7.1 or prior versions of Instant Messaging to Instant Messaging version 7.2, see Chapter 7, Upgrading Instant Messaging of the Sun Java Communications Suite 5 Upgrade Guide.
- For information on how to upgrade from Instant Messaging version 7.2 to Instant Messaging version 7.3, see Upgrading to Instant Messaging 7.3.

> **Note**
> You can upgrade to the Oracle Communications Instant Messaging Server only by using the Communication Suite installer.

Topics:

- Upgrading Instant Messaging Server Overview
- To Upgrade to Instant Messaging Server 9 Patch 3 from Instant Messaging Server 9
- To Upgrade to Instant Messaging Server 9 Patch 3 from Instant Messaging Server Releases Prior to Version 9
- Rolling Back to the Legacy Instant Messaging Version

Upgrading Instant Messaging Server Overview

The process for upgrading the Instant Messaging server and multiplexor is the same and should only take a few minutes. The upgrade procedure automatically copies the pre-upgrade release product configuration and other data to the post-upgrade version. If Instant Messaging is configured to provide email notifications, Calendar alerts, or Access Manager policy features such as authenticating or single-sign on, the configuration data of these features is migrated to the post-upgrade version.

To Upgrade to Instant Messaging Server 9 Patch 3 from Instant Messaging Server 9

To upgrade to Instant Messaging Server 9 Patch 3 from Instant Messaging Server 9, perform the following steps on an existing installation of Instant Messaging. If you are not yet running Instant Messaging Server 9, see To Upgrade to Instant Messaging Server 9 Patch 3 from Instant Messaging Server Releases Prior to Version 9.

1. Stop the Instant Messaging server.

   ```
   <im-svr-base>/sbin/imadmin stop
   ```

2. Use the Communications Suite installer to upgrade Instant Messaging.

   ```
   ./commpkg upgrade
   ```

   For more information, see commpkg upgrade Usage.

3. Select the Instant Messaging Server 9 Patch 3 component from the Product Selection list.
4. Respond to the Communications Suite installer prompts to upgrade.
5. Restart the Instant Messaging server.

```
<im-svr-base>/sbin/imadmin start
```

6. (Optional) If you have deployed any Web applications, redeploy them.

```
<im-svr-base>/sbin/iwadmin redeploy <app-name>
```

   where *app-name* can be `im`, `httpbind`, `imps`, or `all`.
   This step completes the upgrade process and redeploys the specified component(s).

7. If you had previously configured your deployment to use Service Management Facility (SMF), run the following command to enable SMF, as the upgrade does not preserve SMF status.

```
imadmin smf-register
```

8. When upgrading to Instant Messaging 9 Patch 3, check if you are using any of the following items and do not wish to reconfigure:
   - Components: Calendar Agent, HTTPBind, and so on
   - S2S Federation
   - Server Pool
   - Server health monitoring using Watchdog
     If you use any of these items, and if you continue to use the existing configuration file and do not wish to reconfigure, then you must set the `iim_server.useport` parameter to **`true`** by using the `imconfutil` command. For example:

```
imconfutil -c <xml config file> set-prop
iim_server.useport=true
```

To Upgrade to Instant Messaging Server 9 Patch 3 from Instant Messaging Server Releases Prior to Version 9

Upgrading to Instant Messaging Server 9 Patch 3 from an Instant Messaging Server release prior to version 9 is a two step process. You must first upgrade to Instant Messaging Server 9. Then, you upgrade to Instant Messaging Server 9 Patch 3.

1. To upgrade to Instant Messaging Server 9, see Instant Messaging Upgrade.
2. To upgrade from Instant Messaging Server 9 to Instant Messaging Server 9 Patch 3, see To Upgrade to Instant Messaging Server 9 Patch 3 from Instant Messaging Server 9.

Rolling Back to the Legacy Instant Messaging Version

If the upgrade fails or if you need to go back to the previously working version of Instant Messaging, you can roll back the upgrade process.

To roll back the upgrade process, perform the following steps:

1. Stop all services.
2. Remove the Instant Messaging Server 9 Patch 3 packages.
   For example, on Solaris, use the `pkgrm` command.
3. Install the old version of Instant Messaging, for example, version 7.2, 7.3, or 8.3, by using the

Communications Suite installer for that version.

> **Note**
> When you upgrade the server, all previous configuration data is overwritten. The old configuration files are backed up in the `config` directory with the string `-pre 9` suffixed to the file name. For example, the old `iim.conf` file is backed up as `iim.conf-pre9`. This file can be used to roll back to the previous working version in case of a upgrade failure.

4. Rename the old configuration files with their correct names.
   That is, rename `iim.conf-pre9` to `iim.conf`.
5. Restart the services.

Messaging Server Upgrade

Oracle Communications Messaging Server Upgrade Version 7 Update 5

> **Caution**
> Because of database incompatibilities between Messaging Server 7 Update 5 and previous versions, you cannot downgrade to the previous version by "backing out" the upgrade. For instructions, see Downgrading From Messaging Server 7 Update 5.

This information describes the three Messaging Server upgrade strategies and procedures to upgrade individual hosts within a deployment. It assumes that you have chosen a target deployment, and have developed an architectural design and deployment plan.

Topics:

- About Messaging Server Unified Configuration
- Upgrading Messaging Server Overview
- Messaging Server Upgrade Strategies
- Using the Side-by-Side Strategy to Upgrade Messaging Server
- Using the In-Place Upgrade on Messaging Server
- Upgrading Messaging Server with Webmail Over IMAP Protocol

> **Note**
> If you are upgrading from Sun Java System Messaging Server 5.2, refer to Coexistent Upgrades From iPlanet Messaging Server 5.2 for additional information.

About Messaging Server Unified Configuration

Messaging Server 7 Update 5 introduces the capability to create a Unified Configuration. Unified Configuration provides an improved, streamlined process to configure and administer Messaging Server. Unlike in legacy configurations (Messaging Server 7 Update 4 and prior releases), Unified Configuration uses validation to verify configuration accuracy, and employs a single tool to configure the entire Messaging Server configuration (with a few exceptions). Thus, moving your deployment to Unified Configuration simplifies administration and reduces configuration mistakes.

After upgrading to Messaging Server 7 Update 5, you can decide to migrate your legacy configuration to Unified Configuration. It is not a requirement to use Unified Configuration with Messaging Server 7 Update 5, however, Unified Configuration provides a number of benefits over legacy configuration. When you convert to Unified Configuration, Messaging Server saves your old legacy configuration in the *configroot/*`legacy-config` directory. If necessary, you can restore a saved legacy configuration at the time you converted, however, all changes made to your configuration after converting to Unified Configuration are lost. You can migrate to Unified Configuration after you have completed the upgrade. You are not required to migrate to Unified Configuration during the upgrade process.

To help you decide to migrate to Unified Configuration, see Overview of Messaging Server Unified Configuration.

Upgrading Messaging Server Overview

A Messaging Server deployment can consist of multiple back-end message stores, multiple Webmail

servers, front-end MMPs, and MTA relays. Like all upgrades, you proceed on a host-by-host basis. Upgrading a Messaging Server deployment includes the following high-level steps:

- Backing up the Messaging Server data
- Upgrading and running `comm_dssetup.pl` to the latest version before upgrading Messaging Server
  Messaging 7 Update 5 requires you to apply at least `comm_dssetup.pl` version 6.4.0.21.0 (6.4-5.05) against Directory Server. The Communications Suite 7.4 distribution includes `comm_dssetup.pl` version 6.4.0.24.0 (6.4-24.03).
- Defining your upgrade target and the required products and components for that target
- Reviewing your Messaging Server architecture and topology
  Although you might be satisfied with your current Messaging Server architecture and topology, upgrading can provide the opportunity to redesign your deployment for more optimal performance. Refer to the Communications Suite Deployment Planning Guide for more information.
- Selecting the upgrade sequence of individual Messaging Server hosts
  This includes upgrading components such as the message store servers, proxies, Webmail servers, and front-end relays.
- Choosing a Messaging Server upgrade strategy for each host
  Three Messaging Server upgrade strategies offer choices that strike a balance between system downtime, cost, simplicity, and risk. You choose a strategy for each host, and you can use different strategies on different hosts within a Messaging Server deployment.

  > **Note**
  > As of Communications Suite 7, Messaging Server 32-bit has been dropped on Oracle Solaris.

- Upgrading the Messaging Server software
  Use Messaging Server 7 Update 5 or the latest patch. See Messaging Server Patches By Release for patch information.
- Optional: Migrating to Unified Configuration
  Use the `configtoxml` command to migrate from legacy configuration to Unified Configuration. See the configtoxml Command for more information.

Technical Features Supporting Messaging Server Upgrade

The following features support Messaging Server upgrade:

- You migrate mailboxes by using the `imsbackup` and `imsrestore` commands. See Migrating User Mailboxes to a New System. These commands support moving mailboxes from old message store versions to new ones (including when the message store database format changes, for example, from Messaging Server 32-bit to Messaging Server 64-bit). These commands also support moving mailboxes from new message store versions to old ones for back-out purposes.
- In-place Upgrade supports changing the old mailbox format to the new format, but it does not support going from the new format back to the old. You **cannot** back out from new data format to old data format by using the In-place Upgrade Strategy. The conversion is done "on-the-fly" as mailboxes are accessed. In-place server upgrade is by done using commpkg upgrade.
- Migrating the Messaging Server configuration from the old system to the new system is done by using the `migrate-config` utility.
- Alternate root (ALTROOT) install is supported on Oracle Solaris. See Using the ALTROOT Command-Line Argument for more information.

Messaging Server Upgrade Strategies

Messaging Server supports the following three upgrade strategies for individual hosts. These strategies provide a balance between downtime, risk of extended downtime, complexity, and potential hardware costs.

- *In-place Upgrade.* The binaries of the old version are replaced with the binaries of the new version on the same host. That is, you use `commpkg upgrade`.
- *Side-by-side Upgrade on the same host.* The new software version is installed on the same host as the old version in a different directory. After you migrate the software configuration to the new version, you switch the deployment over to the new version.
- *Coexistent Upgrade.* You keep existing services online while you construct a new host on separate hardware.

The strategy chosen for any particular host might differ. For example, you might wish to use an in-place upgrade on your front-end servers (relays, MMPs, and webmail servers) but you might want to do a coexistent upgrade on your message stores.

> **Caution**
> There is a data format change in the message store starting with Messaging Server 7 (see Upgrading the Message Store). Coexistent Upgrade is recommended to facilitate backout.

The strategy you chose also depends upon the version you currently have installed and whether you are using 32-bit or 64-bit Messaging Server product. Issues and compatibilities are described next.

Upgrading to Messaging Server 7 Update 5 (Red Hat Enterprise Linux and Oracle Linux Only)

From	Online/Coexistence	Side-by-Side Migration	In-place Upgrade by Using rpm -U?
6.1, 6.2, 6.3 (32-bit) (through Communications Suite 5)	Yes (recommended for store)	Yes (alternative for store) Note: No back out to old data format.	Yes (recommended for MTA relay, MMP, and webmail server)
7, 7u1, 7u2, 7u3, 7u4 (Communications Suite 6 through 7 Update 2)	Yes	Yes	Yes

Upgrading to Messaging Server 7 Update 5 64-bit (Oracle Solaris Only)

From	Online/Coexistence	Side-by-Side Migration	In-place Upgrade via pkgadd/pkgrm or Patch?
5.2	Yes (recommended for all components)	Yes (alternative for all Messaging Server components) Note: Messaging Server 5.2 did not use SVR4 packaging, so this is just a fresh install.	No
6.0,6.1,6.2,6.3 (32-bit) (through Communications Suite 5)	Yes (recommended for store)	Yes (alternative for store)	No
6.3 (64-bit) (Communications Suite 5)	Yes (recommended for store)	Yes (alternative for store)	Yes: `pkgadd/pkgrm` only (recommended for MTA relay, MMP, and webmail server)
7, 7u1, 7u2 (32bit)	Yes	Yes	Yes: `pkgadd/pkgrm` only
7, 7u1, 7u2, 7u3, 7u4 (Communications Suite 6 through 7 Update 2) (64bit)	Yes	Yes	Yes: `pkgadd/pkgrm` or `patchadd`

> **Note**
> When upgrading/migrating between SPARC and x86 hardware, you need to use the Online/Coexistence strategy. Also, see Migrating from x86 to SPARC.

The Coexistence Migration Strategy is the safest and most secure method of upgrading. It also has the lowest downtime of the three upgrade strategies. In the coexistence model, existing services remain online while you construct a new target host (or entire Messaging Server environment) on new hardware or in a Oracle Solaris whole root zone on the existing hardware. After the new host and environment are established, you can migrate a small number of friendly users to the new system to verify operations and administrative procedures. For a certain period both systems are accessible to user traffic. This is called a coexistence phase. Messaging access is not disrupted and proceeds invisibly to users. When all users are migrated to the new environment, you can decommission your legacy deployment. This phased approach ensures that the new system is fully prepared to handle production users before making the full migration.

> **Note**
> Read Coexistent Upgrades From iPlanet Messaging Server 5.2 for useful information on coexistent upgrades.

Advantages and Disadvantages of Coexistence Migration:

- Service downtimes are usually rare and short. There is less danger that they will be longer than the off-line windows imposed by service level agreements.
- Allows a gradual adoption of the new software so that you can gain confidence by trying it out with a small group of sympathetic users before migrating production users.
- The risk of upgrade failure is mitigated by the fact that your legacy system remains fully functioning throughout the upgrade process.
- Because the new system is built alongside a functional old one, you do not need to install or modify anything on the working legacy machines. This is an advantage as there is always a natural reluctance to modify or reconfigure a working legacy system in significant ways.
- Coexistence is the safest upgrade model and has the least amount of user downtime.
- Simpler back off procedure. Anytime you upgrade software, you need to make provisions for backing off from the new system to the old system in case of failure. Other upgrade models might require that you back up and turn off the old system, install, configure, and migrate to the new system. Only when you switch on the new system do you know if the upgrade succeeded. If it turns out, that it did not, then you might have to use your back off plan to put everything back into place. A coexistence migration is much simpler as a working legacy system is already in place.
- You must move user data, such as mailboxes, from one host to another, typically by using the `imsbackup` and `imsrestore` commands.
- Might require extra hardware to set up a parallel system. (This can be mitigated by upgrading legacy machines after they are no longer used.)

Specific Steps for Upgrading Messaging Server Using the Coexistence Model

1. Make sure that your hardware is installed as per the deployment plan created from the Convergence Deployment Planning and Communications Suite Deployment Planning Guide. See also the Requirements for Communications Suite 7 Update 4.
2. Install new version of Messaging Server in the proper sequence on new machine, by using the `commpkg install` command.
3. Configure Messaging Server.
   You must do so manually. Basically you must clone the old machine's configuration to this new machine.
4. If you are doing a coexistent migration on a message store, migrate user mailboxes (a few at a time) to the new machine. See Migrating or Moving Mailboxes to a New System. Details on message store internals can be found in Upgrading the Message Store.

Using the Side-by-Side Strategy to Upgrade Messaging Server

In this model, you install the new software version on the same machine as the old version. After migrating the configuration to the new version, you can switch over to the new version. This upgrade strategy is new starting with Communications Suite 6. The basic steps are as follows:

1. Install Messaging Server 7 Update 5 side-by-side on the same machine with your earlier version of Messaging Server by using the `commpkg install` command.
2. Back up configuration and mailbox data just in case a back out is required.
   For the configuration data, simply back up the configuration directory. For mailbox data, use the `imsbackup` command.
3. Migrate the configuration from Messaging Server to 7 Update 5 by using the `migrate-config` utility.
4. Start Messaging Server 7 Update 5.

Advantages and Disadvantages of Side-by-Side Messaging Server Migration

- Second best minimal downtime.
- Second best in backout.
- Does not require extra machines.
- Does require different directory location for fresh install. Any custom scripts that reference the install location must be modified.
- Does not involve moving the mailboxes. New version just "points" to the mailboxes and mailbox conversion to the new version is automatic and transparent.
- Back out is complicated and time consuming. See Downgrading From Messaging Server 7 Update 5.
- The only advantage of side-by-side over in-place is that the binaries of the old version remain intact on the system so you do not have to reinstall and reconfigure in the case of a backout.

Specific Steps for Upgrading Messaging Server Using the Side-by-side Migration Model

1. Back up the message store.
   Perform an `imsbackup`.
2. Install the new version of Messaging Server on the same system as your previous version of Messaging Server, but in a different directory (for example, in this procedure, `/opt/sun/comms/messaging64/`).
3. To migrate the configuration and message store data from the previous version of Messaging Server, run the `migrate-config` (migration configuration) utility:
   `/opt/sun/comms/messaging64/bin/migrate-config` *old-msg-svr-root*. (In the following example, *old-msg-svr-root* is `/opt/SUNWmsgsr`.)
   For example:

   ```
   /opt/sun/comms/messaging64/bin/migrate-config /opt/SUNWmsgsr
   ```

4. Run the following command:

   ```
   /opt/sun/comms/messaging64/bin/patch-config
   ```

5. Run the following command:

   ```
   /opt/sun/comms/messaging64/bin/install-newconfig
   ```

6. To back out the migration, run the following command:

```
/opt/sun/comms/messaging64/bin/migrate-config -u /opt/SUNWmsgsr
```

where `-u` is the undo flag.

Next Steps

- Once you complete the migration, stop using the old *server-root* directory:
  - Update `PATH` and any scripts referencing the old *server-root* location.
  - If you are using EMC Networker (formerly Legato Networker), be sure to update the *server-root* location in the configuration.
  - Replace the *server-root* location with the *server-root* binary location.
- Start the new server with the following command: `/opt/sun/comms/messaging64/bin/start-msg`
- If you need to back out the migration, use the `-u` (undo) flag: `/opt/sun/comms/messaging64/bin/migrate-config -u` *old-msg-svr-root* (where *old-msg-svr-root* is the old server-root) directory.
- To restart the old Messaging Server, use: *old-msg-svr-root*`/sbin/start-msg`
- Uninstall the old version Of Messaging Server when you are satisfied with the performance of the new one: `commpkg uninstall`

Backing Out of a Side-by-side Messaging Server Upgrade

Ideally you could just stop the new version and start the old version up and your back out recovery would be complete. However, because there is a mailbox database format change between pre-version 7 and version 7 Messaging Server, this does not work. To back out, you need to restore the message store either by reinstalling the volume snapshot of the file system, or by performing an `imsrestore` on the backed-up message store.

In either case, there is a potential of losing data as mail comes in during the recovery period. For the most part, back out is considered a disaster recovery operation. Backouts are done immediately after major unacceptable problems are found in the upgrade. Thus volume snapshots are quite acceptable as a back out plan.

The basic procedure is as follows:

- Stop new version.
- Restore mailbox data.
- Start old version.

Using the In-Place Upgrade on Messaging Server

In this method you simply replace the old server binaries with the new server binaries on the same machine by using the `commpkg upgrade` command. This command removes the old packages and installs the new ones. For details about this command, see commpkg upgrade Usage.

Advantages and Disadvantages of In-place Messaging Server Upgrade

- Simplest. One command installs the new packages and removes the old packages. This command migrates and upgrades configuration.
- Requires least amount of extra disk space.
- Messaging Server stays in the same disk location (no tweaking of custom scripts).

- Has the most downtime.
- Back out is complicated and time consuming. See Downgrading From Messaging Server 7 Update 5.
- This method is probably best for evaluators/testers/developers.
- Useful for upgrading Messaging Servers configured without the message store, for example, front-end relays and webmail servers.

Specific Steps for Using In-Place Upgrade on Messaging Server

- Run `commpkg upgrade` and select Messaging Server.
  - Stops the servers.
  - Removes the old version.
  - Installs the new version.
  - Performs migration of configuration and mailbox data.

For information about using the `commpkg upgrade` command, see `commpkg upgrade` Usage. Here is a commpkg upgrade sample session.

Upgrading Messaging Server with Webmail Over IMAP Protocol

You must upgrade the back-end server before upgrading the front-end server. Both the Webmail-over-IMAP protocol and the back-end message stores must be the same product version.

Starting with Messaging Server 6.3, the webmail server (mshttpd) communicates with the message store by using IMAP. Thus, the HTTP service could be run on the front end and is no longer needed or enabled on the store. To support older MEM clients for coexistent migrations, enable `mshttpd` and configure it on the 7.x back-end message store systems.
For example:

```
configutil -o service.http.enable -v 1
```

The number of `mshttpd` processes (`service.http.numprocesses`) should not change on the 6.2 front end. However, you must set the number of processes on the new back end to 1.

Finally, you need to copy the webmail files in the *server-root*`/config/html` directory over from the 6.2 system to the 7.x back-end systems. Although the back-end `mshttpd` does not send JavaScript or HTML files to the front end, the contents and structure of that directory need to match the front end.

Downgrading From Messaging Server 7 Update 5

Downgrading From Messaging Server 7 Update 5

Unlike in previous upgrades, starting with Messaging Server 7 Update 5, you cannot easily downgrade once you have upgraded to Messaging Server 7 Update 5. That is, you cannot just "back out" the upgrade by using the `patchrm` command on Solaris, or the `rpm -U` command on Linux. Instead, you must back up your Messaging Server data, back out the update (patch), then restore the Messaging Server data.

These downgrade instructions apply to both the `commmpkg upgrade` procedure and the `migrate-config` procedure (side-by-side upgrade).

Topics:

- Before you Upgrade to Messaging Server 7 Update 5
- Downgrading from Messaging Server 7 Update 5

Before you Upgrade to Messaging Server 7 Update 5

Read this section before upgrading to Messaging Server 7 Update 5 to understand how this release is different from previous releases.

- You cannot simply back out the Messaging Server 7 Update 5 upgrade once it is applied. In previous releases, you were able to back out. Starting with Messaging Server 7 Update 5, this is no longer the case.
- Although the system does permit you to back out the upgrade (for example, by running the `patchrm` command on Solaris platforms), afterwards Messaging Server services do not properly start. Additionally, the `stored` process does not start properly, and any mailbox accessed prior to backing out the upgrade reports that it is corrupted with an invalid format. Furthermore, even if you could manage to start Messaging Server services and manually fix the mailbox corruption, the mailbox owner flags (for example, seen and deleted flags) are all reset.
- Before upgrading to Messaging Server 7 Update 5, make sure that you back up the Messaging Server data. If you do need to downgrade after upgrading to Messaging Server 7 Update 5, you need to restore the Messaging Server the data to their state prior to upgrading.
- Before upgrading to Messaging Server 7 Update 5, it his highly recommended that you test it on a non-production system prior to actual deployment to production systems.
- Backing out from Messaging Server 7 Update 5 is considered an avenue of last resort. If you need to downgrade, you must follow the steps described later in this information to return your system to a working state.
- Depending on whether you upgraded by patch or through the Communications Installer, you might need the previous version's software. For example, if you use the installer to upgrade from Messaging Server 6, the installer removes the old software, and so to revert to that version, you would need the old product. Note that if you do a backup after upgrading, and restore from that backup, you do not lose messages that arrived since that backup when you restore.

Downgrading from Messaging Server 7 Update 5

Use this procedure if you have upgraded to Messaging Server 7 Update 5 and need to return to the version prior to upgrading.

1. Prior to downgrading, perform a full backup of the message store by using the `imsbackup` command.
   For example:

```
stop-msg
start-msg store
bin/imsbackup -v -f - / > backup
```

2. Back out the upgrade.
   - On Solaris: Use the `patchrm` command.
   - On Linux: Use the `rpm -U` command.
3. Move the `store` directory to a difference location.
   For example:

```
mv data/store data/store.old
```

4. Start the message store to perform the restore.

```
bin/start-msg store
```

5. Perform the restore:

```
bin/imsrestore -f backup
```

6. Stop and start Messaging Server.
   For example:

```
stop-msg
start-msg
```

Upgrading Calendar Server

Upgrading to Oracle Communications Calendar Server 7 Update 3

This information describes how to upgrade from Calendar Server 7 Update 2 to Calendar Server 7 Update 3. If you need to upgrade from Calendar Server 7 to Calendar Server 7 Update 2, see upgrading to Calendar Server 7 Update 2. If you need to migrate to Calendar Server 7 from Calendar Server 6, see Migrating From Sun Java System Calendar Server 6 to Calendar Server 7.

Notes About Upgrading to Calendar Server 7 Update 3

- Upgrading to Calendar Server 7 Update 3 requires that you first upgrade your LDAP schema with some new elements required by Calendar Server. To do so, you need to install and run `comm_dssetup` 6.4 against your Directory Server instances, as explained later in these instructions. The Communications Suite 7 Update 4 distribution includes `comm_dssetup` 6.4.
- Calendar Server 7 Update 3 is the product version attained by upgrading to Calendar Server 7 Patch 10 (patch ID 142785/142786/142787-10).
- If your deployment uses document stores, upgrading to Calendar Server 7 Update 3 requires you to also update those document stores at the same time, as documented in these instructions. This upgrade contains a new authentication mechanism and a new shared secret (password) for the server and the document stores and must be created.

Topics:

- Upgrading Calendar Server 7 Overview
- Upgrading to Calendar Server 7 Update 3 Overview
- Running comm_dssetup
- Upgrading to Calendar Server 7 Update 3
- Upgrading the Calendar Server Document Store

Upgrading Calendar Server 7 Overview

When performing an upgrade of Calendar Server 7, you must upgrade all front-end hosts and remote document store hosts (if applicable) to the same version. That is, you cannot have a deployment of mixed versions. This is because upgrades may introduce back-end database schema changes, or the front-end hosts may access the database in a different way.

Upgrading to Calendar Server 7 Update 3 Overview

1. Decide if you want to change the LDAP attribute used for the unique identifier for your Calendar Server deployment.
   If, when you initially installed Calendar Server 7, you chose to use `nsUniqueId` as your unique identifier, you should change to `davUniqueId`. For more information, see How Does Calendar Server Use a Unique Identifier?.
2. Install and run the Communications Suite `comm_dssetup` 6.4 script from the Communications Suite 7 Update 4 distribution against your Directory Server hosts.
3. On Calendar Server 7 Update 2 front-end hosts, and, if applicable, remote document store hosts, upgrade to Calendar Server 7 Update 3 by running `commpkg upgrade` and selecting Calendar Server 7u3.
4. If you are changing to `davUniqueId`, run the `populate-davuniqueid` script.

Running comm_dssetup

Before you can upgrade Calendar Server 7 Update 2 to Calendar Server 7 Update 3, you need to run the `comm_dssetup.pl` script (version 6.4) on each Directory Server in your deployment. This version of `comm_dssetup.pl` applies new schema elements that are required for Calendar Server 7 Update 3. For more information on new schema in Calendar Server 7 Update 3, see New Schema Objects.

To run `comm_dssetup.pl`:

1. Get the `comm_dssetup.pl` script onto each Directory Server host.
   For example, some ways to do so include the following:
   a. Copy the Communications Suite 7 Update 4 distribution to each Directory Server host, run `commpkg install` (or `commpkg upgrade` if `comm_dssetup.pl` exists already on the host), and select only Comms DSsetup 6.4.
   b. On a single host that contains the Communications 7.3 distribution, run `commpkg install` (or `commpkg upgrade` if `comm_dssetup.pl` exists already on the host), select only Comms DSsetup 6.4, then copy the `comm_dssetup.pl` script to each Directory Server host.
2. On each Directory Server host, run the `comm_dssetup.pl` script to apply the schema updates.
   For example:

   ```
   /opt/sun/comms/dssetup/sbin/comm_dssetup.pl
   ```

3. Respond to the prompts.
   For more information, see Communications Suite Directory Server Setup Script (comm_dssetup.pl).
4. Continue with the next section, Upgrading to Calendar Server 7 Update 3.

Upgrading to Calendar Server 7 Update 3

If you initially deployed Calendar Server 7 Update 2 to use the `nsUniqueId` attribute as your unique identifier, you should switch to using the `davUniqueId` attribute, new in Calendar Server 7 Update 3. For more information on the problems with using `nsUniqueId`, see Changing User uuid. For information on the `davUniqueId` attribute, see davUniqueId in the Communications Suite Schema Reference Guide.

Topics in this section:

- To Upgrade to Calendar Server Update 3 for Deployments that Are Using nsUniqueId as the Unique Identifier with 7 Update 2
- To Upgrade to Calendar Server Update 3 for Deployments that Are Not Using nsUniqueId as the Unique Identifier with 7 Update 2

To Upgrade to Calendar Server Update 3 for Deployments that Are Using nsUniqueId as the Unique Identifier with 7 Update 2

For an upgrade from Calendar Server 7 Update 2 to Update 3, and to use the `davUniqueId` attribute:

1. Get the Communications Suite 7 Update 4 distribution onto each Calendar Server 7 Update 2 front-end host.
2. Run `commpkg upgrade` and select Calendar Server 7u3.
   See commpkg upgrade Usage for more information.
3. Run the `init-config` command to enter the current deployment configuration values.
4. Run the `merge-config` command to merge in any other changes that were done to the configuration after the initial configuration, and that are not controlled by the `init-config` program.

For example, you might have customized configuration parameters in the `davserver.properties` file.

5. (Optional) Resolve any problems.
   a. If the upgrade detects a problem during the pre-upgrade phase, correct the problem and re-run the upgrade.
   b. If the upgrade detects a problem during the post-upgrade phase with merging configuration files, reconcile the merged files.
6. Run the `populate-davuniqueid` tool to populate, in LDAP, calendar users, groups, and resources with the `davUniqueId` attribute.
   You can run the tool interactively or with supplied parameters. For more information, see populate-davuniqueid Usage. Here is a sample `populate-davuniqueid` session:

```
# /opt/sun/comms/davserver/sbin/populate-davuniqueid
Directory host: ds.example.com
Directory user bind DN: admin
Directory user bind password:
Directory search base: o=isp
Output to file: popdavunique-output
Please check the following information
Directory host: ds.example.com
Directory port: 389
Directory user bind DN: admin
Directory user bind password: as specified
Directory search base: o=isp
Directory search filter:
(|(objectclass=icscalendaruser)(objectclass=icscalendarresource))
Output to: popdavunique-output
Add daventity objectclass: no
Load output LDIF automatically: no
Do you want to continue (y/n)?:
```

7. Use the `davadmin` command to modify the `davcore.uriinfo.permanentuniqueid` configuration parameter to `davUniqueId`.
   You need to do this, even though you set `davUniqueId` when running the Calendar Server configurator, because the `merge-config` command resets this. For example:

```
/opt/sun/comms/davserver/sbin/davadmin config modify -u admin -o
davcore.uriinfo.permanentuniqueid -v davuniqueid
```

8. Use the `davadmin` command to both obtain the value of and modify the `davcore.uriinfo.subjectattributes` configuration parameter to add `davUniqueId` to its list of attributes value.
   For example:

```
/opt/sun/comms/davserver/sbin/davadmin config list -u admin -o
davcore.uriinfo.subjectattributes
davcore.uriinfo.subjectattributes: cn davstore icsstatus mail
mailalternateaddress nsuniqueid owner preferredlanguage uid
objectclass ismemberof uniquemember memberurl mgrprfc822mailmember
kind

/opt/sun/comms/davserver/sbin/davadmin config modify -u admin -o
davcore.uriinfo.subjectattributes -v "cn davstore icsstatus mail
mailalternateaddress davuniqueid owner preferredlanguage uid
objectclass ismemberof uniquemember memberurl mgrprfc822mailmember
kind"
```

9. Restart GlassFish Server.
   For example:

```
cd /opt/SUNWappserver/bin
./asadmin stop-domain domain1
./asadmin start-domain domain1
```

10. If you have remote document stores, continue with Upgrading the Calendar Server Document Store.

To Upgrade to Calendar Server Update 3 for Deployments that Are Not Using nsUniqueId as the Unique Identifier with 7 Update 2

For an upgrade from Calendar Server 7 Update 2 to Update 3, without any change to the current unique identifier LDAP attribute:

1. Get the Communications Suite 7 Update 4 distribution onto each Calendar Server 7 Update 2 front-end host.
2. Run `commpkg upgrade` and select Calendar Server 7u3.
   See commpkg upgrade Usage for more information.
3. Run the `init-config` command to enter the current deployment configuration values.
4. Run the `merge-config` command to merge in any other changes that were done to the configuration after the initial configuration, and that are not controlled by the `init-config` program.
   For example, you might have customized configuration parameters in the `davserver.properties` file.
5. (Optional) Resolve any problems.
   a. If the upgrade detects a problem during the pre-upgrade phase, correct the problem and re-run the upgrade.
   b. If the upgrade detects a problem during the post-upgrade phase with merging configuration files, reconcile the merged files.
6. If you have remote document stores, continue with Upgrading the Calendar Server Document Store.

Upgrading the Calendar Server Document Store

On each remote document store host, perform the following steps:

1. Get the Communications Suite 7 Update 4 distribution onto each Calendar Server 7 Update 2 remote document store host.
2. Stop the document store.

```
cd <cal-svr-base>/sbin
./stop-as
```

3. Run `commpkg upgrade` and select Calendar Server 7u3.
   See commpkg upgrade Usage for more information.
4. Start the document store.

```
cd <cal-svr-base>/sbin
./start-as
```

5. Set the remote document store passwords.
   Starting in Calendar Server 7 Update 3, the remote document store requires password authentication. See To Configure Remote Document Store Authentication for more information.

populate-davuniqueid Usage

populate-davuniqueid Usage

> The `populate-davuniqueid` command is available starting in **Calendar Server 7 Update 3**.

Topics:

- populate-davunique Overview
- Syntax
- Options
- Examples

populate-davunique Overview

The `populate-davuniqueid` tool is for use by deployments that initially selected to use the `nsUniqueId` attribute as the unique identifier. The `populate-davuniqueid` tool populates calendar users and resources in LDAP with the `davUniqueId` schema element, introduced in Calendar Server 7 Update 3. It copies the value of `nsUniqueId` to `davUniqueId`, thus preserving references in the calendar database. The `davUniqueId` attribute is subsequently used as the value for the Calendar Server `davcore.uriinfo.permanentuniqueid` configuration parameter. Calendar Server requires a unique identifier in the form of an LDAP attribute whose value is used to map each calendar entry (in the LDAP Directory Server) to a unique account in the calendar database (the MySQL Server or Oracle Database that stores Calendar Server data). The unique identifier links various entries from different database tables for a user and resource. You must use a unique identifier, and one that does not change, for user and resource entries stored in LDAP.

> **Note**
> The problem with using the `nsUniqueId` attribute for this purpose is that if the user or resource LDAP entry is deleted and re-created in LDAP, the new entry has a different `nsUniqueId` value. For more information on the problems with using `nsUniqueId`, see Changing User uuid.

Requirements: Must be root user.

Location: *cal-svr-base*`/sbin`

Syntax

```
populate-davuniqueid [ -h HOST ] [ -p PORT ] [ -D USER ] [ -w <password> | -
j <pwdfile> ] [-b BASE ] [ -f FILTER ] [ -o OUTFILE ] [-O] [ -x ] [ -v ] [ -?
]
```

Options

The options for this command are:

populate-davuniqueid Options

Option	Description	Default
`-h` *HOST*	Specifies the Directory Server host	NA
`-p` *PORT*	Specifies the Directory Server port	389
`-D` *USER*	Specifies the Directory Server bind user	NA
[`-w` *password* | `-j` *pwdfile*] (The `-j` option is preferred, as the password is not specified on the command line.)	Specifies the Directory Server bind password	NA
`-b` *BASE*	Specifies the Directory base to carry out the search	NA
`-f` *FILTER*	Specifies the LDAP search filter	"(|(objectclass=icscalendaruser)(objectclass=icscalendarresource))"}}
`-o` *OUTFILE*	Specifies the output file name	NA
`-O`	Specifies to add the `davEntity` object class to the LDAP entry	NA
`-x`	Automatically runs the `ldapmodify` command on the output file	NA
`-v`	Specifies verbose debugging	NA
`-?`	Prints the usage help text	NA

When running the `populate-davuniqueid` tool, you are prompted to type all options with the exception of *PORT* and *FILTER*, if you do not specify them. If not specified, *PORT* has a default value of 389 and *FILTER* has the value `"(|(objectclass=icscalendaruser)(objectclass=icscalendarresource))"`. All LDAP entries matching *FILTER*, starting from the search *BASE*, that have a missing `davUniqueId` field are output to the *OUTFILE* file in the form of an LDAP modification operation. You can then examine the *OUTFILE* content before running it through an `ldapmodify` command, Alternately, you can do so automatically by using the `-x` option.

Examples

These examples show different scenarios for running the `populate-davuniqueid` command.

To Add davUniqueId to All Calendar Server 7 Users

1. Run the `populate-davuniqueid` command and output the changes to a file, `sample.txt`.

```
# /opt/sun/comms/davserver/sbin/populate-davuniqueid -h
host1.us.example.com -D "cn=Directory Manager" -b o=isp -o
sample.txt
Directory user bind password:

Please check the following information
Directory host: host1.us.example.com
Directory port: 389
Directory user bind DN: cn=Directory Manager
Directory user bind password: as specified
Directory search base: o=isp
Directory search filter:
(|(objectclass=icscalendaruser)(objectclass=icscalendarresource))
Output to: sample.txt
Add daventity objectclass: no
Load output LDIF automatically: no
Do you want to continue (y/n)?: y
sample.txt is created. Please examine content and run ldapmodify on
it.
bash-3.00#
```

2. Examine the `sample.txt` file. It should resemble the following:

```
dn: uid=calmaster63, ou=People, o=us.example.com,o=isp
changetype: modify
add: davuniqueid
davuniqueid: e5cb6c08-dd5811e1-80f5ce3b-d63ea23a
```

3. As long as there is no error, run the `ldapmodify` command to add `davUniqueId` to all Calendar Server 7 users, or run the following command:

```
/opt/sun/comms/davserver/sbin/populate-davuniqueid -h
host1.us.example.com -D "cn=Directory Manager" -b o=isp -o
sample.txt -x
Directory user bind password:
```

To Add the daventity Object Class and davuniqueid to All Calendar Server 6 Users

1. Run the `populate-davuniqueid` command and output the changes to a file, `test.txt`.

```
/opt/sun/comms/davserver/sbin/populate-davuniqueid -h
host2.us.example.com -D "cn=Directory Manager" -b o=isp -o test.txt
-O
Directory user bind password:

Please check the following information
Directory host: host2.us.example.com
Directory port: 389
Directory user bind DN: cn=Directory Manager
Directory user bind password: as specified
Directory search base: o=isp
Directory search filter:
(|(objectclass=icscalendaruser)(objectclass=icscalendarresource))
Output to: test.txt
Add daventity objectclass: yes
Load output LDIF automatically: no

Do you want to continue (y/n)?: y
test.txt is created. Please examine content and run ldapmodify on
it.
bash-3.00#
```

2. Examine the `test.txt` file. It should resemble the following:

```
dn: uid=user3,ou=People,o=domain3.com,o=isp
changetype: modify
add: objectclass
objectclass: daventity
-
add: davuniqueid
davuniqueid: ff22a401-e52011e1-80f5ce3b-d63ea23a
```

3. As long as there is no error, run the `ldapmodify` command to add `davEntity` and `davUniqueId` to all Calendar Server 6 users, or run the following command:

```
/opt/sun/comms/davserver/sbin/populate-davuniqueid -h
host2.us.example.com -D "cn=Directory Manager" -b o=isp -o test.txt
-O -x
Directory user bind password:
```

Upgrading Communications Suite in Silent Mode

Upgrading Communications Suite in Silent Mode

When you run the installer to upgrade in *silent mode*, you are running a non-interactive session. The upgrade inputs are taken from the following sources:

- A silent installation file (also known as a state file)
- Command-line arguments
- Default settings

You can use silent mode to upgrade multiple instances of the same software component and configuration without having to manually run an interactive upgrade for each instance.

Topics:

- To Run a Communications Suite Silent Upgrade
- About Upgrading Shared Components

To Run a Communications Suite Silent Upgrade

1. Obtain the state file by one of the following two means.
   - Run an interactive upgrade session and use the state file that is created in the `/var/opt/CommsInstaller/logs/` directory. The state file name is similar to `silent_CommsInstaller_20070501135358`. A state file is automatically created for every run of the installation.
   - Create a silent state file without actually installing the software during the interactive session by using the `--dry-run` option, then modifying the state file.
     For example:

     ```
     # commpkg upgrade --dry-run
     ```

2. Copy the state file to each host and edit the file as needed.
   See Silent Mode File Format.
3. Run the silent installation on each host.
   For example:

   ```
   # commpkg upgrade --silent <Input File>
   ```

   where *Input File* is the path and name of the silent state file, for example `/var/opt/CommsInstaller/logs/silent_CommsInstaller_20070501135358`.
   For details about the `--silent` option, see the silent installation usage in commpkg upgrade usage.

   > **Note**
   > Command-line arguments override the values and arguments in the state file.

   > **Note**
   > If you specify *None* for the silent file, then defaults are used for the property values.

About Upgrading Shared Components

By default, shared components are not upgraded when you run a silent upgrade. The option to upgrade shared components in the silent state file is automatically disabled. That is, the option is set to `UPGRADESC=No`. This is true *even* if you explicitly asked to upgrade shared components when you ran the interactive upgrade that generated the silent state file. That is, you ran `commpkg upgrade --upgradeSC y`.

Disabling upgrading shared components in the silent state file is done because the other hosts on which you are propagating the upgrade might have different shared components installed, or different versions of the shared components. Therefore, it is safer to not upgrade the shared components by default.

You can upgrade shared components when you run a silent upgrade by performing either of the following actions:

- Use the `--upgradeSC y` option when you run the silent upgrade. (The command-line argument overrides the argument in the state file.)
- Edit the `UPGRADESC=No` option in the silent state file to: `UPGRADESC=Yes`.

Silent Mode File Format

The silent mode file (also known as a state file) is formatted like a property file: comment lines begin with a number sign (#) and properties are key/value pairs separated by an equals (=) sign. You can change the following parameters:

Silent Mode File Parameters

Parameter	Description	Example
VERB	Indicates which function to perform. You can add CLI arguments described in commpkg usage, however the `---dry-run` argument cannot be added to the `install` function in the state file.	`VERB=upgrade`
`ALTDISTROPATH`	Indicates an alternate distro path if `--distro` is not specified.	`ALTDISTROPATH=SunOS5.10_i86pc_DBG.OBJ/releas`
`PKGOVERWRITE`	Forces the overwriting of the existing installation packages even if patches are available to do the upgrade. See the `--pkgOverwrite` option to `commpkg upgrade`	`PKGOVERWRITE=YES`

INSTALLROOT	Specifies installation root. See the `--installroot` option to `commpkg upgrade`	INSTALLROOT=/opt/sun/comms
ALTROOT	Specifies an alternate root.	ALTROOT=yes
EXCLUDEOS	Specifies to not upgrade operating system patches. See the `--excludeOS` option to `commpkg upgrade`	EXCLUDEOS=YES
EXCLUDESC	Specifies to exclude shared component patches. See the `--excludeSC` option to `commpkg upgrade`	EXCLUDESC=no
COMPONENTS	Lists the components you want to upgrade. See the `--components` option to `commpkg upgrade`	COMPONENTS=MS64 to specify 64-bit Messaging Server
UPGRADESC	Indicates whether all shared components should or should not be upgraded without prompting. See the `--upgradeSC` option to `commpkg upgrade`	UPGRADESC=no
USEPKGUPGRADE	Indicate whether to perform upgrade by using `pkgrm` and `pkgadd` commands. See the `--usePkgUpgrade` option to `commpkg upgrade`.	USEPKGUPGRADE=no
COMPONENT_VERSIONS	unused	COMPONENT_VERSIONS= 7.4 6.4 7.2 8.3 2.0 1.3 7.0

To Display Product Mnemonic Names

- To display a complete list of the mnemonic product names (such as MS, MS64, CS) to use with the `COMPONENTS` property, run the `commpkg info --listPackages` command.
  This command displays the mnemonics for each product. See commpkg info Sample Session for example output.

Upgrading Indexing and Search Service

Upgrading Indexing and Search Service for Oracle Communications Unified Communications Suite Version 1 Update 4

Topics:

- Running commpkg upgrade
- Getting to Indexing and Search Service 1 Update 4 Requires Running postpatch_restart.sh
- Rebootstrapping Accounts
- Reverting an Upgrade

Running commpkg upgrade

To upgrade to Indexing and Search Service 1 Update 4 from a previous version, run the `commpkg upgrade` command on each host in your deployment. Upgrade your ISS back-end hosts first and then upgrade your front-end hosts. For more information, see commpkg upgrade Usage.

Getting to Indexing and Search Service 1 Update 4 Requires Running postpatch_restart.sh

The final step in this process is to manually run *iss-svr-base*`/bin/postpatch_restart.sh` *iss-svr-base* after completing the upgrade. Because the postpatch process might be interactive, you must manually run `postpatch_restart.sh`.
For example:

```
# cd /opt/sun/comms/jiss/bin
# ./postpatch_restart.sh /opt/sun/comms/jiss
```

For more information, see postpatch_restart.sh.

(Optional) If you also upgraded from Java 6 to 7, you need to rebootstrap accounts. Going forward, Java 7 (at least Java 7 Update 11) is recommended, as Java 6 is entering end of life. If ISS indexes were generated while on Java 6, once you upgrade to Java 7, you should regenerate the indexes. See Rebootstrapping Accounts for more information.

To make use of features in Indexing and Search Service 1 Update 4, such as periodic auto-sync and autobootstrapping, see Indexing and Search Service Post Configuration.

Rebootstrapping Accounts

When updating from a version earlier than Indexing and Search Service 1 Update 3, after the upgrade, you should rebootstrap all user accounts. This step is not necesssary when updating from Indexing and Search Service 1 Update 3.

Here is one possible way to rebootstrap your accounts:

1. Use the Messaging Server `imquotacheck` command to get a list of all accounts on the system. For example:

```
cd /opt/sun/comms/messaging64/bin
./imquotacheck -a > quotafile
```

2. Delete all information in the redirected `quotafile` except the user IDs. Make sure that there is a single user ID on each line of the file.
3. Get a sense of the size of the users by running the following commands.
   - How many users?

     ```
     wc quotafile
     ```

   - Largest users by size, distribution of account sizes?

     ```
     ./imquotacheck | sort -k 3,3rn | less
     ```

   - Total mailbox size in Kbytes?

     ```
     ./mboxutil -l | awk '{ sum += $2} END {print sum}'
     ```

     You might want to save a copy of the `imquotacheck` and `mboxutil -l` output to ISS for later reference.

4. On ISS, remove the existing index by using the `/opt/sun/comms/jiss/examples/removeindex` command.
5. Run `/opt/sun/comms/jiss/examples/createuserlist < quotafile` to create users.
6. Re-initialize the index by using the `/opt/sun/comms/jiss/examples/initializeindex` command.
7. Bootstrap all users in the `quotafile` in parallel by using the `/opt/sun/comms/jiss/examples/parallelbootstrap` command.
   By default, the command bootstraps 16 users in parallel. Edit the file if you need to change this.

Reverting an Upgrade

The indexes for ISS 1 Update 4 are not backward compatible with previous versions of ISS. When downgrading from ISS 1 Update 4 to an earlier release, you must regenerate the index information. If you need to downgrade to ISS 1 Update 3 from ISS 1 Update 4, you only need to regenerate some of the index directories.

To downgrade to ISS 1 Update 3 from ISS 1 Update 4:

1. Stop all ISS services.
   As root, run the following command:

   ```
   <iss-base>/bin/svc_control.sh stop
   ```

2. Run the *iss-base*`/examples/findbigaccounts.sh` script to get a list of accounts that have been modified to use the new folder flags implementation in ISS 1 Update 4.
   The index information format for these accounts is not backward compatible with previous versions.
3. Reinstall ISS 1 Update 3.
   See Indexing and Search Service 1 Update 3 Installation Scenario for instructions.
4. Delete and rebootstrap each account from the output in step 2.

If you downgrade to any version prior to ISS 1 Update 3 from ISS 1 Update 4, you need to regenerate

the index information for all accounts. You can use the *iss-base*`/examples/removeindex` script to remove the entire index so that the index can be recreated after you have completed the downgrade from ISS 1 Update 4.

Upgrading Instant Messaging in an HA Environment

Upgrading to Oracle Instant Messaging Server 9 in an HA (High Availability) Environment

Upgrading Instant Messaging Server in an HA environment consists of upgrading the Instant Messaging Server software followed by the Instant Messaging Server Sun Cluster Agent.

Topics:

- To Upgrade to Instant Messaging Server 9 in an HA Environment
- To Upgrade to Instant Messaging Server 9 Sun Cluster Agent (`IM_SCHA`)

To Upgrade to Instant Messaging Server 9 in an HA Environment

1. Disable the Instant Messaging server resource.

```
# scswitch -n -j im-server-resource
```

2. Make sure that the non-active node does not have access to the configuration directory.
3. Invoke the `commpkg upgrade` command on all cluster nodes.
4. Copy the Instant Messaging 9 configuration file `iim.conf.xml` to the `iim.conf` file with the same permissions.
   Also copy the `iim.conf.xml` file to `iim.conf` after any future configuration changes as cluster uses the `iim.conf` file.
5. To use the new 'GatewayConnector' service in HA, update this service configuration with the virtual host name or IP address and port number as follows:

```
<im-base-dir>/imconfutil --config <config_dir>
iim_gwc.hostport=<virtual host-name or ip:port>
```

   For example:

```
# /opt/sun/comms/sbin/imconfutil --config /DATA1/default/config
iim_gwc.hostport=192.10.12.11:22222
```

6. Enable the Instant Messaging server resource.

```
# scswitch -e -j im-server-resource
```

To Upgrade to Instant Messaging Server 9 Sun Cluster Agent (`IM_SCHA`)

Invoke the `commpkg upgrade` command on all nodes on the cluster. If cluster node is a non-global zone, invoke `commpkg upgrade` in global zone as well as in non-global zones.

Upgrading Convergence

Upgrading to Convergence Version 2

This information describes how to upgrade to Convergence 2 Patch 6.

Topics:

- Overview of Upgrading Convergence
- Upgrading Convergence

Overview of Upgrading Convergence

Upgrade to Convergence 2 Patch 6 by using the Communication Suite installer's `commpkg upgrade` command, which follows one of the following upgrade scenarios:

1. The `commpkg upgrade` command invokes the `patchadd` command to upgrade Convergence 2.x to Convergence 2 Patch 6. The Communications Suite installer upgrades from Convergence 2.x to Convergence 2 Patch 6 by installing the required patches.
2. The `commpkg upgrade` command upgrades Convergence 1.x to Convergence 2.x with an in-place package replacement. This is an irreversible process.

After upgrading, apply the latest Convergence patch. See Convergence Patches by Release for patch information.

For operating system and supported platform details, see this list of operating system and platform requirements.

For details of the requirements for product version compatibility in upgrading to Convergence 2 Patch 6, see Product Version Compatibility Requirements.

Upgrading Convergence

Before you begin, ensure that the following software is running:

- GlassFish Server domain to which Convergence is deployed.
- All services configured for Convergence must be running. This must include Directory Server and may include Messaging Server, Calendar Server, and Instant Messaging.

If this software is not running, the upgrade fails to complete the installation and deployment of the Convergence 2 Patch 6 package.

To Upgrade to Convergence 2 Patch 6

1. Log in to the machine on which you have installed Convergence.
2. Unzip the Communications Suite installer zip file.
3. Use the Communications Suite installer to upgrade Convergence.

   ```
   ./commpkg upgrade
   ```

   The command-line prompt displays the welcome message followed by the copyright information and license.

4. Type `yes` to accept the license agreement.
   The Communications Suite installer detects the installed components on the server and lists all the components that can be upgraded.
5. Select the number corresponding to Convergence and press Return.

After upgrading, you must restart the GlassFish Server.

> **Note**
> If you run the Convergence initial configuration program `init-config` when you installed Convergence, do not rerun the `init-config` again after you upgrade to Convergence 2 Patch 6.

Upgrading to Messaging Server in an HA Environment

Upgrading to Oracle Communications Messaging Server 7 Update 5 in an HA (High Availability) Environment

Upgrading Messaging Server in an HA environment consists of upgrading the Messaging Server software then upgrading the Messaging Server Sun Cluster Agent.

Topics:

- Upgrading to Messaging Server 7 Update 5 in an HA Environment
- Upgrading to the Messaging Server 7 Sun Cluster Agent (MS_SCHA)

Note
After configuring Messaging Server 7 Update 5 for HA or upgrading to Messaging Server 7 Update 5 in HA, if you are using a compiled configuration, you must recompile the configuration by issuing the command:

```
<msg-svr-base>/sbin imsimta cnbuild
```

Otherwise, the Messaging Server fails to start in the HA environment.

Upgrading to Messaging Server 7 Update 5 in an HA Environment

Upgrade strategies, each of which require different procedures, include the following:

- Coexistent upgrade: This is similar to a fresh HA installation. See Configuring Messaging Server for High Availability for more information
- Side-by-side upgrade
- In-place HA upgrade

To Do a Side-by-side Upgrade to Messaging Server 7 Update 5 in an HA Environment

1. Go to the resource group online node.
   a. Disable Messaging server resource.

      ```
      # scswitch -n -j <msg_svr_resource>
      ```

   b. Upgrade Messaging Server by using the side-by-side strategy (see this discussion). Perform this step only on the Messaging Server resource group online node. Do not start Messaging Server yet.
   c. Run the `ha_ip_config` command on the Messaging Server resource group online node.

      ```
      # <msg_svr_base>/sbin/ha_ip_config
      ```

      This command is needed only if the currently installed Messaging Server is prior to version 7.0.

2. Switch over to other node:

```
# scswitch -z -g <msg_svr_resource_group> -h <node-name>
```

3. Run the `useconfig` command.
   This is needed if you are upgrading Messaging Server from 32-bit to 64-bit, to update the trusted library path for 64-bit applications to include Messaging Server `/bin/crle -s -64` *`new_msg_svr_base`*`/lib'`).

```
# <msg_svr_base>/bin/useconfig <msg_svr_base>/config
```

4. Change `IMS_serverroot` path for Messaging Server resource if new Messaging Server base directory is different from old installation.

```
# scrgadm -cj <msg_svr_resource> -x
IMS_serverroot=<new_msg_svr_base>
```

5. If Messaging Server Sun Cluster agent (`MS_SCHA`) is old (not from Communications Suite 6 or later), then it does not work with upgraded Messaging Server and you need to perform the `MS_SCHA` upgrade procedure.
6. Enable Messaging Server resource.

```
# scswitch -e -j <msg_svr_resource>
```

To Perform an In-place Upgrade to Messaging Server 7 Update 5 in an HA Environment

An in-place upgrade is done by using the `commpkg upgrade` command.

1. Disable Messaging Server resource:

```
# scswitch -n -j <msg_svr_resource>
```

2. Run the `commpkg upgrade` command on all nodes of the cluster.
3. Run the `ha_ip_config` command on the Messaging Server resource group online node.

```
# <msg_svr_base>/sbin/ha_ip_config
```

   This command is needed only if the currently installed Messaging Server is prior to version 7.0.

4. Enable Messaging Server resource:

```
# scswitch -e -j <msg_svr_resource>
```

Upgrading to the Messaging Server 7 Sun Cluster Agent (MS_SCHA)

This section provides instructions for the Sun Cluster Agent upgrade. It consists of the following sections:

- To Upgrade to the Messaging Server 7 Sun Cluster Agent (MS_SCHA)
- To Upgrade to the Messaging Server 7 Sun Cluster Agent (MS_SCHA) if Cluster Nodes Include Non-Global Zones
- To Upgrade to the Messaging Server 7 Sun Cluster Agent (MS_SCHA) in a Two-node Symmetric Sun Cluster HA Environment

To Upgrade to the Messaging Server 7 Sun Cluster Agent (MS_SCHA)

1. Run `commpkg upgrade` on all nodes on the cluster.
   Messaging Server should be upgraded to 7 Update 5 before upgrading Messaging Server Sun Cluster Agent.
2. Enable Messaging Server resource:

```
# scswitch -e -j <msg_svr_resource>
```

To Upgrade to the Messaging Server 7 Sun Cluster Agent (MS_SCHA) if Cluster Nodes Include Non-Global Zones

If a machine that has non-global zones participates in a cluster, all zones on that machine must be in the cluster. The Sun Cluster software and HA agents should be installed in all zones, and `MS_SCHA` should be installed in the global zone and automatically propagated into all non-global zones (that is, don't use the `-G` switch to `pkgadd`). The Communications Suite Installer treats HA agents like `MS_SCHA` as a product that should be propagated to all non-global zones when it is installed in the global zone. In the rare case where you have managed to install the pre-version 7 `MS_SCHA` agent in the non-global zones, then an upgrade consists of first uninstalling the older agent from all non-global zones, followed by installing the new 7 `MS_SCHA` agent in the global zone.

To check if the older pre-version 7 agent was installed in the global zone and automatically propagated to all non-global zones, verify that `SUNWscims` is listed in `/var/sadm/install/gz-only-packages`. If it is, then run `commpkg upgrade` in the global zone. If it is not listed, then `SUNWscims` is either not installed, or is installed so that it is propagated to non-global zones. If this is this case, use the following procedure:

1. Run `commpkg uninstall` and uninstall `MS_SCHA` in every non-global zone (do not uninstall it in the global zone).
2. In the global zone, run `commpkg upgrade` and upgrade `MS_SCHA`.

To Upgrade to the Messaging Server 7 Sun Cluster Agent (MS_SCHA) in a Two-node Symmetric Sun Cluster HA Environment

1. Upgrade Messaging Server to Version 7 Update 5 before upgrading the Messaging Server Sun Cluster Agent.
2. Make sure that the Messaging Server installation location is accessible from both nodes.
   This is required because a resource type upgrade command validates accessibility. For the first instance in a Symmetric Cluster setup, Messaging Server installation is done on first node only (on a shared storage mount point). For the second instance, Messaging Server installation is done on second node only.
3. Follow the steps mentioned in To Upgrade to the Messaging Server 7 Sun Cluster Agent (MS_SCHA).

> **Note**
> If you prefer to upgrade Sun Cluster Agent (MS_SCHA) for only one instance, then follow the prior steps and correct the resource type version using Sun Cluster commands.

Chapter 5. Installation Scenario - Calendar Server

Installation Scenario - Oracle Communications Calendar Server Version 7 Update 3

Topics:

- Overview of This Scenario
- Assumptions
- Which Software Components and Downloads Do You Need?
- Installing and Configuring a Calendar Server 7 Update 3 Deployment
- Configuring Calendar Server 7 Update 3
- Configuring Calendar Server With Multiple Hosts
- Verifying the Calendar Server Configuration
- Configuring the Calendar Server Document Store
- Running Calendar Server 7 Update 3 Post-Installation Tasks
- Troubleshooting Calendar Server

Overview of This Scenario

The following installation information describes how to install and configure Oracle Communications Calendar Server 7 Update 3. It assumes you have already made your architectural and design decisions. For example, it assumes that you know the total number of servers in your deployment, the number of front-end and back-end servers, and so on. If you are still in the planning or evaluating process, see the following documents:

- If you do not have an existing architecture or design, see Calendar Server 7 Deployment Planning .
- For general Communications Suite information, see also Communications Suite Deployment Planning Guide.

> **Note**
> In a Calendar Server 7 deployment, all front-end hosts and remote document store hosts (if applicable) must run the same Calendar Server version. That is, you cannot have a deployment of mixed versions.

Assumptions

This scenario shows how to install Calendar Server 7 Update 3 on a separate host using the following assumptions:

- You are deploying Communications Suite on a single host or Solaris zone, or multiple hosts or Solaris zones.
- A Directory Server host is already installed.
- A Messaging Server host is available for notification mail delivery.

Which Software Components and Downloads Do You Need?

- Communications Suite: Calendar Server

- Back-end database: Either MySQL Server or Oracle Database (see Oracle Database Online Documentation for Oracle Database installation documentation)
- Application server web container for Calendar Server: GlassFish Server
- LDAP server: Directory Server
- SMTP server: Messaging Server

For information on how Calendar Server uses Directory Server, see Calendar Server and Directory Server Integration.

Installing and Configuring a Calendar Server 7 Update 3 Deployment

The tasks to install a Calendar Server 7 Update 3 deployment are as follows:

- To Check Requirements for Calendar Server 7 Update 3
- To Get the Software
- To Install Directory Server
- To Install and Configure Sun GlassFish Enterprise Server 2.1.1
- To Install the Database Back End for Calendar Server
- To Install and Create a MySQL Database Instance for Calendar Server
- To Install and Create an Oracle Database Instance for Calendar Server
- To Install the Calendar Server Software
- To Prepare MySQL Server for Use with Calendar Server
- To Prepare Oracle Database for Use with Calendar Server

Note
If you are installing a Calendar Server 7 Update 3 front end on one host and a Calendar Server 7 Update 3 back end on a separate host, note the following installation differences:

- MySQL Server
  - If you don't have an existing MySQL server to use with Calendar Server 7 Update 3, install one.
  - Configure MySQL Server for Calendar Server 7 Update 3 (`config-mysql`).
  - Configure Calendar Server 7 Update 3 (`init-config`).
- Oracle Database:
  - If you don't have an existing Oracle Database to use with Calendar Server 7 Update 3, install one.
  - Configure Oracle Database for Calendar Server 7 Update 3 (`config-oracle`).
  - Configure Calendar Server 7 Update 3 (`init-config`).

To Check Requirements for Calendar Server 7 Update 3

See Requirements for Calendar Server 7 Update 3.

To Get the Software

1. Go to Get the Software.
   From this site, download Communications Suite 7 Update 4. Also download Sun GlassFish Enterprise Server 2.1.1 for use as the Calendar Server web container. If you need to install a directory service, download Directory Server 11g. If you choose to use Oracle Database 11g2 as the calendar store, you need to download that product as well, though you can use an existing Oracle Database 11g2 installation if you want. If you choose to use MySQL Server as the calendar store, you need to download that product as well.
2. Continue with the next task.

To Install Directory Server

1. If you need to install Directory Server (that is, your site does not currently have Directory Server deployed), see Installation Scenario - Directory Server.
2. When you are done installing Directory Server, continue with the next task.

For more information on how Calendar Server uses Directory Server, see Calendar Server and Directory Server Integration.

To Install and Configure Sun GlassFish Enterprise Server 2.1.1

1. See Installation Scenario - GlassFish Server.
2. When you are done installing GlassFish Server, continue with the next task.

To Install the Database Back End for Calendar Server

You can use either Oracle Database or MySQL Server as the Calendar Server 7 Update 3 back end (calendar store).

Depending on your database choice, go to one of the following two tasks:

- To Install and Create a MySQL Database Instance for Calendar Server
- To Install and Create an Oracle Database Instance for Calendar Server

To Install and Create a MySQL Database Instance for Calendar Server

1. Add the new MySQL package.
   - For example, on Solaris:

     ```
     pkgadd -d mysql-advanced-5.5.8-solaris10-sparc-64bit.pkg
     ```

   - For example, on Linux:

     ```
     rpm --ivv MySQL-client-advanced-5.5.8-1.rhel5
     rpm --ivv MySQL-server-advanced-5.5.8-1.rhel5
     ```

     Linux has two MySQL RPMs, client and server, that need to be added.

     > **Note**
     > Adding the new package on Red Hat Linux might include an automatic `mysql_upgrade`. This is fine in the context of this procedure.

2. If the MySQL configuration file, `/etc/my.cnf` is absent, create it.
   For more information on creating the `/etc/my.cnf` file, see To Prepare MySQL server for Use With Calendar Server.
3. Make sure that the `/etc/my.cnf` file includes the transaction isolation level additional configuration parameter:

   ```
   transaction-isolation = READ-COMMITTED
   ```

4. If you use replication, use the following `ROW` binary logging, instead of the default `STATEMENT` logging. Add the following to the `/etc/my.cnf` file:

```
binlog-format=ROW
```

5. If you use `log_long_format`, it is no longer supported in MySQL 5.5.8. Remove it from the `/etc/my.cnf` file, otherwise MySQL Server won't start.
6. Start MySQL Server.

```
/etc/init.d/mysql start
```

7. Continue with the section, To Install the Calendar Server Software.

To Install and Create an Oracle Database Instance for Calendar Server

> **Note**
> The Oracle Database instance must be a Unicode database, that is, the database character set must be AL32UTF8. Calendar Server does not support non-Unicode database character sets.

You can install an Oracle Database for Calendar Server use in one of the following three ways:

- Install a new database
- Create new database from an existing Oracle installation
- Create the Calendar Server schema on an existing database

Topics in this section:

- To Install a New Database
- To Create a New Database From an Existing Oracle Installation
- To Create the Calendar Server Schema on an Existing Database

To Install a New Database

The following procedure installs and creates the Oracle Database instance by using Oracle Universal Installer.

1. Start `runInstaller` to install the Oracle Database.
2. When the Oracle Universal Installer Welcome window appears click Next.
   The Specify Inventory directory and credentials windows appears.
3. Type the full path of the directory in which to install the Oracle software or accept the default directory.
   On UNIX and Linux installations, make sure that the directory owner, group, and permissions are set correctly.
4. Click OK.
   A dialog appears, for performing the root privileges before installing run the script in the command terminal.
5. Click Continue.
   The Specify File Locations window appears.
6. Type the Oracle home and directory path in which to install the Oracle Software or accept the default, and click Next.
   The Select Installation Type window appears.
7. Select Enterprise Edition or Standard Edition as appropriate for you environment and click Next.
   The Oracle Universal Installer verifies that your system meets minimum system requirements for installing and configuring the chosen products.
8. Correct any reported issues before continuing then click Next.
   The Select Database Configuration windows appears.

9. Select the starter database type of General Purpose, Transaction Processing, or Data Warehouse and click Next.
   The Specify Database Configuration Options windows appears.
10. Type the the Global Database Name and SID in the Database Naming section.
11. Select the 'Unicode standard UTF-8 AL32UTF8' character set in the Database Character Set section and uncheck the 'Create database with sample schema' under the Database Example section, then click Next.
    The Select Database Management Options window appears.
12. Select Use Database Control for Database Management and click Next.
    The Specify Database File Storage Option window appears.
13. Select File System, Automatic Storage Management, or Raw Devices as appropriate, or default File System and click Next.
    The Specify Backup and Recovery Options window appears.
14. Select the appropriate backup storage (the default is Do not enable Automated backups) and click Next.
    The Specify Database Schema Passwords window appears.
15. Select Use different passwords for these accounts and type passwords or select Use the same password or all the accounts and click Next.
    The Summary window appears.
16. Click Install to begin the installation, proceed with the dialog privileges and run `root.sh` as `root`.
17. When the Exit Installation window appears, click Exit then click Yes on the dialog.
18. Continue with the section, To Install the Calendar Server Software.

To Create a New Database From an Existing Oracle Installation

The following procedure creates the Oracle Database instance by using Oracle Database Configuration Assistant (DBCA).

1. Log in to the host where Oracle Database is installed.
2. Launch the DBCA in a terminal window.
   The Welcome window appears
3. Click Next.
   The Operations window appears.
4. Select Create a Database and click Next.
   The Database Templates window appears.
5. Select the default General Purpose under the template and click Next.
   The Database Identification window appears.
6. Type the Global Database Name and SID, and click Next.
   The Management Options window appears.
7. Select the Use Database Control for Database Management and click Next.
   The Database Credentials window appears.
8. Type the password for All Accounts and click Next.
   The Storage Options window appears.
9. Select the File System and click Next.
   The Database File Locations window appears.
10. Select the appropriate location Use Database File Locations from Template or Use Common Location for All Database Files or Use Oracle-Managed Files. Click Next.
    The Flash Recovery Area window appears.
11. Select the appropriate Archiving and click Next.
    The Database Content window appears.
12. Uncheck the sample schema and click Next.
    The Initialization Parameters window appears.
13. Click the Character Sets tab.
14. Select the Use Unicode (AL32UTF8) in the Database Character Set section from the drop-down menu and click Next.
    The Database Storage window appears.
15. Click Next.
    The Creation Options window appears.
16. Select Create Database and click Finish.

17. When the Confirmation window appears, click OK to confirm the creation.
18. After the database is created, the Database Configuration Assistant appears for password management.
19. Click Password Management to change the passwords or Click Exit.
20. Continue with the section, To Install the Calendar Server Software.

To Create the Calendar Server Schema on an Existing Database

The following procedure extends the Calendar Schema on an Oracle Database instance.

1. Verify that the Oracle Database instance is running in AL32UTF8 database character set by running the following query in Oracle SQL*Plus SQL Plus:

```
SELECT * FROM NLS_DATABASE_PARAMETERS WHERE PARAMETER LIKE
'NLS_CHARACTERSET';
```

2. Examine the results.
   a. If the query returns `AL32UTF8`, the database can be used for creating Calendar Server schema. Continue to To Install the Calendar Server Software.
   b. If the query does not return `AL32UTF8`, you must either create a new database in AL32UTF8 or migrate the database character set to AL32UTF8. Database character set migration is in most cases an intricate process that requires careful planning and execution strategies. For details, consult Oracle Database Globalization Support Guide for the character set migration chapter, and documentation for Oracle Database Migration Assistant for Unicode. To create a new database instance, follow the instructions provided in To Create a New Database From an Existing Oracle Installation.

To Install the Calendar Server Software

1. To install the Calendar Server software, run the Communications Suite installer.
   The installer is a single unified utility called `commpkg`. It installs (but does not configure) the Communications Suite products. The `commpkg` utility does all the necessary preparation work before installing the product software on the system. Run the following command:

```
./commpkg install
```

   For more information, see commpkg install Usage.
2. Select Calendar Server (CALDAV) 7u3 and proceed with the installation.
   The default installation directory for Calendar Server 7 Update 3 is `/opt/sun/comms/davserver`.
3. If the installer detects older versions of LDAP tools, you are prompted to change them.
   You must answer **y**, otherwise, during the initial configuration (running `init-config`), the `ldapmodify` command does not run.

```
Shared component LDAPCSDK6 has a different pkg version installed
Description: ldap c sdk 6
Current pkg Version (SUNWldapcsdk-libs): 6.00,REV=2005.11.29.16.11
To be installed pkg version (SUNWldapcsdk-libs):
6.00,REV=2006.12.11.00.35
Product Version: 6.0
Note that changing pkg versions is irreversible
On the other hand, if you do not change it,
some products may not work properly
An alternative is to start over and do a multi-install using
\--altroot

Do you wish to change pkg versions for LDAPCSDK6 [n] : y

Shared component LDAPCSDK6 Tools has a different pkg version
installed
Description: ldap c sdk 6 Tools
Current pkg Version (SUNWldapcsdk-tools): 6.00,REV=2005.11.29.16.11
To be installed pkg version (SUNWldapcsdk-tools):
6.00,REV=2006.12.11.00.35
Product Version: 6.0
Note that changing pkg versions is irreversible
On the other hand, if you do not change it,
some products may not work properly
An alternative is to start over and do a multi-install using
\--altroot

Do you wish to change pkg versions for LDAPCSDK6 Tools [n] : y
```

4. Depending on your database choice for the Calendar Server back end, go to one of the following two tasks:
   - To Prepare MySQL Server for Use with Calendar Server
   - To Prepare Oracle Database for Use with Calendar Server

To Prepare MySQL Server for Use with Calendar Server

You can either perform the following steps in this section or run the `config-mysql` script to prepare a new MySQL installation for use with Calendar Server 7 Update 3. For more information on running the `config-mysql` script, see Running the Oracle Communications Calendar Server config-mysql Script.

> **Note**
> When necessary, the following instructions show where commands differ between Solaris OS, and Red Hat Linux or Oracle Linux.

> **Caution**
> You must use the MySQL connector version packaged with Calendar Server 7 Update 3. Do not use a different version.

1. Create a `mysql` group.
   For example:

```
# /usr/sbin/groupadd mysql
```

2. Create a `mysql` user.
   For example:

```
# /usr/sbin/useradd -g mysql -d / mysql
or
# useradd -M -r -c "MySQL Server" -d /var/lib/mysql -g mysql -s
/bin/bash mysql
```

3. Initialize the database.
   a. Remove the pre-created data, for example:

```
# rm -rf /opt/mysql/mysql/data
# rm -rf /var/lib/mysql
```

   b. Create an initial database, for example:
      - Solaris OS:

```
# /opt/mysql/mysql/scripts/mysql_install_db --user=mysql
--ldata=/var/mysql
```

      - Red Hat Linux or Oracle Linux:

```
# /usr/bin/mysql_install_db --user=mysql
--ldata=/var/lib/mysql
```

      Substitute a different directory for `/var/mysql` if desired.

4. If the MySQL configuration file, `/etc/my.cnf`, is absent, create it with the following content: Change `basedir` and `datadir` if needed. Make sure there are no extra spaces if you cut and paste the path.
   - Solaris OS:

```
[mysqld]
basedir = /opt/mysql/mysql
datadir = /var/mysql
default-storage-engine = InnoDB
character-set-server = utf8
transaction-isolation = READ-COMMITTED
```

   - Red Hat Linux or Oracle Linux:

```
[mysqld]
basedir = /usr
datadir = /var/mysql
default-storage-engine = InnoDB
character-set-server = utf8
transaction-isolation = READ-COMMITTED
```

5. Install startup script.

- Solaris OS:

```
# cp /opt/mysql/mysql/support-files/mysql.server
/etc/init.d/mysql
```

- Red Hat Linux or Oracle Linux:

```
# cp /usr/share/mysql/mysql.server /etc/init.d/mysql
```

6. Start MySQL Server.

```
# /etc/init.d/mysql start
Starting MySQL
. SUCCESS!
```

7. Change the MySQL `root` password.
   - Solaris OS:

```
# /opt/mysql/mysql/bin/mysqladmin -u root password
'<password>'
```

   - Red Hat Linux or Oracle Linux:

```
/usr/bin/mysqladmin -u root password '<password>'
```

   Replace `'password'` with the appropriate password to use for the `root` user.

8. Run the secure MySQL installation (disables remote root access, removes anonymous users, removes test databases, and so on).
   - Solaris OS:

```
# /opt/mysql/mysql/bin/mysql_secure_installation
```

   - Red Hat Linux or Oracle Linux:

```
/usr/bin/mysql_secure_installation
```

9. Create the MySQL user, and caldav and iSchedule databases based on the sample session that follows.
   The following example uses `'caldav'` as the MySQL user name, `'caldav'` as the database name, and `ischedule` as the iSchedule database name. You can use different names.
   Replace `'localhost'` with the calendar server host name if the MySQL server is on a remote host (or use `'%'` for any host). Also replace `'password'` with the appropriate password to use for the `caldav` user.
   See MySQL CREATE USER syntax.

```
# /opt/mysql/mysql/bin/mysql -u root -p
Enter password:
mysql> CREATE DATABASE caldav CHARACTER SET = UTF8;
mysql> CREATE USER 'caldav'@'localhost' IDENTIFIED BY 'password';
mysql> GRANT ALL ON caldav.* TO 'caldav'@'localhost';
mysql> CREATE DATABASE ischedule CHARACTER SET = UTF8;
mysql> GRANT ALL ON ischedule.* TO 'caldav'@'localhost';
mysql> exit
```

Note
The iSchedule database is used to manage external calendar invitations. The established standard for scheduling between two separate calendar servers is still only through iMIP, which sends calendar data over email. Previously, end users had to manually import such invitations and responses that arrived in email into their calendars. Now, starting with Messaging Server 7 Update 5, you can use an iSchedule channel that interprets such mail messages and posts them to the Calendar server directly. Thus, external invitations and responses get into users' calendars without any user intervention. See Using the iSchedule Channel to Handle iMIP Messages for instructions on how to set up Messaging Server. No special setup is required for Calendar server.

10. Configure MySQL to start automatically upon system reboot.
    a. Option 1:

    ```
    # ln /etc/init.d/mysql /etc/rc3.d/S99mysql
    ```

    If you need to add the stop scripts, use the following command:

    ```
    # ln /etc/init.d/mysql /etc/rc0.d/K48mysql
    ```

    b. Option 2:
    Configure MySQL to run with Solaris Management Facility (SMF).
    See the following links for information on how to configure MySQL to run with Solaris Management Facility (SMF):
    - http://blogs.sun.com/ritu/entry/how_to_configure_mysql_to
    - http://www.oracle.com/technetwork/systems/articles/smf-example-jsp-136458.html
    - http://blogs.sun.com/smenon/entry/how_to_configure_mysql_to
11. Continue with the section, Configuring Calendar Server 7 Update 3.

To Prepare Oracle Database for Use with Calendar Server

1. If your Oracle Database resides on a different host from where you installed the Calendar Server software, copy the `config-oracle` script and the `Util.pm` module, located in the *cal-svr-base* `/tools/unsupported/bin` directory, to the Oracle Database host.
2. Make sure that the Oracle environment has been configured after installing the software by running the `/usr/local/bin/oraenv` script (or `corenv` for C Shell) to set up the environment.
3. Run the `config-oracle` script.

```
cd <cal-svr-base>tools/unsupported/bin
./config-oracle -c -i
```

4. Respond to the following prompts.

```
Enter the Oracle SYS user password:
Enter the name of the Calendar db user (caldav):
Enter the password for Calendar db user <user>:
Please enter password again:
Enter the name of the iSchedule db user (ischedule):
Enter the password for iSchedule db user <user_ischedule>:
Please enter password again:
```

The script starts to configure the Oracle Database for use with Calendar Server. For more information on this script, see Running the Oracle Communications Calendar Server config-oracle Script.

> **Note**
> The iSchedule protocol (currently in draft) defines how to handle scheduling between two different calendar servers. In general, the architecture accounts for a global calendar inbox/outbox for invitations. However, because iSchedule is still in draft form and not a standard, general adoption of the protocol has not yet taken place. Calendar Server currently handles invitations through the iMIP protocol (that is, by email). You need to configure the iSchedule database even though it is not currently used. If you remove the iSchedule database configuration, Calendar Server 7 Update 3 does not function correctly without it.

5. When the script is finished, proceed to Configuring Calendar Server 7 Update 3.

Configuring Calendar Server 7 Update 3

After you install the Calendar Server software by using the Communications Suite installer, you must configure Calendar Server to complete the installation. You perform this initial runtime configuration by running the Calendar Server configuration program, `init-config`.

See Calendar Server Initial Configuration.

Configuring Calendar Server With Multiple Hosts

If you have multiple back-end hosts in your Calendar Server deployment, additional steps are necessary. See CommSuite:Configuring Multiple Calendar Server Back-end Hosts.

Verifying the Calendar Server Configuration

To verify the Calendar Server configuration, you configure a client to connect to the server. See Configuring CalDAV Clients for Calendar Server 7.

Configuring the Calendar Server Document Store

The document store is used to store large data in the Calendar Server, such as calendar events and todos with large attachments. CalDAV and Convergence clients are able to retrieve these attachments over HTTP.

See Configuring the Calendar Server Document Store.

Running Calendar Server 7 Update 3 Post-Installation Tasks

After installing and configuring configuring Calendar Server 7 Update 3, make sure that you add the appropriate ACIs for granting permission to users to search the LDAP directory for other users and resources whose calendars they can subscribe to. In addition, you might need to perform other post-installation tasks, such as the following:

- Enabling Connection Validation for Connection Pools
- Configuring Calendar Server for a Secure Deployment
- Changing User uuid
- Adding LDAP Access Control for Calendar Server Features

See Oracle Communications Calendar Server Post Configuration for more information.

Troubleshooting Calendar Server

See Calendar Server 7 Troubleshooting.

For More Information
See Calendar Server 7 Configuration Parameters for configuration parameters and values. See Administering Calendar Server 7 Logging for how to enable logging. See `davadmin config` for how to set configuration parameters by using the `davadmin` command.

Calendar Server Initial Configuration

< Back to Installation Scenario - Calendar Server

Oracle Communications Calendar Server Initial Configuration Version 7 Update 3

After you install the Calendar Server software by using the Communications Suite installer, and install the Calendar Server back-end database, you must configure Calendar Server to complete the installation. You perform this initial runtime configuration by running the Calendar Server configuration program, `init-config`.

1. If you haven't done so already, run the `comm_dssetup.pl` script, which is installed by the Communications Suite installer, to prepare the LDAP Directory Server.
   See Communications Suite Directory Server Setup Script (comm_dssetup.pl).

   > **Note**
   > You can use either LDAP Schema 2 or Schema 1. For information on how Calendar Server uses Directory Server, see Calendar Server and Directory Server Integration .

2. Configure Calendar Server by running the `init-config` command and responding to the prompts.
   Running the `init-config` command completes the Calendar Server software installation.
   a. Log in as or become superuser (`root`).

      > **Note**
      > Log in as "`su -`" when running `init-config` if you installed GlassFish Server with secure mode.

   b. Change to the *cal-svr-base*`/sbin` directory.
      The default installation directory is `/opt/sun/comms/davserver`.
   c. Run the script.
      See Oracle Communications Calendar Server init-config Syntax for more information.

      ```
      ./init-config
      ```

      For example, to run the configuration script in command-line mode, run the following command:

      ```
      ./init-config -nodisplay
      ```

   d. Respond to the prompts that appear on each screen.

      > **Note**
      > For the text of the information contained in the various questions presented by the script, refer to the Configuration Worksheets - Calendar Server.

      i. Screen 1: Select the Directory to Store Configuration and Data Files.
         The default directory is `/var/opt/sun/comms/davserver`.

ii. Screen 2: Select Components to be Configured.
Currently, there is only the Calendar Server component.
iii. Screen 3: Network Connection.
Type your host name then DNS domain name.
iv. Screen 4: Select type of database for back end.
Choose MySQL database or Oracle database.
v. Screen 5: MySQL Server Configuration Details or Oracle Database Server Configuration Details
Type the following information, depending on whether you chose MySQL database or Oracle database:
    - MySQL Server Details
        - Server Host (default: localhost)
        - Server Port (default: 3306)
        - Database User (default: `caldav`)
        - Password (This is the password provided while creating the `caldav` user in the MySQL configuration section)
        - Calendar DB Name (default: `caldav`)
        - iSchedule DB Name (default: `ischedule`)

> **Note**
> The iSchedule protocol (currently in draft) defines how to handle scheduling between two different calendar servers. In general, the architecture accounts for a global calendar inbox/outbox for invitations. However, because iSchedule is still in draft form and not a standard, general adoption of the protocol has not yet taken place. Calendar Server currently handles invitations through the iMIP protocol (that is, by email). You need to configure the iSchedule database even though it is not currently used. If you remove the iSchedule database configuration, Calendar Server 7 Update 3 does not function correctly without it.

A pop-up message appears if you do not have the correct value entered for the MySQL Server:

```
Unable to connect to the MySQL server:
<hostname>:3306. This may result in an incomplete
configuration, if you accept the current MySQL
server host and port details. Select Accept if you
want to continue configuration using the current
values.
```

You can click either the Accept or Choose New button. Then continue with Screen 6 to configure the document store.

- Oracle Database Server Details
    - Server Host (default: localhost)
    - Server Port (default: 1521)
    - Service Name (default: `orcl.`*domain*)
    - Calendar DB User (default: `caldav`)
    - Password (This is the password provided while creating the `caldav` user in the configuration section)
    - iSchedule DB User (default: `ischedule`)
    - Password
    A pop-up message appears if you do not have the correct value entered for the Oracle Database:

```
Unable to connect to the Oracle Database Server:
<hostname>:1521. This may result in an incomplete
configuration, if you accept the current Oracle
Database server host and port details. Select Accept
if you want to continue configuration using the
current values.
```

You can click either the Accept or Choose New button. Then continue with Screen 6 to configure the document store.

vi. Screen 6: Select the Document Store Directory.
The default is `/var/opt/sun/comms/davserver/db`.

vii. Screen 7: Application Server Configuration Details.
Type the following information:
- Install Directory (default: `/opt/SUNWappserver`)
- Domain Directory (default: `/opt/SUNWappserver/domains/domain1`)
- Document Root Directory (default: `/opt/SUNWappserver/domains/domain1/docroot`)
- Server Target Name (default: `server`)
- Virtual Server Identifier (default: `server`)
- Server Instance HTTP Port (default: 8080)

viii. Screen 8: Application Server: Administration Instance Details.
Type the following information:
- Administration Server Port (default: 4848)
- Administrator User ID (default: `admin`)
- Administrator Password
- Secure Administration Server Instance (yes selected by default)
  This setting specifies if the specified administration server port is setup for HTTPS access.

ix. Screen 9: URI Path.
The default URI path is `/`. You should use `/` (root) as the default context URI for deployment. The purpose of this recommendation is for better client compatibility and ease of client configuration. If the base URI is not `/`, users are more likely to have to use their advanced client configuration and type a long cumbersome URL versus just being able to type a host name. Using `/` as the URI path replaces the GlassFish Server's main `index.html`, thus, the GlassFish welcome page is no longer displayed at `http://`*host*`:`*port*.

> **Note**
> For information about using a .well-known URI, such that access to `/` (root) or `/.well-known/caldav/` is redirected to the `/dav/principals/` URI, see Support for CalDAV and CardDAV Autodiscovery.

x. Screen 10: User/Group Directory Server Details.
Type the following information:
- LDAP URL (default: `ldap://`*hostname*`:389`)
- Bind DN (default: `cn=Directory Manager`)
- Bind Password
  A pop-up message appears if you do not have the minimum required version of `comm_dssetup` installed. You must use at least `comm_dssetup` 6.4 version 24.
  A pop-up message also appears if you do not have the correct value entered for the Directory Server:

```
Could not connect to LDAP server. Error code 91.
Connect Error.
```

If this message appears, click Choose New.

> **Note**
> Use the LDAP URL that points to the non-SSL LDAP port. If you need SSL communication between Calendar Server and Directory Server, you can do so as a post-configuration step.

xi. Screen 11: DC Tree Suffix.
The default value results from when you ran `comms_dssetup.pl` against the Directory Server.

xii. Screen 12: LDAP Unique ID attribute.
Type the LDAP attribute whose value serves as the unique identifier for each calendar account in the calendar database. The default is `davUniqueId`.

> **Caution**
> This attribute defines the unique value used as the database identifier for each account. This value is used internally to identify a user in other user's access control entries, subscription entries, and so on. The attribute chosen as the unique ID attribute must be present in all user, group, and resource LDAP entries for the deployment. Do not use the value of `nsUniqueId` in a production deployment. See Changing User uuid for more information on choosing a production-ready value.

xiii. Screen 13: Default Domain Name.
Type the Domain Name for the LDAP users in the deployment.

xiv. Screen 14: Organization DN for the Default Domain
Type the organization DN under which all users and groups that belong to the default domain are located in the LDAP tree.

xv. Screen 15: Notification Mail Server Configuration Details.
Type the following information:
- Mail Server Host Name (default: *hostname*`.`*domainname*)
- Mail Server Port Number (default: 25)

xvi. Screen 16: Calendar Server Administrator.
Type the user name (the default is `calmaster`) and the password.

> **Notes**
> - To enable SSL communication between Calendar Server and Directory Server, you can do so as a post-configuration step. See Oracle Communications Calendar Server Post Configuration for more information.
> - Currently, the default setting for the timezone (`davcore.serverdefaults.tzid`) is configured based on the tzid of the host where Calendar Server is deployed.

3. Click Configure Now to configure Calendar Server.
Up to now the screens have been gathering data needed for the configuration and performing some validity checking. You can go back and redo the configuration information at this point, or start the configuration.
4. The Sequence Completed Screen appears.

This screen provides a running update of all tasks if they have passed or failed. When the message "All Tasks Passed" is displayed, the configuration has finished. Check the specified log files for any error messages.

5. Click Next when the configuration program completes.
   The Configuration Summary Screen appears.
6. Click Details to view the details of the configuration log or Close to exit the configuration program.
7. Restart GlassFish Server, for example:

```
# /opt/SUNWappserver/bin/asadmin stop-domain domain1
Domain domain1 stopped.
# /opt/SUNWappserver/bin/asadmin start-domain domain1
Please enter the admin user name>
Please enter the admin password>
Please enter the master password>
Redirecting output to
/opt/SUNWappserver/domains/domain1/logs/server.log
Domain domain1 started.
```

8. Return to the Installation Scenario - Oracle Communications Calendar Server to verify the installation.

Configuring the Calendar Server Document Store

Configuring the Oracle Communications Calendar Server Document Store Version 7 Update 3

This information explains how to configure either a local or remote document store for Calendar Server 7 Update 3. You set up one document store per configured Calendar Server back end. For conceptual information, For conceptual information, see Document Store and Planning the Document Store.

> **Note**
> Every logically configured database, including the iSchedule database, must have its own unique document store to manage its large data.

Topics:

- To Configure a Local Document Store
- To Configure a Remote Document Store
- To Configure Oracle Database for Both Calendar Data and Large Data
- Remote Document Store Authentication
- To Configure the Document Store for High Availability
- To Migrate the Document Store
- To Troubleshoot the Document Store

To Configure a Local Document Store

1. Create a data directory for the document store.
   The default location is `/var/opt/sun/comms/davserver/db/`. Make sure that the directory has sufficient storage space, and is readable and writable by the document store user only.

   ```
   mkdir </path/to/docstore>
   chmod 700 </path/to/docstore>
   ```

2. Configure Calendar Server to use the document store directory.

   ```
   davadmin config modify -u admin -o store.dav.defaultbackend.dbdir
   -v </path/to/docstore>
   ```

3. Restart Calendar Server by restarting the GlassFish Server instance, for example:

   ```
   /opt/SUNWappserver/bin/asadmin start-domain domain1
   ```

To Configure a Remote Document Store

Prerequisite: Install the Oracle Communications Calendar Server software. See Installation Scenario - Oracle Communications Calendar Server.

1. Create a data directory for the document store.
   The default location is `/var/opt/sun/comms/davserver/db/`. Make sure that the directory is

readable and writable by the document store user only.

2. Run the `configure-as` command, which is located in the document store `sbin` directory.

```
<cal-svr-base>/sbin/configure-as
```

3. Start the document store server.

```
<cal-svr-base>/sbin/start-as
```

To stop the document store, run the following command.

```
<doc-svr-base>/sbin/stop-as
```

4. Change the `store.dav.*.attachstorehost` and `store.dav.*.attachstoreport` parameters on each Calendar Server front-end host to specify the host name and port number of the document store hosts for both the back-end database and iSchedule database.
For example:

```
davadmin config modify -u admin -o
store.dav.defaultbackend.attachstorehost -v ahost.example.com
davadmin config modify -u admin -o
store.dav.defaultbackend.attachstoreport -v 8008
davadmin config modify -u admin -o
store.dav.ischedulebackend.attachstorehost -v ahost.example.com
davadmin config modify -u admin -o
store.dav.ischedulebackend.attachstoreport -v 8008
```

Each back-end database and iSchedule database have their own document stores. See `davadmin` command for more information on how to change the `store.dav.*.attachstorehost` and `store.dav.*.attachstoreport` parameters.

5. Restart Calendar Server by restarting the GlassFish Server instance, for example:

```
/opt/SUNWappserver/bin/asadmin start-domain domain1
```

To Configure Oracle Database for Both Calendar Data and Large Data

In the case of Oracle Database, you can configure it to contain both the calendar data and the data that otherwise would need to be stored in the separate document store. That is, you would use a single "large" Oracle database for both calendar data and the document store. This type of configuration is not possible with a MySQL database, because it has a storage size limit of 64 KB. Oracle Database does not have this limitation.

1. Set the `store.dav.`*`backend-name`*`.attachstorehost` parameter for a value of `dbdocstore`.
For example:

```
davadmin config modify -o store.dav.defaultbackend.attachstorehost
-v dbdocstore
davadmin config modify -o
store.dav.ischedulebackend.attachstorehost -v dbdocstore
```

You need to do this on all back ends, including the iSchedule back-end database.

2. Restart Calendar Server by restarting the GlassFish Server instance, for example:

```
/opt/SUNWappserver/bin/asadmin start-domain domain1
```

Remote Document Store Authentication

> This feature is available starting in **Calendar Server 7 Update 3**.

Starting with Calendar Server 7 Update 1, the optional document store is used to store and retrieve "large data," such as calendar events with many invitees, and todos with large attachments. You must set up one document store per configured Calendar Server back-end database and iSchedule database (new in Calendar Server 7 Update 2). The document store can either be local or remote. For more information, see Planning the Document Store.

The remote document store mechanism provides storage of calendar data on remote hosts. Starting in Calendar Server 7 Update 3, you must configure password authentication of the connection between the the remote document store server (which runs on the remote host where the store is located), and the document store client (which runs on every Calendar Server front end). The password needs to be known by both the document store client and the remote document store server. The password is stored in a password file (called a *wallet*) on each host where it is needed.

To Configure Remote Document Store Authentication

> This feature is available starting in **Calendar Server 7 Update 3**.

Prerequisite: The remote document store must exist and be running. If necessary, see To Configure a Remote Document Store.

1. On the local Calendar Server host, use the `davadmin passfile modify` command to set the document store password.
   For example:

   ```
   cd <cal-svr-base>/sbin
   ./davadmin passfile modify
   Enter Password File password:
   Do you want to add/modify the app server admin user password? [y/n]
   n

   Do you want to add/modify the migration server user password? [y/n]
   n

   Do you want to add/modify the database password? [y/n] n

   Do you want to add/modify the document store password? [y/n] y
   Enter the password:
   Reenter the password:
   ```

   Setting the document store password updates the `store.document.password` configuration parameter.

2. On each remote document store host, use the `configure-as` command to set the password.

For example:

```
cd <cal-svr-base>/sbin
./configure-as
Enter Password File password:
Enter the Document Store password:
Reenter the password:

Please check the values in
/var/opt/sun/comms/davserver/config/ashttpd.properties
are correct before starting the server with start-as
To stop the server, run stop-as
Document Store server is now configured
```

The `configure-as` script runs the `davadmin passfile create -O` command to create the wallet that is used by the remote document store server. The `-O` option instructs the `davadmin` command to set the password locally (on the remote document store host) and that it does not need to contact Calendar Server.

> After setting the initial password, if you use the `davadmin config modify` command to modify the `store.document.password` configuration parameter (instead of rerunning the `davadmin passfile modify` command), the document store password in the "davadmin" wallet may not be up-to-date.

To Configure the Document Store for High Availability

- Use the `store.dav.`*backendid*`.attachstorehost` configuration parameter to specify a comma-separated list of document store hosts. When the current document store host fails, the back end fails over to the next document store host on the list.

A shared file system, or some kind of replication for the data, is required. In addition, you must keep the data on the document stores in sync at all times.

See Calendar Server 7 Command-Line Utilities and Calendar Server 7 Configuration Parameters for more information.

To Migrate the Document Store

If you need to migrate your `store.datadir` to another location, reconfigure the store location in the `ashttpd.properties` file, then manually move your existing documents in the `astore` directory. Also, manually move the files in the `config` and `logs` directories to the new location before restarting the document store server and the front-end Calendar Server. For more information on the `ashttpd.properties` file, see Document Store Server Configuration File.

1. Stop Calendar Server by stopping the GlassFish Server instance, for example:

```
/opt/SUNWappserver/bin/asadmin stop-domain domain1
```

2. If the document store is remote, stop it as well.

```
<doc-svr-base>/sbin/stop-as
```

3. Manually move the existing documents from the old path to the newly configured location.

4. Reconfigure the document store server.
   - Remote store: Reconfigure the `store.datadir` parameter in the `ashttpd.properties` file.
   - Local store: Reconfigure the `store.dav.defaultbackend.dbdir` parameter.
     For more information on these parameters, see Calendar Server 7 Configuration Parameters.
5. If the document store is remote, restart it.

```
<doc-svr-base>/sbin/start-as
```

6. Restart Calendar Server by restarting the GlassFish Server instance, for example:

```
# /opt/SUNWappserver/bin/asadmin start-domain domain1
```

To Troubleshoot the Document Store

- If the Java Runtime Environment is not the minimum version required by the start script, you might need to set your `JAVA_HOME` variable before starting the document server.
- When running the `start-as` script, you might encounter the following error:

```
Error occurred during initialization of VM
Could not reserve enough space for object heap
```

  The server does not have enough memory. Install more memory to the document store server. The attachment store requires 2 Gbytes of memory.

Oracle Communications Calendar Server init-config Syntax

Oracle Communications Calendar Server init-config Syntax Version 7 Update 3

The `init-config` script enables you to perform an initial configuration of your Oracle Communications Calendar Server deployment.

The following table provides the `init-config` options.

init-config Options

Option	Description
`-nodisplay`	Runs configurator in text-only (non-graphical) mode.
`-noconsole`	Does not display non-graphical text. Used with `nodisplay` option for silent configuration.
`-novalidate`	Does not perform text field validation.
`-saveState` *statefile*	Saves state of configurator input.
`-state` *statefile*	Uses the *statefile* for setting input values.
`-debug`	Gathers general debugging information from the configurator.
`-debugMessage`	Outputs debugging information, including errors and warnings.
`-debugWarning`	Outputs warning messages, including errors.
`-debugError`	Outputs error messages, on by default.
`-relaxugcheck`	Bypasses checking for the organization RDN to be the same as the organization tree suffix.

Oracle Communications Calendar Server Post Configuration

Oracle Communications Calendar Server Post Configuration Version 7 Update 3

This information contains procedures that you might need to run after installing and configuring Oracle Communications Calendar Server 7 Update 3.

Topics:

- Enabling Connection Validation for Connection Pools in GlassFish Server
- Configuring Calendar Server for a Secure Deployment
- Changing User uuid
- Adding LDAP Access Control for Calendar Server Features

Enabling Connection Validation for Connection Pools in GlassFish Server

In GlassFish Server, enable Connection Validation for the connection pools (both CalDav back-end and iSchedule pools) so that Calendar Server automatically reconnects to the back-end database if it goes down.

1. Log in to GlassFish Server.
2. Enable Connection Validation for the connection pools (both CalDav back-end and iSchedule pools):
   a. In the Admin Console, choose Resources, then JDBC, then Connection Pools.
   b. Select the pool.
   c. Check the Required box for Connection Validation.
   d. Choose table for the Validation Method.
   e. Type DUAL for Table Name.
   f. Click Save.
   g. Click the Advanced tab.
   h. Type 60 for Validate Atmost Once.
   i. Click Save.
   This configuration then issues the command "select count(*) from DUAL;" on every connection, at most one time every 60 seconds. (If the connection is not being used, it is not checked.)

   > **Note**
   > Use these settings as a starting point and adjust where necessary. For example, if validation is not important, you can turn it off. Additionally, you might want to adjust the "Validate At Most Once" time duration or validate each time a connection is requested (by setting the value to 0). HA deployments might also use different values.

3. Restart GlassFish Server, for example:

```
# /opt/SUNWappserver/bin/asadmin stop-domain domain1
Domain domain1 stopped.
# /opt/SUNWappserver/bin/asadmin start-domain domain1
Please enter the admin user name>
Please enter the admin password>
Please enter the master password>
Redirecting output to
/opt/SUNWappserver/domains/domain1/logs/server.log
Domain domain1 started.
```

Configuring Calendar Server for a Secure Deployment

The high-level steps to configuring Calendar Server for a secure deployment include:

1. Making sure that HTTPS is configured correctly:
    a. Making use of a CA signed certificate
    b. Setting SSL port to default port of 443 to ease client configurations
    c. Changing `fulluriprefix` configuration option
    d. Disabling Elliptic Curve Encryption to workaround a Java 6 issue
2. Disabling HTTP
3. Enabling LDAP SSL

Topics in this section:

- Configuring HTTPS for a Secure Deployment
- Disabling HTTP
- Enabling LDAP SSL in Calendar Server
- Enabling Secure Notification Mail Submission

Configuring HTTPS for a Secure Deployment

This section contains the following subtopics:

- Installing an Official Certificate
- Setting SSL Default Port to 443
- Changing `fulluriprefix`
- Disabling Elliptic Curve Encryption
- Enabling Secure Notification Mail Submission

Installing an Official Certificate

The default installation comes with a self-signed certificate, which is incompatible with production usage. To install an official certificate, see To Configure GlassFish Enterprise Server to Use a CA Signed Certificate for SSL.

Setting SSL Default Port to 443

By default, most clients assume that the server is running on the default SSL port number (443). Thus, you need to set the server port number accordingly, if you did not do so during installation.

To set the default SSL port to 443:

1. List all the http listeners and note the SSL listener (`security-enabled=true`).
   For example, use the `asadmin` command as follows:

```
# ./asadmin get
server.http-service.http-listener.*.security-enabled
server.http-service.http-listener.admin-listener.security-enabled =
true
server.http-service.http-listener.http-listener-1.security-enabled
= false
server.http-service.http-listener.http-listener-2.security-enabled
= true
# ./asadmin get
server.http-service.http-listener.http-listener-2.port
server.http-service.http-listener.http-listener-2.port = 8181
```

2. Set the port number to the correct value.
   For example:

```
# ./asadmin set
server.http-service.http-listener.http-listener-2.port=443
server.http-service.http-listener.http-listener-2.port = 443
```

   This change does not require a server restart.

Changing `fulluriprefix`

The default installation of GlassFish Server enables both both HTTP and HTTPS (using a self-signed cert) on the server instance. During the Calendar Server configuration, you can only choose to specify the HTTP port, which sets the `davcore.uriinfo.fulluriprefix` parameter to `http://`*host*`:`*HTTP-port*. This results in all URLs constructed by Calendar Server, for example those pointing to attachments, to have the `http://` URL. If you are using SSL, the host name part of this prefix should match the host name associated with the certificate.

To change the `fulluriprefix` parameter:

- Run the `davadmin config` command to set the `davcore.uriinfo.fulluriprefix` parameter to the desire HTTPS port, for example:

```
/opt/sun/comms/davserver/sbin/davadmin config -u admin -o
davcore.uriinfo.fulluriprefix -v https://www.example.com:8181
```

Disabling Elliptic Curve Encryption

- To workaround a Java 6 issue, disable Ellipitic Curve Encryption by setting the `com.sun.net.ssl.enableECC` jvm option to `false`. For example:

```
# ./asadmin create-jvm-options -Dcom.sun.net.ssl.enableECC=false
Command create-jvm-options executed successfully.
```

Disabling HTTP

Disable non-SSL HTTP access to prevent any unsecured communications with Calendar Server.

1. List all the http listeners and note the ones that don't have security enabled.
   For example, using the `asadmin` command:

```
# ./asadmin get
server.http-service.http-listener.*.security-enabled
server.http-service.http-listener.admin-listener.security-enabled =
true
server.http-service.http-listener.http-listener-1.security-enabled
= false
server.http-service.http-listener.http-listener-2.security-enabled
= true
```

2. Disable those http listeners.
   For example:

```
# ./asadmin set
server.http-service.http-listener.http-listener-1.enabled=false
server.http-service.http-listener.http-listener-1.enabled = false
```

   This change does not require a server restart.

Enabling LDAP SSL in Calendar Server

To configure Calendar Server 7 Update 3 for SSL communication with Directory Server, you use the `davadmin config` command to specify the necessary `ldap` parameters, then stop and start the GlassFish Server.

Prerequisite: You must have already enabled the back-end Directory Server for SSL, either with a CA certificate or self-signed certificate.

To configure Calendar Server to communicate with Directory Server over SSL, use the following steps.

1. Create a text file, for example, `usessl.txt`, with the following content:

```
base.ldapinfo.authldap.ldapport=636
base.ldapinfo.authldap.ldapusessl=true
base.ldapinfo.ugldap.ldapport=636
base.ldapinfo.ugldap.ldapusessl=true
```

   Change the `ldapport` values to the LDAP SSL port value in your deployment.

2. Run the `davadmin config` command to make the configuration change, for example:

```
/opt/sun/comms/davserver/sbin/davadmin config -u admin -f
usessl.txt
```

   Warning messages appear to restart the server, that is, to restart GlassFish Server.

3. Restart GlassFish Server, for example:

```
/opt/SUNWappserver/bin/asadmin stop-domain
/opt/SUNWappserver/bin/asadmin start-domain
```

Enabling Secure Notification Mail Submission

The Calendar Server notification mechanism relies on Messaging Server to deliver iMIP messages, and email notifications and reminders. By default, message submission is in the clear. You can secure this communication by using TLS/SSL transport. To use TLS/SSL, you need to install a CA-signed SSL certificate for Messaging Server. If you choose to use a self-signed certificate, you need to import the certificate into the Java `truststore` file by using the Java `keytool` command, then define the `javax.net.ssl.trustStore` and `javax.net.ssl.trustStorePassword` variables to the GlassFish Server JVM. To use TLS, set the `notification.dav.smtpstarttls` configuration parameter to `true`. To use SSL, set the `notification.dav.smtpusessl` configuration parameter to `true` and the `notification.dav.smtpport` configuration parameter to the SMTP SSL port, typically 465.

To further enhance security, you can employ SMTP authentication by setting the `notification.dav.smtpauth` configuration parameter to `true` and specifying the user and password of a valid mail user in your deployment by using the `notification.dav.smtpuser` and `notification.dav.smtppassword` configuration parameters, respectively.

Changing User uuid

Calendar Server requires a unique identifier in the form of an LDAP attribute whose value is used to map each calendar account to a unique account in the database. The current default and recommended attribute, `davUniqueId`, prevents a potential serious issue with the previous default attribute, `nsUniqueId`. The problem with using `nsUniqueId` is that if the LDAP entry for a user, group, or resource is deleted and recreated in LDAP, the new entry would receive a different `nsUniqueId` value from the Directory Server, causing a disconnect from the existing account in the calendar database. As a result, recreated users cannot access their existing calendars. For more information on the problem with using `nsUniqueId`, see Changing User uid (Communications Suite 7 Update 2).

If you do need to change the unique identifier:

- Run the `davadmin config` command to modify the `davcore.uriinfo.permanentuniqueid` configuration parameter, which specifies the unique valued LDAP attribute present in the LDAP entry of all subjects (users, groups, and resources).
  For more information on the `davadmin` command, see Calendar Server 7 Command-Line Utilities .

> **Caution**
> Changing this option after any user data is created in the database leads to data loss.

Be sure to also index the attribute used for `davcore.uriinfo.permanentuniqueid`, as Calendar Server performs searches on it. The chosen attribute needs to be indexed for presence and equality ([pres.eq]) in Directory Server. For more information on working with Directory Server indexes, refer to the Directory Server documentation. For example, for Directory Server 7, see Directory Server Indexing. Add the attribute to the list of LDAP attributes fetched by Calendar Server by using the `davadmin config modify` command on the `davcore.uriinfo.subjectattributes` configuration parameter. Make sure to add on to the existing list and pass the entire value when doing the modification.

For information on how Calendar Server uses Directory Server, see Calendar Server and Directory Server Integration.

Adding LDAP Access Control for Calendar Server Features

This section provides sample ACIs that show the attributes that Calendar Server needs for granting permission to users to search the LDAP directory for other users and resources whose calendars they can subscribe to. Tailor these samples to your individual site's security needs. Add an ACI to the

user/group suffix in Directory Server by using the `ldapmodify` tool. For more information on creating ACIs, see Creating, Viewing, and Modifying ACIs.

- The following sample ACI enables users to search for all other users and resources in the same domain for all domains hosted in the Directory Server, assuming a suffix of `o=isp`.

```
dn: o=isp
changetype: modify
add: aci
aci: (target="ldap:///($dn),o=isp")
 (targetattr!="userPassword")
 (targetfilter=(|(objectClass=icscalendaruser)(objectclass=icscalendarresource
(version 3.0; acl "CS User search access to all users and resources in own
domain - product=davserver,class=install,num=3,version=1";
 allow (read,search)
 userdn="ldap:///[$dn],o=isp??sub?(objectclass=icscalendaruser)";)
```

- To control domain access at a finer level, add individual ACIs instead of using the `$dn` macro. For example, to allow search for only one domain, set the following ACI on the domain organization entry.

```
dn: <domainA.orgdn>
changetype: modify
add: aci
aci: (targetattr!="userPassword")
 (targetfilter=(|(objectClass=icscalendaruser)(objectclass=icscalendarresource
(version 3.0; acl "CS User search access to all users and resources in domain
A - product=davserver,class=install,num=3,version=1";
 allow (read,search)
 userdn="ldap:///<domainA.orgdn>??sub?(objectclass=icscalendaruser)";)
```

Replace *domainA.orgdn* with your organization DN.

When adding ACIs to enable users to search other domains, that is, cross-domain searches, keep the following in mind:

- For `domain A` users to be able to search for users in `domain B`, you would add an ACI on `domain B`'s node to allow the search from users in `domain A`. For example, to enable users in `example.com` to search users in `varrius.com`, add the following ACI to the domain entry for `varrius.com` domain `o=varrius.com,o=isp` by using the `ldapmodify` command:

```
dn: o=varrius.com,o=isp
changetype: modify
add: aci
aci: (targetattr!="userPassword")
 (targetfilter=(|(objectClass=icscalendaruser)(objectclass=icscalendarresource
(version 3.0; acl "example.com users access in varrius.com -
product=davserver,class=install,num=3,version=1";
 allow (read,search)
 userdn="ldap:///o=example.com,o=isp??sub?(objectclass=icscalendaruser)";)
```

- You might also need to set Domain Access Control Lists (ACLs) to control calendar operations that span multiple domains. Oracle Communications Calendar Server 7 combines domain ACLs with the calendar and scheduling ACLs to grant or deny levels of access to these operations. All operations within a single domain rely strictly on the calendar and scheduling ACLs. For more information, see Managing Domain Access Controls.

Running the Oracle Communications Calendar Server config-mysql Script

< Back to Calendar Server Installation Scenario

Running the Oracle Communications Calendar Server config-mysql Script
Version 7 Update 3

The `config-mysql` Perl script prepares a new MySQL installation for use with Oracle Communications Calendar Server 7 Update 3. You can use this script instead of manually preparing a new MySQL installation.

> **Caution**
> If you already have a running instance of MySQL server, read the following information carefully before using this script.

> Beginning with **Oracle Communications Calendar Server for CALDAV Clients 7 Update 1,** the `config-mysql` and `Util.pm` scripts are bundled in the product distribution in the *cal-svr-base*`/tools/unsupported/bin` directory.

Topics:

- Syntax and Examples
- To Run the config-mysql Script

Syntax and Examples

`config-mysql` [*options*]

where the *options* are:

Option	Description
`--help` | `-?`	Prints help
`--calendar` | `-c`	Configures the calendar database
`--ischedule` | `-i`	Configures the ischedule database
`--server` | `-s`	Configures the MySQL server instance
`--user` | `-u`	Creates the MySQL database user

- To set up a new MySQL Server instance, and the default back end and iSchedule back end:

```
config-mysql -s -u -c -i
```

- To set up a MySQL Server instance on an additional host, and a new calendar back end:

```
config-mysql -s -u -c
```

- To set up just a new calendar back end on any existing instance:

```
config-mysql -c
```

To Run the config-mysql Script

1. Copy the `config-mysql` script from a machine where Calendar Server is installed to the machine where MySQL is installed.
   The `config-mysql` script is located in the *cal-svr-base*`/tools/unsupported/bin` directory.
2. On the machine where MySQL is installed, as root, launch the `config-mysql` script with options `-s`, `-u`, `-c`, and `-i`.
   The script creates a log file in the `/tmp` directory with a name such as `config-mysql_`*YYYYMMDDHHMMSS*`.log`.
3. The script creates a minimal instance configuration in the `/etc/my.cnf` file for use with the Calendar Server database.
   If you receive a message that the script has found existing instance configuration in the `/etc/my.cnf` file, type **yes** to overwrite the existing instance configuration, or **no** to exit.
4. Type the instance data directory.
   If you choose a directory that already exists, the script assumes that it belongs to an existing MySQL instance and that it might contain useful data. If that's not the case and you want to use that directory, remove the directory first.
5. Type the MySQL root user password, and type again to confirm.
6. Type the db user, password (once more to confirm), calendar db name, and iSchedule database name.
7. The script will then output the list of tasks to be performed and asked the user to confirm before proceeding. Below is a sample output:

```
A MySQL instance configuration /etc/my.cnf already exists
Are you sure to overwrite? (Y/N) y
Enter the MySQL data directory (/var/mysql): /var/mysql
Enter the MySQL root user password:
Please enter password again:
Enter the db user name: caldav
Enter the db user password:
Please enter password again:
Enter the name of the Calendar db (caldav):
Enter the name of the iSchedule db (ischedule):

====================================================
Here are the tasks to configure the MySQL instance:
  1. Attempt to stop MySQL server /etc/init.d/mysql stop
  2. Run mysql_install_db script to prepare a new database
directory
     in /var/tmp/mysql
  3. Create MySQL server configuration /etc/my.cnf
  4. Install mysql.server script to system startup and shutdown
  5. Attempt to start MySQL server /etc/init.d/mysql start
  6. Run mysqladmin to change the MySQL root password
  7. Run mysql_secure_installation to lock down the MySQL
installation

=======================================
Here is the SQL script to be performed:
CREATE USER 'caldav'@'localhost' IDENTIFIED BY 'password';
CREATE USER 'caldav'@'%' IDENTIFIED BY 'password';
CREATE DATABASE IF NOT EXISTS caldav CHARACTER SET = UTF8;
GRANT ALL ON caldav.* TO 'caldav'@'localhost';
GRANT ALL ON caldav.* TO 'caldav'@'%';
CREATE DATABASE IF NOT EXISTS ischedule CHARACTER SET = UTF8;
GRANT ALL ON ischedule.* TO 'caldav'@'localhost';
GRANT ALL ON ischedule.* TO 'caldav'@'%';

Do you want to proceed? (Y/N)
```

8. Type **n** to proceed.
   The script performs the following steps:
   - Stops the running MySQL instance.
     This step is run regardless of whether there is a running instance. You might see the message "ERROR! MySQL server PID file could not be found!." You can safely ignore this message.
   - Runs `mysql_install_db` to create the instance data directory specified in Step 3.
   - Creates a minimal `/etc/my.cnf` file for the instance.
   - Copies the `mysql.server` script to the system startup and shutdown directory.
   - Starts the MySQL server by using the configuration in the `/etc/my.cnf` file.
   - Uses the `mysqladmin` script to change the root password specified in Step 4.
   - Runs `mysql_secure_installation` to secure the newly created MySQL instance.
9. When the script asks for the existing root password, use the one from Step 4 and answer "no" to the question "Change the root password? [Y/n]."
   One of the tasks in the `mysql_secure_installation` script is to change the root password (since a fresh instance has a blank root password).
10. The last step is for the script to create the calendar database, iSchedule database, and database

user by using the mysql tool.

Running the Oracle Communications Calendar Server config-oracle Script

Running the Oracle Communications Calendar Server config-oracle Script

Topics:

- config-oracle Script Overview
- Syntax
- Options
- To Run the config-oracle Script
- config-oracle Examples

config-oracle Script Overview

The `config-oracle` Perl script prepares a running Oracle Database instance for use with Oracle Communications Calendar Server 7 Update 3. Before running this script, make sure that you have run the `oraenv` or `coraenv` script. The script creates a log file in the `/tmp` directory with a name such as `config-oracle_`*YYYYMMDDHHMMSS*`.log`.

> Beginning with **Oracle Communications Calendar Server 7 Update 2,** the `config-oracle` and `Util.pm` scripts are bundled in the product distribution in the *cal-svr-base*`/tools/unsupported/bin` directory.

Requirements: Must be `root`.

Location: *cal-svr-base*`/tools/unsupported/bin/config-oracle`

Syntax

`config-oracle` [*options*]

Options

The following table provides the options to the `config-oracle` script.

config-oracle Script Options

Option	Description
`--help` or `-?`	Prints the help.
`--calendar` or `-c`	Configures the calendar database.
`--ischedule` or `-i`	Configures the iSchedule database.

To Run the config-oracle Script

1. Copy the `config-oracle` script from a machine where Calendar Server is installed to the machine where Oracle Database is installed.
   The `config-oracle` script is located in the *cal-svr-base*`/tools/unsupported/bin` directory.
2. On the host where Oracle Database is installed, as `root`, type:

```
config-oracle -c -i
```

3. Type the Oracle SYS user password.
4. Type the calendar db user name and password, and iSchedule database user name and password.
   The script outputs the list of tasks to be performed.
5. Type **Y** to proceed.
   The script creates the calendar and iSchedule database users and schemas.

The following is a sample `config-oracle` session.

```
Enter the Oracle SYS user password:
Enter the name of the Calendar db user (caldav):
Enter the password for Calendar db user caldav:
Please enter password again:
Enter the name of the iSchedule db user (ischedule):
Enter the password for iSchedule db user ischedule:
Please enter password again:

========================================
Here is the SQL script to be performed:
WHENEVER SQLERROR EXIT SQL.SQLCODE;

CREATE USER caldav IDENTIFIED BY password;
GRANT CONNECT, RESOURCE TO caldav;
GRANT CREATE VIEW to caldav;
GRANT UNLIMITED TABLESPACE to caldav;
GRANT EXECUTE ON DBMS_LOCK to caldav;

WHENEVER SQLERROR EXIT SQL.SQLCODE;

CREATE USER ischedule IDENTIFIED BY password;
GRANT CONNECT, RESOURCE TO ischedule;
GRANT CREATE VIEW to ischedule;
GRANT UNLIMITED TABLESPACE to ischedule;
GRANT EXECUTE ON DBMS_LOCK to ischedule;


Do you want to proceed? (Y/N)
```

config-oracle Examples

- To set up the default back end and iSchedule back end:

```
config-oracle -c -i
```

- To set up an additional calendar back end:

```
config-oracle -c
```

Chapter 6. Installation Scenario - GlassFish Server

Installation Scenario - Sun Enterprise GlassFish Server Version 2.1.1

Topics:

- GlassFish Server Overview
- To Install and Configure GlassFish Server 2.1.1
- To Complete the GlassFish Server 2.1.1 Configuration

GlassFish Server Overview

Sun Enterprise GlassFish Server 2.1.1 is the primary web container used by Communications Suite 7 Update 4 component products. For complete installation instructions, see Sun GlassFish Enterprise Server 2.1.1 Installation Guide. The following procedures summarize the process.

For details on downloading the software, see Get the Software.

> **Tip**
> If you are installing GlassFish Server to be the web container for Indexing and Search Service, see Step 2, To Complete the GlassFish Server 2.1.1 Configuration, before starting.

> **Note**
> Starting with Communications Suite 7 Update 3, the Communications Suite installer no longer installs Java. To install Java for Communications Suite, see Installing Java For Communications Suite.

To Install and Configure GlassFish Server 2.1.1

1. Before installing GlassFish Server 2.1.1, check that the Java version on the system is at least Version 1.6. To check the Java version, type the following command:

   ```
   # java -version
   ```

   The shell returns results that look similar to the following:

   ```
   java version "1.6.0_06"
   Java(TM) SE Runtime Environment (build 1.6.0_06-b03)
   Java HotSpot(TM) Server VM (build 20.1-b02, mixed mode)
   ```

2. If you need to update your Java software, see the Java SE downloads site.
3. Create a directory for the GlassFish software (for example, `/var/tmp`), copy the GlassFish

software to this directory, then launch the installer.

```
# cd /var/tmp
# chmod +x <distribution-filename>
# ./<distribution-filename> -console -javahome /usr/jdk/latest
```

4. When prompted, press Enter to continue.
5. Accept the License Agreement by typing `yes` when prompted.
   The following table shows the options that the installation script prompts you to answer, and the default values for the options.
   GlassFish Server 2.1.1 Settings

Option	Default Value
Installation Directory	`/opt/SUNWappserver`
Create Directory or Choose New	Create Directory
Install Node Agent	yes
Install High Availability Database Server	no
Install Load Balancing Plugin	no
Install Domain Administration Server	yes
Install Sample Applications	yes Type `no` if you do not want the sample applications.
Install or reuse Java 2 SDK	Install You can `reuse` if the Java SDK version is 1.6 or higher.
Path to Java 2 SDK 5.0 or greater	`/usr/jdk/instances/jdk1.6.0`
Admin User	admin
Admin User's Password	—
Master Password for SSL Certificate	—
Admin Port	`4848`
HTTP Port	`8080`
HTTPS Port	`8181`
Enable Updatecenter client	yes Type `no`
Upgrade from previous AS version	no

6. At the Ready to Install prompt, type `1` (to Install Now).
   The installation begins.
7. At the Installation Successful screen, press Enter to exit the installation program.
8. Verify the GlassFish Server version.
9. Start the GlassFish Server, for example:

```
# /opt/SUNWappserver/bin/asadmin start-domain domain1
Starting Domain domain1, please wait.
Log redirected to
/opt/SUNWappserver/domains/domain1/logs/server.log.
Please enter the admin user name>admin
Please enter the admin password><adminpass>
Please enter the master password><adminpass>
```

10. Continue with the next task.

To Complete the GlassFish Server 2.1.1 Configuration

You might need to make a few additional changes to the configuration settings in the GlassFish Server installation:

1. If you did not already set the location of JDK 6 during the installation, edit the `asenv.conf` file (by default, located in `/opt/SUNWappserver/config/asenv.conf`). Change the value for

AS_JAVA to the location of JDK 6, for example:

```
AS_JAVA="/usr/jdk/instances/jdk1.6.0"
```

2. If you are using Oracle GlassFish Message Queue (which ships with Communications Suite 7 Update 4), for example, to use Indexing and Search Service, move the embedded JMQ server that comes with Glassfish Server to another port to avoid a conflict:
   a. Edit the `/opt/SUNWappserver/domains/domain1/config/domain.xml` file.
   b. Find the following line in the `/opt/SUNWappserver/domains/domain1/config/domain.xml` file:

      ```
      <jms-host admin-password="<adminpwd>" admin-user-name="<admin>"
      host="<hostname>" name="default_JMS_host" port="7676"/>
      ```

   c. Change `port="7676"` to a value such as `port="7677"`.

   > **Note**
   > You can avoid this situation by first running the Communications Suite installer, installing the Message Queue software that is provided with the installer, then starting Message Queue before installing GlassFish Server. Then, when you install GlassFish Server, the installation automatically selects a new port if it detects an already-started JMQ running on port 7676.

3. To restrict viewing the listing of the `iwc_static/layout` directory in Convergence, change the value of the `init-param` listings to `false` for `DefaultServlet` in `default-web.xml`, located in: `/opt/SUNWappserver/domains/domain1/config/`. For example:

```
<servlet>
     <servlet-name>default</servlet-name>

<servlet-class>org.apache.catalina.servlets.DefaultServlet</servlet-c
.
     <init-param>
       <param-name>debug</param-name>
       <param-value>0</param-value>
     </init-param>
     <init-param>
       <param-name>listings</param-name>
       <param-value>false</param-value>
     </init-param>
     <load-on-startup>1</load-on-startup>
   </servlet>
```

4. Restart GlassFish Server, for example:

```
# /opt/SUNWappserver/bin/asadmin stop-domain domain1
Domain domain1 stopped.
# /opt/SUNWappserver/bin/asadmin start-domain domain1
Starting Domain domain1, please wait.
Log redirected to
/opt/SUNWappserver/domains/domain1/logs/server.log.
Please enter the admin user name>admin
Please enter the admin password>adminpass
Please enter the master password>adminpass
```

Chapter 7. Installation Scenario - Indexing and Search Service

Installation Scenario - Indexing and Search Service for Oracle Communications Unified Communications Suite Version 1 Update 4

Topics:

- Overview of This Scenario
- Assumptions
- Which Software Components and Downloads Do You Need?
- Installing and Configuring an Indexing and Search Service Deployment
- Uninstalling ISS
- ISS Installation Command-Line Reference
- Troubleshooting Indexing and Search Service Installation Problems

Overview of This Scenario

The following installation information describes how to install and configure Indexing and Search Service for Oracle Communications Unified Communications Suite. Before proceeding, make sure that you have already made your architectural and design decisions. For example, you should already know the total number of servers in your deployment, the number of front-end and back-end servers, and similar details. If you are still in the planning or evaluating process, see the following documents:

- If you do not have an existing architecture or design, see Indexing and Search Service Deployment Planning and the Communications Suite Deployment Planning Guide.

Some of this information assumes that you are using Solaris Operating System (Solaris OS) 10. For Red Hat Linux, substitute the respective Red Hat Linux commands.

Assumptions

This scenario shows how to install Indexing and Search Service on a separate host.

Which Software Components and Downloads Do You Need?

- Communications Suite: Messaging Server, Indexing and Search Service, and GlassFish Message Queue, bundled together as part of the Oracle Communications Unified Communications Suite download
- Communications Suite patches, created after the initial release of Communications Suite 7 Update 4
- Application server web container for Indexing and Search Service: Sun GlassFish Enterprise Server
- LDAP server: Directory Server
- (Optional): Apache HTTP Server version 2, for multi-host deployments (used as web container for ISS back ends)

Download sites: Get the Software

> **Note**
> Starting with Communications Suite 7 Update 3, the Communications Suite installer no longer installs Java. To install Java for Communications Suite, see Installing Java For Communications Suite.

Installing and Configuring an Indexing and Search Service Deployment

Installing ISS involves the following high-level steps:

- 1. Before You Install and Configure ISS
- 2. Install, But Do Not Configure, ISS Software
- 3. Gather Information Required to Configure ISS
- 4. Prepare Messaging Server for ISS
- 5. Decide on ISS Installable Components
- 6. Configure GlassFish Message Queue 4.4u1 on the ISS Host
- 7. Complete the ISS Installation
- 8. Index (Bootstrap) Users
- 9. Verify the ISS Installation
- 10. (Optional) Configure Messaging Server to Use ISS for IMAP SEARCH
- 11. (Optional) Configure Convergence to Use ISS

1. Before You Install and Configure ISS

Complete the following prerequisites for installing and configuring ISS:

1. Review Requirements for Communications Suite 7 Update 4 for the operating system, patch, client software, and disk space needed, and any additional software requirements for this release of Indexing and Search Service.
2. Install and configure the following required software:
   - Java. See Installing Java For Communications Suite.
   - GlassFish Server 2.1.1. See Installation Scenario - GlassFish Server for more information about installing the software.
   - (Optional) Apache HTTP Server version 2, for multi-host deployments. See About Apache HTTP Server Version 2 for more information about obtaining and installing the software.
3. Make sure that the Messaging Server host for your ISS deployment is running at least Messaging Server 7 Update 4 and GlassFish Message Queue 4.4 Update 1.
4. On Messaging Server and ISS hosts, define and set up additional product requirements. Make sure that the Network Time Protocol (NTP) service is running on both the Messaging Server and the ISS hosts.
   - Solaris OS:

     ```
     # svcadm enable ntp
     # svcs ntp
     STATE          STIME    FMRI
     online         16:35:43 svc:/network/ntp:default
     ```

     See the section about time-related services in System Administration Guide: Network Services for more information about NTP on Solaris.

   - Red Hat Linux:

```
# cd /etc/rc3.d
# ln -s ../init.d/ntpd S74ntpd
# ../init.d/ntpd start
Starting ntpd:                                                [
OK  ]
# ps -ef | grep ntp
ntp       2347     1  0 20:56 ?        00:00:00 ntpd -u
ntp:ntp -p /var/run/ntpd.pid -g
```

See the section about NTP in Red Hat Documentation for more information about NTP on Red Hat Linux.

2. Install, But Do Not Configure, ISS Software

1. To install the ISS software, run the Communications Suite installer, for example:

```
./commpkg install
```

2. Select the option for Indexing and Search Services 1 Update 4.
3. For information about running the Communications Suite installer, see Installing Communications Suite.
4. For multi-host deployments, run the Communications Suite installer on each host in your multi-host deployment to install the ISS software.

> **Note**
> Deploying ISS involves installing then configuring the software. In this section, you only install the software. You configure the ISS software in a later step.

5. Install current ISS patch.
   See Indexing and Search Service Patches by Release for latest patch information.

3. Gather Information Required to Configure ISS

Complete the Configuration Worksheet to prepare for Messaging Server for Indexing and Search Service integration and to configure Indexing and Search Service.

4. Prepare Messaging Server for ISS

See Preparing Messaging Server for Indexing and Search Service Integration.

5. Decide on ISS Installable Components

You can install all the ISS components onto a single host or spread the installation across multiple hosts. The four ISS components include:

- `web`
- `jmq`
- `ldap`
- `index`

Web (`web`)

This component contains the front-end web server access to the index services. This component must be GlassFish Server and must support the `asadmin` command. The `setup` script installs and configures the following three JAR files on the GlassFish Server:

- `rest`. This component is the RESTful API. You access the RESTful service at the following URL:

  ```
  http://<host>:<port>/rest
  ```

- `searchui`. This component is a sample search UI. You access the sample search UI at the following URL:

  ```
  http://<host>:<port>/searchui
  ```

- `storeui`. This component controls access to the attachment store. You access it at the following URL:

  ```
  http://<host>:<port>/storeui
  ```

Oracle GlassFish Message Queue (`jmq`)

This component is Oracle GlassFish Message Queue for the Indexing and Search Services. The GlassFish Server and index services use this message bus to communicate.

Directory Service (`ldap`)

ISS requires Directory Server for Java Naming and Directory Interface (JNDI) lookups.

Indexing (`index`)

This component contains the following core index and search services that are required for normal operation:

- Index Service (`indexSvc`) – Bootstraps new users and indexes incoming content.
- Search Service (`searchSvc`) – Searches index and returns results.
- JMQ Consumer (`jmqconsumer`) – Listens to the JMQ on the message store and notifies `indexSvc` if new content requires indexing.
- Util Service (`utilSvc`) – Provides utility services to Index Service.
- Apache (`httpd`) – Used only in multimachine deployments, provides access to the attachment store.

6. Configure GlassFish Message Queue 4.4u1 on the ISS Host

1. a. Ensure that the GlassFish Message Queue broker is running and is enabled to start at reboot. Edit the `imqbrokerd.conf` file (`/etc/imq/imqbrokerd.conf` on Solaris OS and `/etc/opt/sun/mq/imqbrokerd.conf` on Red Hat Linux) to contain the following information. Check the file permissions and change them to be writeable if they are set to read-only.

   ```
   AUTOSTART=YES
   ARGS=-vmargs -Xmx1024m
   RESTART=YES
   ```

   b. If the `config.properties` file (`/var/imq/instances/imqbroker/props/config.properties` on Solaris OS and

/var/opt/sun/mq/instances/imqbroker/props/config.properties on Red Hat Linux) does not yet exist, start the IMQ broker for the first time to generate it.

```
nohup /etc/init.d/imq start
```

c. Tune the GlassFish Message Queue broker properties by editing the bottom of the config.properties file (/var/imq/instances/imqbroker/props/config.properties on Solaris OS and /var/opt/sun/mq/instances/imqbroker/props/config.properties on Red Hat Linux) to contain the following information.
You might need to check the file permissions and change them to be writeable if set to read-only. The defaults for these settings appear in the default.properties file (/usr/share/lib/imq/props/broker/default.properties on Solaris OS and /opt/sun/mq/private/share/lib/props/broker/default.properties on Red Hat Linux).

```
imq.portmapper.backlog=-1
imq.autocreate.destination.limitBehavior=REMOVE_OLDEST
imq.autocreate.destination.maxNumProducers=-1
imq.autocreate.reaptime=7200
imq.destination.DMQ.truncateBody=true
imq.jms.max_threads=2000
```

d. Ensure that the Message Queue broker is restarted to acquire the new settings:

```
/etc/init.d/imq stop
nohup /etc/init.d/imq start
```

7. Complete the ISS Installation

Use the tasks in this section to complete the ISS installation on either a single host or multiple hosts.

To Configure Indexing and Search Service on a Single Host

1. Change to the jiss/bin directory, for example:

```
cd /opt/sun/comms/jiss/bin
```

2. Run the initial configuration.

```
./setup
```

3. Answer the series of configuration prompts.
For more information, see Indexing and Search Service Initial Configuration.
4. Restart GlassFish Server.

```
cd /opt/SUNWappserver/bin
./asadmin stop-domain domain1
./asadmin start-domain domain1
```

5. Run Post Configuration Procedures.
See Indexing and Search Service Post Configuration.

To Configure Indexing and Search Service on Multiple Hosts

For multi-host deployments, see Using setup in a Multi-host Environment.

8. Index (Bootstrap) Users

Use the issadmin.sh --bootstrap command to index users.

For example, to index a single user:

```
# ./issadmin.sh --bootstrap --user <username> --host <hostname>
--runoptimizer true
```

To index a list of users, 16 users at time:

```
# ./issadmin.sh --bootstrap --accountlist /tmp/accountlist.txt --threads
16 --runoptimizer true --altoutput /tmp/parallelbootstrap.log
```

9. Verify the ISS Installation

1. You can search a user's content by accessing it in a browser at the following URL:

   ```
   http://<host>:<port>/rest
   ```

   Log in as the user or proxy auth as the read-only store admin user (`mail.imap.admin.username`, `mail.imap.admin.username`).

2. To view a demo web application utilizing the ISS API, try the SearchUI link or access the following URL in a browser:

   ```
   http://<host>:<port>/searchui
   ```

   Try a search such as `+body:java` to search for attachments from email with the word "java" in the body.

3. Finally, send a new email message to an indexed user and confirm that the new message appears in the search.

10. (Optional) Configure Messaging Server to Use ISS for IMAP SEARCH

1. Set `service.imap.indexer.enable` to 1, which redirects IMAP SEARCH queries to ISS for fulfillment:

   ```
   cd <msg-svr-base>/bin
   ./configutil -o service.imap.indexer.enable -v 1
   ```

2. This parameter is refreshable, so a refresh of the configuration is sufficient to enable the change.

   ```
   ./refresh imap
   ```

11. (Optional) Configure Convergence to Use ISS

See Enabling Convergence and Indexing and Search Service.

1. Configure Convergence to provide the ISS attachment interface.

```
cd /opt/sun/comms/iwc/sbin
./iwcadmin -w <password> -o ISS.enable -v true
./iwcadmin -w <password> -o ISS.enablessl -v true (if SSL to be
used)
./iwcadmin -w <password> -o ISS.host -v <ISS-web-frontend-FQDN>
./iwcadmin -w <password> -o ISS.port -v <ISS-web-frontend-port>
./iwcadmin -w <password> -o ISS.proxyadminid -v <value of ISS's
mail.imap.admin.username>
./iwcadmin -w <password> -o ISS.proxyadminpwd -v <plaintext
password for mail.imap.admin.username>
```

   ISS-web-frontend-port is the web component port number on which ISS is deployed (and should be the same as the port number for `appserver.web.port` in the `jiss.conf` file). Typically, the port number is 8080.

2. If you are deploying Convergence and ISS on the same host and on the same GlassFish Server web container, you must increase the number of GlassFish Server request processing threads to two times the number of CPUs on the system.
   a. Determine the number of CPUs on the system.
      - Red Hat Linux:

```
cat /proc/cpuinfo | grep processor | wc -l
```

      - Solaris OS:

```
mpstat | grep -v CPU | wc -l
```

   b. Set the number of request processing threads to two times the number of CPUs determined above. If the number of CPUs is 4 or less, set this number to 8.

```
cd /opt/SUNWappserver/bin
./asadmin set
server.http-service.request-processing.thread-count = <2 x
number-of-cpus>
```

3. Restart GlassFish Server.

```
cd /opt/SUNWappserver/bin
./asadmin stop-domain domain1
./asadmin start-domain domain1
```

Uninstalling ISS

1. To uninstall the Indexing and Search Service installed on the local machine, run the `setup -u` command, for example:

```
# cd <iss-base>/bin
# ./setup -b <iss-base> -u
Logfile is: /var/tmp/jiss.install.13067
No setup type found, defaulting to all
Removing single-sign on
Undeploying JISS wars to Appserver
Stopping JISS services
Removing Apache if required
Removing up mq entries
Removing up ldap entries
-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-
All configurations have been run successfully
-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-
```

2. If necessary, uninstall the Communications Suite packages.
   See Uninstalling Communications Suite for more information.

ISS Installation Command-Line Reference

- check_conf.sh Usage
- configure_etc.pl Usage
- setup Usage
- verify_conf.pl Usage
- configure_web_node Usage

Troubleshooting Indexing and Search Service Installation Problems

- Initial ISS Troubleshooting
- Troubleshooting ISS Configuration Problems

Initial ISS Troubleshooting

If you encounter problems during the initial ISS configuration, it might be helpful to run the setup uninstall, adjust the initial configuration, and re-attempt the setup. See setup Usage for more information.

Troubleshooting ISS Configuration Problems

This section describes how to troubleshoot installation problems without using the `setup` utility.

1. Change to the *iss-base*`/bin` directory.
2. Copy the example configuration file.

```
cp ../etc/jiss.conf.example myfile.conf
```

3. Edit the `myfile.conf` with your configuration details.
4. Move the existing configuration files.

```
mv ../etc/jiss.conf ../etc/jiss.conf.backup
mv ../etc/jiss_passwd.conf ../etc/jiss_passwd.conf.backup
```

5. Run the `configure_etc.pl` script to create new `jiss.conf` and `jiss.password` files.

```
./configure_etc.pl -c myfile.conf -A
```

6. Run the `verify_data.pl` script to check the *iss-base*`/etc/jiss.conf` and *iss-base* `/etc/jiss_passwd.conf` files for all required parameters and formating.

```
./verify_data.pl
```

7. Run the `verify_conf.pl` script to check if needed services are running and can be authenticated with provided credentials.

```
./verify_conf.pl
```

8. If all these steps passed, run `setup` to configure the system.

```
./setup -b <iss-base>
```

See Indexing and Search Service Troubleshooting for more information.

About Apache HTTP Server Version 2

About Apache HTTP Server Version 2

Starting with 1 Update 3, when installing Indexing and Search Service for Oracle Communications Unified Communications Suite in a multi-host deployment, you need to install and configure Apache HTTP Server version 2 on the host(s) functioning as the ISS back end(s). That is, you need Apache on the host(s) that offer the Indexing Tier services (`searchSvc` for searching; `indexSvc` for adding new users and processing mail server events; and `jmqconsumer` for listening to the Messaging Server JMQ for events to process and send to `indexSvc`).

The following software is required:

- **Solaris 10 OS:** Make sure that you have installed the package metacluster `SUNWCapache` from your Solaris OS media. For more information, refer to the Solaris OS product documentation.
- **Red Hat Linux and Oracle Linux:** You need to install the RPM `httpd` from the respective Linux media. For instructions, refer to the appropriate product's documentation.

check_conf.sh Usage

check_conf.sh Usage

The `check_conf.sh` utility verifies that the needed Indexing and Search Service services are running and that the password provided is able to authenticate to the service. The utility reads the *iss_base* `/etc/jiss.conf` file and the *iss_base*`/etc/jiss_passwd.conf` file for configurations.

Location: *iss-base*`/bin/check_conf.sh`

Syntax

```
check_conf.sh [ -v ] [ -h ] [ -t TYPE ]
```

Options

These are the options for this command:

Option	Description
`-t` *TYPE*	Optional. Defaults to `all`. The type of service to check: `all`: All components `web`: Checks GlassFish configurations `jmq`: Checks Oracle Glassfish Message Queue configurations `ldap`: Checks Directory Server configurations `index`: Checks Index and starts Indexing services `ms`: Checks message store configurations
`-v`	Optional. Enable shell debugging.
`-h`	Optional. Prints help text.

Exit code 0 indicates a success.
Exit code 1 indicates a failure.

Arguments can appear in any order.

Example

Single machine install:

```
# /opt/sun/comms/jiss/bin/check_conf.sh
No type defined (jmq, ldap, web) default to all
Hostname match found
test3.example.com:4848 (tcp) => Active
test3.example.com:80 (tcp) => Active
checking test3.example.com 389
checking test3.example.com 7676
Version string matched in headers: 101 imqbroker 4.[2-9]
test3.example.com:143 (tcp) => Active
checking test3.example.com 7676
checking test3.example.com 389
```

configure_etc.pl Usage

configure_etc.pl Usage

The `configure_etc.pl` utility is used to generate the Indexing and Search Service *iss_base* `/etc/jiss.conf` and *iss_base*`/etc/jiss_passwd.conf` files. This script reads in information from the *iss_base*`/etc/jiss.conf.template` file for default values. If no configuration file is provided at run time, you are prompted to enter all information. If a configuration file is provided at run time and required parameters are missing, you are prompted for a value.

Requirements: Must be root user.

Location: *iss-base*`/bin/configure_etc.pl`

Syntax

```
configure_etc.pl [ -b <BASEDIR> ] [ -f <CONF_FILE> ] [ -l ] [ -i <FQDN> ] [
-O ] [ -A ] [ -t <TYPE> ] [ -s ] [ -S <FILE> ] [ -R <FILE> ] [ -C <FILE> ]
```

Options

These are the options for this command:

configure_etc.pl Options

Option	Description
`-b` *BASEDIR*	Required. Specifies the base directory of the installation.
`-f` *CONF_FILE*	Optional. Specifies a file from which to read configuration information for the `jiss.conf` file.
`-l`	Optional. Use local host for `jmq` and `ldap` host names. `/bin/hostname` must return a fully qualified domain name.
`-i` *FQDN*	Optional. Fully qualified domain name to use for host name.
`-O`	Optional. Overwrites the current `jiss.conf` and `jiss_passwd.conf` files.
`-A`	Optional. Prompts for all configurations.
`-t` *TYPE*	Optional. Defaults to `all`. The type of install or uninstall to perform: `all`: All components `web`: Configures GlassFish `jmq`: Configures Oracle GlassFish Message Queue `ldap`: Configures Directory Server `index`: Configures index and starts indexing services `ms`: Configures Message Store Directory Server `cluster`: Configures a cluster
`-s`	Optional. Skips validation steps.
`-S` *FILE*	Saves information to state file.
`-R` *FILE*	Preserves all data and regenerates comments in file (requires `-f` *file* option).
`-C` *FILE*	Creates a cluster configuration file based on the `jiss.conf` and `jiss_passwd.conf` files.

Arguments can appear in any order.

Examples

Generate configuration:

```
/opt/sun/comms/jiss/bin/configure_etc.pl
```

Generate configuration by overwriting current configuration:

```
/opt/sun/comms/jiss/bin/configure_etc.pl -O
```

Read values from a configuration file:

```
/opt/sun/comms/jiss/bin/configure_etc.pl -f my.conf
```

Generate new configuration file and prompt for all values:

```
/opt/sun/comms/jiss/bin/configure_etc.pl -A -O
```

configure_web_node Usage

configure_web_node Usage

This utility updates the `httpd.conf` file running under the `iss.user` and `iss.group` context to allow or deny access to the Indexing and Search Service attachment store. Use this utility only in multi-machine deployments where the attachment store is not on the same host as GlassFish Server.

Location: *iss-base*`/bin/configure_web_node`

Syntax

```
configure_web_node [ -a | -d ] [ IP | IP | IP ... ]
```

Options

These are the options for this command:

configure_web_node Options

Option	Description
`-a`	Optional. Allows access for listed IP addresses.
`-d`	Optional. Removes access for listed IP addresses.

Examples

- To add an IP address:

```
<iss-base>/configure_web_node -a 10.10.10.10
```

- To remove an IP address:

```
<iss-base>/configure_web_node -d 10.10.10.10
```

- To add multiple IP addresses:

```
<iss-base>/configure_web_node -a 10.10.10.10 10.10.10.11
10.10.10.12
```

Indexing and Search Service Post Configuration

Indexing and Search Service for Oracle Communications Unified Communications Suite Post Configuration Version 1 Update 4

This information contains procedures that you might need to run after installing and configuring Indexing and Search Service for Oracle Communications Unified Communications Suite 1 Update 4.

Topics:

- Enabling Autoprovisioning
- Enabling Periodic Auto-sync
- Enabling Autobootstrapping of Accounts
- Enabling the Watcher Service

Enabling Autoprovisioning

Autoprovisioning enables you to add new accounts to the ISS store automatically. By using autoprovisioning, you make account creation less prone to error than when manually bootstrapping accounts. However, unlike the `issadmin.sh` command, which gives you control over the group or singleton status for an account, autoprovisioning simply creates the account in the next available index group in the ISS store by using the default allocation policy See ISS Store Instance Overview and Concepts for more information about the default allocation policy.

To Enable ISS Autoprovisioning

1. Edit the `jiss.conf` file and set the `iss.autoprovision.enabled` configuration parameter to `true`.
2. Refresh the ISS configuration for the change to take place.

```
issadmin.sh --refresh
```

For more information on autoprovisioning, see Autoprovisioning ISS Accounts.

Enabling Periodic Auto-sync

This feature checks every ISS account against Messaging Server accounts at regular intervals to detect differences, for example, from a reconstructed folder or lost event notifications, that ISS can then automatically correct.

To Enable Periodic Autosync

1. Edit the `jiss.conf` file and set the `iss.indexsvc.periodic.autosync.enabled` configuration parameter to `true`.
2. (Optional) Set the `iss.indexsvc.periodic.autosync.interval` configuration parameter to specify the number of seconds to wait from the start of one period until the start of the next autosync period.
   The default is 300 seconds.
3. (Optional) Set the `iss.indexsvc.periodic.autosync.count` configuration parameter to specify the number of accounts to process from the list of accounts yet to be synced during each period.

The default is 1000.
4. Refresh the ISS configuration for the change to take place.

```
issadmin.sh --refresh
```

5. For tuning suggestions, see Other Tuning Controls of Periodic Autosync.

For more information on periodic autosync, see Enabling Periodic Autosync.

Enabling Autobootstrapping of Accounts

Similar to the situation for active accounts described in Overview of Periodic Automatic Synchronization, accounts which have not been bootstrapped or autoprovisioned may cause event notifications of changes to such accounts to fail. To correct these accounts, you can use the *autobootstrapping* feature, which is useful if you want your deployment to index uninitialized accounts under such conditions.

To Enable Periodic Autobootstrap

1. Edit the `jiss.conf` file and set the `iss.indexsvc.periodic.autobootstrap.enabled` configuration parameter to `true`.
2. (Optional) Set the `iss.indexsvc.periodic.autobootstrap.interval` configuration parameter to specify the number of seconds to wait from the start of one period until the start of the next autobootstrap period.
   The default is 300 seconds.
3. (Optional) Set the `iss.indexsvc.periodic.autobootstrap.count` configuration parameter to specify the number of accounts to process from the list of accounts yet to be bootstrapped during each period.
   The default is 500.
4. Refresh the ISS configuration for the change to take place.

```
issadmin.sh --refresh
```

For more information, see Enabling Periodic Autobootstrap.

Enabling the Watcher Service

This feature is designed for the implementation of highly available (HA) ISS nodes, however the service itself is useful even when you do not use HA. The watcher service provides local host monitoring of ISS services and alerts you, with log file messages and email warnings, when it detects a service outage. Once alerted, you can take the appropriate corrective action, such as restarting a service.

To Enable the ISS Watcher Service

To enable the watcher service on an ISS node, configure the appropriate `iss.cluster` and `iss.watcher` parameters in the `jiss.conf` file as described in Administering the ISS Watcher Service .

postpatch_restart.sh

postpatch_restart.sh

The `postpatch_restart.sh` utility updates the system after an Indexing and Search Service patch has been applied. The utility script performs five basic operations:

- Stopping all ISS services
- Merging the configuration file
- Updating the configuration with new parameters
- Starting all ISS services
- Deploying the ISS war files to GlassFish Server

Location:*iss-base*`/bin/postpatch_restart.sh`

Syntax

```
postpatch_restart.sh [ -h ] [ -v ] [ -S file ] [ -f file ] [ -b ]
<BASEDIR>
```

Options

These are the options for this command:

postpatch_restart.sh Options

Option	Description
`-b` *BASEDIR*	Sets the base directory of the ISS installation, must be the last argument.
`-f` *file*	Specifies the file containing configuration information for silent install.
`-S` *file*	Generates state file for silent install.
`-v`	Uses verbose output.
`-h`	Prints out the usage summary.

Example run

```
# /opt/sun/comms/jiss/bin/postpatch_restart.sh -S /tmp/new.state
/opt/sun/comms/jiss
```

Preparing Messaging Server for Indexing and Search Service Integration

< Back to Installation Scenario - Indexing and Search Service

Preparing Messaging Server for Indexing and Search Service Integration

The following instructions describe how to prepare and configure Messaging Server for integration with Indexing and Search Service.

1. Assign read-only store administrator privileges to the ISS proxy auth user (by default named `indexeradmin`).
   The ISS proxy auth user must exist in LDAP and must be a member of the `store.admins` group.

   ```
   cd <msg-svr-base>/bin
   ./configutil -o store.indexeradmins -v indexeradmin
   ```

2. Configure the GlassFish Message Queue broker on Messaging Server.
   a. Ensure that the GlassFish Message Queue broker is running and enabled to start at reboot. Edit the `imqbrokerd.conf` file (`/etc/imq/imqbrokerd.conf` on Solaris Operating System (Solaris OS) and `/etc/opt/sun/mq/imqbrokerd.conf` on Red Hat Linux) to contain the following information. You might need to check the file permissions and change them to be writeable if set to read-only.

      ```
      AUTOSTART=YES
      ARGS=-vmargs -Xmx1024m
      RESTART=YES
      ```

   b. If the `config.properties` file (`/var/imq/instances/imqbroker/props/config.properties` on Solaris OS and `/var/opt/sun/mq/instances/imqbroker/props/config.properties` on Red Hat Linux) does not yet exist, start the IMQ broker for the first time to generate it.

      ```
      /etc/init.d/imq start
      ```

   c. Tune the GlassFish Message Queue broker properties by editing the bottom of the `config.properties` file (`/var/imq/instances/imqbroker/props/config.properties` on Solaris OS and `/var/opt/sun/mq/instances/imqbroker/props/config.properties` on Red Hat Linux) to contain the following information. You might need to check the file permissions and change them to be writeable if set to read-only. The defaults for these settings appear in the `default.properties` file (`/usr/share/lib/imq/props/broker/default.properties` on Solaris OS and `/opt/sun/mq/private/share/lib/props/broker/default.properties` on Red Hat Linux).

```
imq.portmapper.backlog=-1
imq.autocreate.destination.limitBehavior=REMOVE_OLDEST
imq.autocreate.destination.maxNumProducers=-1
imq.autocreate.reaptime=7200
imq.destination.DMQ.truncateBody=true
```

d. Ensure that the Message Queue broker is restarted to acquire the new settings:

```
/etc/init.d/imq stop
/etc/init.d/imq start
```

e. Use the `imqusermgr` command to create a Message Queue user, referred to later in `local.store.notifyplugin.index.jmquser` on Messaging Server and `mail.imq.user` in ISS.
Solaris OS:

```
# /usr/bin/imqusermgr add -u <jmquser> -p <jmquserpassword> -g
user
```

Red Hat Linux:

```
# /opt/sun/mq/bin/imqusermgr add -u <jmquser> -p
<jmquserpassword> -g user
```

f. Reset the default account passwords, if not already reset:
Solaris OS:

```
# /usr/bin/imqusermgr update -u admin -p <adminpassword>
# /usr/bin/imqusermgr update -u guest -p <guestpassword>
```

Red Hat Linux:

```
# /opt/sun/mq/bin/imqusermgr update -u admin -p
<adminpassword>
# /opt/sun/mq/bin/imqusermgr update -u guest -p
<guestpassword>
```

3. Configure Java Messaging Queue (JMQ) notifications on Messaging Server to produce event notifications of real-time changes to the Messaging Server store for ISS to consume.

> **Note**
> ISS requires JMQ software. If you are currently running ENS for IMAP IDLE, you need to run both ENS and JMQ. In other words, ENS and JMQ are independent. You can use ENS for IMAP IDLE and JMQ for ISS. Prior to Messaging Server 7 Update 4, you can use JMQ for both IMAP IDLE and ISS. Starting with Messaging Server 7 Update 4, IMAP IDLE only supports ENS.

a. Set the `local.store.notifyplugin configutil` parameter to include a JMQ notification plugin named `index`.
If you have already enabled `local.store.notifyplugin`, add the following entry for

ISS to what is already specified so that you do not overwrite the existing setting. For example, if `local.store.notifyplugin` is already set, run the following commands:

```
# cd <msg-svr-base>/bin
# ./configutil -o local.store.notifyplugin
lib/libibiff$ms-internal$
# ./configutil -o local.store.notifyplugin -v
'lib/libibiff$ms-internal$lib/libjmqnotify$index'
```

You may receive a response such as the following:

```
libibiff$ms-internal$
```

If this is the case, append the new JMQ notification to existing one:

```
# ./configutil -o local.store.notifyplugin -v
'libibiff$ms-internal$libjmqnotify$index'
```

If `local.store.notifyplugin` is not already set, set it as follows:

```
# cd <msg-svr-base>/bin
# ./configutil -o local.store.notifyplugin
# ./configutil -o local.store.notifyplugin -v
'lib/libjmqnotify$index'
```

> For more information about the syntax of `local.store.notifyplugin` consult the Messaging Server configutil Parameters Reference or run
> `cd <msg-svr-base>/bin`
> `./configutil -o local.store.notifyplugin -H`

b. Configure the following settings for the `index` JMQ notification plugin, replacing `<jmquser>` with the JMQ user and `<jmquserpassword>` with the JMQ user password. Note that time values are in milliseconds.

```
# cd <msg-svr-base>/bin
./configutil -o
local.store.notifyplugin.index.annotatemsg.enable -v 0
./configutil -o
local.store.notifyplugin.index.changeflag.enable -v 1
./configutil -o local.store.notifyplugin.index.copymsg.enable
-v 1
./configutil -o local.store.notifyplugin.index.debuglevel -v 0
./configutil -o
local.store.notifyplugin.index.deletemsg.enable -v 0
./configutil -o local.store.notifyplugin.index.destinationtype
-v queue
./configutil -o
local.store.notifyplugin.index.expungemsg.enable -v 1
./configutil -o local.store.notifyplugin.index.jmqhost -v
127.0.0.1
./configutil -o local.store.notifyplugin.index.jmqport -v 7676
./configutil -o local.store.notifyplugin.index.jmqpwd -v
<jmquserpassword>
./configutil -o local.store.notifyplugin.index.jmqtopic -v
INDEXMS
./configutil -o local.store.notifyplugin.index.jmquser -v
<jmquser>
./configutil -o local.store.notifyplugin.index.loguser.enable
-v 0
./configutil -o local.store.notifyplugin.index.maxbodysize -v
262144
./configutil -o local.store.notifyplugin.index.maxheadersize
-v 16384
./configutil -o local.store.notifyplugin.index.msgflags.enable
-v 0
./configutil -o local.store.notifyplugin.index.msgtypes.enable
-v 0
./configutil -o local.store.notifyplugin.index.newmsg.enable
-v 1
./configutil -o
local.store.notifyplugin.index.noneinbox.enable -v 1
./configutil -o
local.store.notifyplugin.index.overquota.enable -v 0
./configutil -o local.store.notifyplugin.index.persistent -v 0
./configutil -o local.store.notifyplugin.index.priority -v 4
./configutil -o local.store.notifyplugin.index.purgemsg.enable
-v 0
./configutil -o local.store.notifyplugin.index.readmsg.enable
-v 0
./configutil -o
local.store.notifyplugin.index.underquota.enable -v 0
./configutil -o
local.store.notifyplugin.index.updatemsg.enable -v 1
./configutil -o local.store.notifyplugin.index.ttl -v 3600000
./configutil -o local.store.notifyplugin.msgflags -v 1
```

> **Note**
> If you are deploying multiple ISS backends to connect to the same INDEXMS destination, set the `local.store.notifyplugin.index.destinationtype` parameter to **`topic`** rather than queue.

> **Note**
> The `local.store.notifyplugin.index.overquota.enable` and `local.store.notifyplugin.index.underquota.enable` parameters are "newer" parameters that older versions of the `configutil` command do not support. If this is the case, you see a warning about setting an unknown parameter. This only means that the over and under quota events have not been disabled. These events are still sent to ISS but are ignored.

> **Caution**
> If you are using ISS and IMAP IDLE together and if you are using ENS rather than JMQ for IMAP IDLE, verify that the following ENS parameters are still set correctly. The `local.store.notifyplugin` parameter should include `libibiff` and `service.imap.ensidle` should be set to `1`.

c. Important: For Messaging Server 7 Update 3 or earlier versions, if you have changed the guest password for the IMQ broker from its default value and you do not have ENS enabled for IDLE, you might also need to either disable IDLE and `imkill` over JMQ, or provide a valid JMQ user name and password for their configuration.

- To disable IDLE and KILL over JMQ, run the following:

```
# cd <msg-svr-base>/bin
# ./configutil -o service.imap.ensidle -v 1
```

  This setting does not enable ENS. Instead, it merely disables IDLE and `imkill` over JMQ.

- To provide a valid JMQ user name and password for IDLE and JMQ, run the following:

```
# cd <msg-svr-base>/bin
# ./configutil -o service.imap.idle.jmquserid -v
<jmquser>
# ./configutil -o service.imap.idle.jmqpassword -v
<jmquserpassword>
# ./configutil -o local.store.notifyplugin.idle.jmquser
-v <jmquser>
# ./configutil -o local.store.notifyplugin.idle.jmqpwd -v
<jmquserpassword>
```

> **Note**
> Starting with Messaging Server 7 Update 4, the parameters `service.imap.idle.jmquserid` and `service.imap.idle.jmqpassword` might be obsolete and might send a warning message if you attempt to set them. For Messaging Server 7 Update 5, run these commands instead:
> ```
> # cd <msg-svr-base>/bin
> # ./configutil -o
> local.store.notifyplugin.idle.jmquser -v <jmquser>
> # ./configutil -o
> local.store.notifyplugin.idle.jmqpwd -v
> <jmquserpassword>
> ```

- If you skip this step, but the following messages appear in the IMAP log after you restart Messaging Server, you must perform one of the previous two options.

```
[09/Apr/2009:22:59:05 +0000] mailhost imapd[26954]:
General Error: JMQ Error: Broker: invalid login
[09/Apr/2009:22:59:16 +0000] mailhost imapd[26954]:
General Error: JMQ Error: Broker: invalid login
[09/Apr/2009:22:59:26 +0000] mailhost imapd[26954]:
General Error: JMQ Error: Broker: invalid login
[09/Apr/2009:22:59:37 +0000] mailhost imapd[26954]:
General Error: JMQ Error: Broker: invalid login
[09/Apr/2009:22:59:47 +0000] mailhost imapd[26954]:
General Error: JMQ Error: Broker: invalid login
[09/Apr/2009:22:59:58 +0000] mailhost imapd[26954]:
General Error: JMQ Error: Broker connection is closed
```

d. To make the changes effective, restart Messaging Server. For example:

```
# cd <msg-svr-base>/bin
# ./stop-msg
# ./start-msg
```

e. Verify that the JMQ index plugin is working by checking for an entry such as the following in the *msg-srv-base*`/log/imap` log:

```
[28/May/2013:22:35:35 +0000] mailhost imapd[13996]: General
Notice: JMQ notifica tions enabled: index
[28/May/2013:22:35:35 +0000] mailhost imapd[13996]: General
Notice: jmqNotify JM Q initialization MQCreateConnection [dest
: index] [host : 127.0.0.1]
[28/May/2013:22:35:35 +0000] mailhost imapd[13996]: General
Notice: jmqNotify JM Q initialization MQCreateSession [dest :
index] [host : 127.0.0.1]
[28/May/2013:22:35:35 +0000] mailhost imapd[13996]: General
Notice: jmqNotify JM Q initialization MQCreateDestination
[dest : index] [host : 127.0.0.1] [topic :  INDEXMS]
[28/May/2013:22:35:35 +0000] mailhost imapd[13996]: General
Notice: jmqNotify JM Q initialization
MQCreateMessageProducerForDestination [dest : index] [host :
12 7.0.0.1]
[28/May/2013:22:35:35 +0000] mailhost imapd[13996]: General
Notice: jmqNotify JM Q initialization MQCreateTextMessage
[dest : index] [host : 127.0.0.1]
[88/May/2013:15:11:07 -0700] mailhost imapd[19507]: General
Warning: Oracle Communications Messaging Server IMAP4
7u5-28.21(7.0.5.28.0) 64bit (built Apr 8 2013) starting up
```

Messaging Server 7 Update 4 and later may require that the NSS shared component be updated before JMQ notifications will work properly. If the *msg-srv-base*`/log/imap` log contains an error at start up similar to the following:

```
[26/Jun/2012:18:55:00 +0000] bco44 imapd[5471]: General Error:
jmqNotify JMQ initialization error The library is incompatible
```

Then consult the patch README for Messaging Server to determine the corresponding required patch level for the NSS/NSPR/JSS patch. For example, Messaging Server 7 Update 4 Patch 25 requires the 3.12.8 version of NSS shared component.

f. Verify that no login errors have occurred on the IMQ broker by checking the `/var/imq/instances/imqbroker/log/log.txt` file. For example:

```
[06/Apr/2009:19:51:32 PDT] [B1065]: Accepting:
jmquser@127.0.0.1:65220->jms:63268. Count: service=1 broker=1
[06/Apr/2009:19:51:33 PDT] [B1065]: Accepting:
jmquser@127.0.0.1:65223->jms:63268. Count: service=2 broker=2
[06/Apr/2009:19:51:34 PDT] [B1065]: Accepting:
jmquser@127.0.0.1:65226->jms:63268. Count: service=3 broker=3
[06/Apr/2009:19:51:34 PDT] [B1065]: Accepting:
jmquser@127.0.0.1:65228->jms:63268. Count: service=4 broker=4
[06/Apr/2009:19:51:35 PDT] [B1065]: Accepting:
jmquser@127.0.0.1:65232->jms:63268. Count: service=5 broker=5
```

g. Verify that Messaging Server has producers connected to the INDEXMS destination:

```
# imqcmd list dst
Username: admin
Password:
Listing all the destinations on the broker specified by:

-------------------------
Host         Primary Port
-------------------------
localhost    7676

----------------------------------------------------------------------
Name      Type    State      Producers        Consumers
Msgs
                             Total  Wildcard  Total  Wildcard
Count  Remote  UnAck  Avg Size
----------------------------------------------------------------------
Queue  RUNNING  9     -         0      -         0      0       0
0.0
mq.sys.dmq   Queue  RUNNING  0      -         0      -         0
0       0      0.0

Successfully listed destinations.
```

h. For more information, see JMQ Notification.

4. Prepare, but do not enable, Messaging Server to forward some IMAP SEARCH queries to ISS.

> **Note**
> In this step, you send some IMAP search and sort commands to ISS. The `service.imap.indexer.hostname` `configutil` parameter must also be set to function correctly. ISS processes search operations based on words rather than substrings; consequently, results might not follow IMAP standards and might differ from a search performed by the IMAP server.
>
> ISS is not used in any of the following scenarios:
>
> - Starting with Messaging Server 7.0.5.30.0, ESEARCH extension features other than "RETURN ALL" are present.
> - KEYWORD, HEADER, OLDER, YOUNGER, MODSEQ, ANNOTATION, or RECENT appears
> - SUBJECT, FROM, TO, CC, BCC, TEXT or BODY is not present
>
> If an error occurs from ISS, then the search might fall back to processing by the IMAP server. See the ISS documentation for details on what searches ISS supports, because it might not support all combinations of AND, OR and NOT operations that IMAP supports.

ISS IMAP SEARCH configutil Parameters

Parameter	Description	Default Value
`service.imap.indexer.hostname`	Name of host providing ISS RESTful search service	`NULL` (must be configured if `service.imap.indexer.enable` is set)
`service.imap.indexer.port`	Port number of ISS RESTful search service	`8080`
`service.imap.indexer.enable`	Redirects some IMAP SEARCH queries to ISS for fulfillment	0

> **Note**
> After ISS has been enabled, and users have been indexed and searching has been verified, this step is revisited to set `service.imap.indexer.enable` to `1` so that the setting then redirects IMAP SEARCH queries to ISS for fulfillment.

1. a. Before ISS is enabled, apply the following settings:

```
# cd <msg-svr-base>/bin
# ./configutil -o service.imap.indexer.hostname -v
<iss-web-frontend-host-name>
# ./configutil -o service.imap.indexer.port -v
<iss-web-frontend-port-number>
# ./configutil -o service.imap.indexer.enable -v 0
```

   b. To make the changes effective, restart Messaging Server. For example:

```
# cd <msg-svr-base>/bin
# ./refresh imap
```

2. Return to 4. Prepare Messaging Server for ISS.

setup Usage

setup Usage

> This utility was renamed to simply `setup` in **Indexing and Search Service 1 Update 2**. In previous releases, the utility was called `setup.sh`.

The `setup` utility configures and starts all services for Indexing and Search Service. This script expects all supporting services to be running, including:

- GlassFish Server
- GlassFish Message Queue
- Directory Server (for ISS and Messaging Server message store)

Requirements: Must be root.

Location: *iss-base*`/bin/setup`

Syntax

```
setup [ -b basedir ] [ -c conf | -f conf ]
    [ -l logfile ] [ -t type ] [ -u ]
    [ -i isshost ] [ -L ] [ -O ] [ -D ]
    [ -S statefile ] [ -s ] [ -v ] [ -h ]
    [ install | uninstall | reconfigure | restart ]
```

> The `-s` option was introduced in **Indexing and Search Service 1 Update 2**.

Options

These are the options for this command:

setup Options

Option	Description
`install`	Sets up and configures the ISS system (default).
`uninstall`	Stops and removes the ISS system.
`restart`	Restarts ISS services by using `svc_control.sh`.
`reconfigure`	Uninstalls then reinstalls by using the same configuration.
`-b` *basedir*	Required. Specifies the base directory of the installation.
`-c` | *conf*	Optional. Specifies location of configuration file for running in unattended mode.
`-f` | *conf*	Optional. Specifies location of configuration file for running in unattended mode.
`-i` *isshost*	Optional. Fully qualified domain name to use for host name.
`-l` *logfile*	Optional. Defaults to `/var/tmp/jiss-install.`*pid*.
`-L`	Optional. Use `/bin/hostname` for the ISS machine name, `/bin/hostname` must return a FQDN.
`-t` *TYPE*	Optional. Defaults to `all`. Specifies the type of install or uninstall to perform, can be a comma separated list: `all`: All components `web`: Configure GlassFish Server, that is, web node, deploy the JISS wars to GlassFish Server `jmq`: Configure GlassFish Message Queue, that is, jmq node, set up the Java Message Queue and Directory Server entries for ISS `ldap`: Configure Directory Server, that is, JNDI configuration `cluster`: Configure Cluster Services for ISS `index`: Configure index node and start indexing services `watcher`: Configure the watcher service for ISS
`-u`	Optional. Specifies to run in UNINSTALL mode. Same as providing `uninstall` option.
`-D`	Dry run, checks the configuration files but does not configure. Output configuration to `-S` *statefile* is required.
`-O`	Optional. Overwrites the `jiss.conf` file and password configuration if present.
`-S` *STATEFILE*	Optional. Generates state file based on install.
`-s`	Optional. Installs but does not start index services.
`-v`	Optional. Enables shell debugging.
`-h`	Optional. Prints help text.

Arguments can appear in any order.

Examples

- To install and configure all services:

```
/opt/sun/comms/jiss/bin/setup -t all
```

- To uninstall:

```
/opt/sun/comms/jiss/bin/setup -u
```

- To install and take options from a configuration file:

```
/opt/sun/comms/jiss/bin/setup -c my.conf
```

- To install and overwrite existing configuration:

```
/opt/sun/comms/jiss/bin/setup -O
```

- To install and use host to answer ISS questions:

```
/opt/sun/comms/jiss/bin/setup -i isshost.example.com
```

- To set up only `ldap` and `jmq` configurations:

```
# /opt/sun/comms/jiss/bin/setup -t ldap,jmq
```

verify_conf.pl Usage

verify_conf.pl

The `verify_conf.pl` utility is used to verify the *iss_base*`/etc/jiss.conf` and *iss_base* `/etc/jiss_passwd.conf` files for Indexing and Search Service. The utility checks for required parameters and formatting.

Location: *iss-base*`/bin/verify_conf.pl`

Syntax

```
verify_conf.pl [ -f <JISS_CONF> ] [ -p <PASSWD_CONF> ][ -v ] [ -h ]
```

Options

These are the options for this command:

Option	Description
`-f` *JISS_CONF*	Optional. Location of `jiss.conf` file, assumes `../etc/jiss.conf` if not provided.
`-p` *PASSWD_CONF*	Optional Location of `jiss_passwd.conf` file, assumes `../etc/jiss_passwd.conf` if not provided.
`-v`	Optional. Enables shell debugging.
`-h`	Optional. Prints help text.

Exit code 0 indicates a success.
Exit code 1 indicates a failure.

Arguments can appear in any order.

Example

```
# cd <iss-base>/bin
# ./verify_data.pl
# ./verify_data.pl -f /var/tmp/jiss-test.conf -p
/var/tmp/jiss-passwd-test.conf
```

Chapter 8. Installation Scenario - Instant Messaging Server

Installation Scenario - Oracle Communications Instant Messaging Server Version 9

Topics:

- Assumptions
- Deploying an Instant Messaging Multiplexor and Server on One Host
- Which Software Components and Downloads Do You Need?
- To Install and Configure Instant Messaging Server

Assumptions

This scenario shows how to install an instance of Oracle Communications Instant Messaging Server and multiplexor on the same host using the following assumptions:

- You are deploying Communications Suite on multiple hosts or Solaris zones.
- This Instant Messaging server is one functional component of your multi-host deployment.
- You are installing the Instant Messaging server on a separate host or Solaris zone; you are not bundling Instant Messaging with Communication Suite products on the same host.
- If you are distributing multiple instances of the Instant Messaging server across several hosts or zones, you can follow these instructions for each host on which you install the Instant Messaging server.

Deploying an Instant Messaging Multiplexor and Server on One Host

What if you intend to deploy a single-server instance of Instant Messaging (that is, an Instant Messaging deployment with both a multiplexor and Instant Messaging server running on this host)?

Use the following procedure. However, when you run the Instant Messaging configuration program, do not select the Disable Server option.

Which Software Components and Downloads Do You Need?

- Communications Suite: for Instant Messaging

Download sites: Get the Software.

To Install and Configure Instant Messaging Server

1. Use the following worksheet to gather configuration information for the Instant Messaging server: Configuration Worksheets - Instant Messaging
2. Run the Communications Suite installer.
   When the Communications Suite installer lists the components to install, choose the following component: Instant Messaging 9

3. Make sure that the other components are not selected.
4. When the software installation has finished, run the Instant Messaging initial configuration program:

```
<im-svr-base>/sbin/configure
```

   For detailed instructions, see Instant Messaging Initial Configuration.

5. When the Instant Messaging `configure` program runs, the default port numbers are displayed.
6. Do not select the Disable Server option.

Chapter 9. Installation Scenario - Instant Messaging Server Multiplexor

Installation Scenario - Oracle Communications Instant Messaging Server Multiplexor Version 9

Topics:

- Assumptions
- Deploying an Instant Messaging Server and Multiplexor on Different Hosts
- Which Software Components and Downloads Do You Need?
- To Install and Configure Instant Messaging Multiplexor

Assumptions

This scenario shows how to deploy an Instant Messaging Server and Multiplexor on different hosts using the following assumptions:

- You are deploying Communications Suite on multiple hosts or Solaris zones.
- This Instant Messaging multiplexor is one functional component of your multi-host deployment.
- You are installing the Instant Messaging multiplexor on a separate host or Solaris zone. You are not bundling Instant Messaging with Communication Suite products on the same host.
- If you are distributing multiple instances of the Instant Messaging multiplexor across several hosts or zones, you can follow these instructions for each host on which you install the Instant Messaging multiplexor.

Deploying an Instant Messaging Server and Multiplexor on Different Hosts

What if you intend to deploy a single-server instance of Instant Messaging (that is, an Instant Messaging deployment with a multiplexor and Instant Messaging server running on different hosts)?

Use the following procedure. However, when you run the Instant Messaging configuration program, select the **Disable Server** option.

Which Software Components and Downloads Do You Need?

- Communications Suite: for Instant Messaging

Download sites: Get the Software.

To Install and Configure Instant Messaging Multiplexor

1. Use the following worksheet to gather configuration information for the Instant Messaging multiplexor: Configuration Worksheets - Instant Messaging
2. Run the Communications Suite installer.
   When the Communications Suite installer lists the components to install, choose the following

component: Instant Messaging 9

3. Make sure that the other components are not selected.
4. When the software installation has finished, run the Instant Messaging initial configuration program:

```
<im-svr-base>/im/configure
```

   For detailed instructions, see Instant Messaging Initial Configuration.

5. When the Instant Messaging `configure` program runs, type the Multiplexor Port Number.
   This is the port number on which Instant Messaging Server listens for incoming requests from Instant Messenger clients. The default port is 5222.
6. Select the Disable Server option.
   Select this option if the instance you are installing acts as a multiplexor and not a server. If you select this option, you must provide a value for Remote Instant Messaging Server Host Name.
7. When the Remote Instant Messaging Server Host Name option appears, type the host name of the Instant Messaging server for which this multiplexor routes messages.
   (If the multiplexor and server are installed on the same host, use `localhost`. (Solaris Only) If you are configuring High Availability service for Instant Messaging, use the logical host's name.)
   Dependencies: This option is not available unless the Disable Server parameter has been selected. That is, server functionality must be disabled on this host.

Chapter 10. Installation Scenario - Message Store

Installation Scenario - Message Store

Beginning with Messaging Server 7 Update 5, you need to decide if you want to use Unified Configuration or legacy configuration. Unified Configuration is an improved, streamlined process to configure and administer Messaging Server. Unlike in legacy configurations (Messaging Server 7 Update 4 and prior releases), Unified Configuration uses validation to verify configuration accuracy, and employs a single tool to configure the entire Messaging Server configuration (with a few exceptions). For more information, see Overview of Messaging Server Unified Configuration.

Topics:

- Assumptions
- Which Software Components and Downloads Do You Need?
- Installing and Configuring the Messaging Store

Assumptions

This scenario shows how to install the Messaging Server back-end message store on a separate host using the following assumptions:

- You are deploying Communications Suite on multiple hosts or Solaris zones.
- This Messaging Server back-end message store is one functional component of your multi-host deployment.
- You are installing the message store on a separate host or Solaris zone; you are not bundling the message store with Communication Suite products on the same host.
- If you are distributing multiple partitions of the message store across several hosts or zones, you can follow these instructions for each host on which you install store partitions.

Which Software Components and Downloads Do You Need?

- Communications Suite: for the Messaging Server message store

Download site: Get the Software.

Installing and Configuring the Messaging Store

Before Installing the Message Store

1. Ensure tht DNS is running and configured properly.
   For details, see DNS configuration.
2. Recommended file systems for the message store are listed here.
3. Make sure you do not configure conflicting port numbers on a machine when various components are running on a single machine. For a list of port numbers used by Messaging Server, see Default Port Numbers.

To Install and Configure the Message Store

1. Use the following worksheet to gather configuration information for the message store:

Configuration Worksheets - Messaging Server

2. Run the Communications Suite installer.
   When the Communications Suite installer lists the components to install, choose Messaging Server.
3. When the software installation has finished, run the Messaging Server `configure` command.
   - To configure a legacy configuration, run the `configure` command.
     For more information on options to the `configure` command, see To Run the Configure Program.
   - To configure a Unified Configuration, run the `configure --xml` command.
     For more information on options to the `configure --xml` command, see CommSuite:Messaging Server Unified Configuration Command-line Utilities.
     For detailed instructions on performing an initial configuration, see Messaging Server Initial Configuration.
4. If you are not also using the Webmail server on this message store, disable it.
   - In legacy configuration, run this command:

     ```
     configutil -o service.http.enable -v 0
     ```

   - In Unified Configuration, run this command:

     ```
     msconfig set http.enable 0
     ```

5. If you are configuring LMTP, see To Configure LMTP Deliver.

Chapter 11. Installation Scenario - Message Transfer Agent

Installation Scenario - Message Transfer Agent (MTA)

Beginning with Messaging Server 7 Update 5, you need to decide if you want to use Unified Configuration or legacy configuration. Unified Configuration is an improved, streamlined process to configure and administer Messaging Server. Unlike in legacy configurations (Messaging Server 7 Update 4 and prior releases), Unified Configuration uses validation to verify configuration accuracy, and employs a single tool to configure the entire Messaging Server configuration (with a few exceptions). For more information, see Overview of Messaging Server Unified Configuration.

Topics:

- Assumptions
- Which Software Components and Downloads Do You Need?
- Installing and Configuring the MTA

Assumptions

This scenario shows how to install the Message Transfer Agent (MTA) on a separate host using the following assumptions:

- You are deploying Communications Suite on multiple hosts or Solaris zones.
- This MTA relay in and MTA relay out is one functional component of your multi-host deployment.
- You are installing the MTA on a separate host or Solaris zone; you are not bundling the MTA with other Communications Suite products on the same host.
- If you are distributing multiple instances of the MTA across several hosts or zones, you can follow these instructions for each host on which you install the MTA.

Which Software Components and Downloads Do You Need?

- Communications Suite: for the Messaging Server MTA

Download site: Get the Software.

Installing and Configuring the MTA

Before Installing the MTA

1. Ensure that DNS is running and configured properly. For details, see DNS configuration.
2. Make sure you do not configure conflicting port numbers on a machine when various components are running on a single machine. For a list of port numbers used by Messaging Server, see Default Port Numbers.

To Install and Configure the MTA

1. Use the following worksheet to gather configuration information for the MTA: Configuration Worksheets - Messaging Server

2. Run the Communications Suite installer.
   When the Communications Suite Installer lists the components to install, choose Messaging Server.
3. When the software installation has finished, run the Messaging Server `configure` command.
   - To configure a legacy configuration, run the `configure` command.
     For more information on options to the `configure` command, see To Run the Configure Program.
   - To configure a Unified Configuration, run the `configure --xml` command.
     For more information on options to the `configure --xml` command, see CommSuite:Messaging Server Unified Configuration Command-line Utilities.
     For detailed instructions on performing an initial configuration, see Messaging Server Initial Configuration.
4. Disable the Message Store and Webmail Server.
   - In legacy configuration, run these commands:

     ```
     configutil -o local.store.enable -v 0
     configutil -o service.http.enable -v 0
     ```

   - In Unified Configuration, run these commands:

     ```
     msconfig set store.enable 0
     msconfig set http.enable 0
     ```

5. Configure the relay for the kind of traffic you are dealing with and the kind of traffic shaping you need.
   For example, if your inbound relay needs to use LMTP, configure your deployment accordingly.

Chapter 12. Installation Scenario - Messaging Multiplexor

Installation Scenario - Messaging Multiplexor (MMP) Front End

Beginning with Messaging Server 7 Update 5, you need to decide if you want to use Unified Configuration or legacy configuration. Unified Configuration is an improved, streamlined process to configure and administer Messaging Server. Unlike in legacy configurations (Messaging Server 7 Update 4 and prior releases), Unified Configuration uses validation to verify configuration accuracy, and employs a single tool to configure the entire Messaging Server configuration (with a few exceptions). For more information, see Overview of Messaging Server Unified Configuration.

Topics:

- Assumptions
- Which Software Components and Downloads Do You Need?
- Installing and Configuring the MMP

Assumptions

This scenario shows how to install the Messaging Multiplexor (MMP) front-end on a separate host using the following assumptions:

- You are deploying Communications Suite on multiple hosts or Solaris zones.
- This MMP front end is one functional component of your multi-host deployment.
- You are installing the MMP on a separate host or Solaris zone; you are not bundling the MMP with other Communication Suite products on the same host.
- If you are distributing multiple instances of the MMP partitions across several hosts or zones, you can follow these instructions for each host on which you install the MMP.
- You are installing only the MMP front end; you are not installing message store or SMTP functions.

Which Software Components and Downloads Do You Need?

- Communications Suite: for the Messaging Server MMP front end

Download site: Get the Software.

Installing and Configuring the MMP

Before Installing the MMP

1. Ensure that DNS is running and configured properly. For details, see DNS configuration.
2. Make sure you do not configure conflicting port numbers on a machine when various components are running on a single machine. For a list of port numbers used by Messaging Server, see Default Port Numbers.

To Install and Configure the MMP

1. Use the following worksheet to gather configuration information for the MMP: Configuration Worksheets - Messaging Server
2. Run the Communications Suite installer.
   When the Communications Suite Installer lists the components to install, choose Messaging Server.
3. Make sure that the other components are not selected.
4. When the software installation has finished, run the Messaging Server `configure` command.
   - To configure a legacy configuration, run the `configure` command.
     For more information on options to the `configure` command, see To Run the Configure Program.
   - To configure a Unified Configuration, run the `configure --xml` command.
     For more information on options to the `configure --xml` command, see CommSuite:Messaging Server Unified Configuration Command-line Utilities.
     For detailed instructions on performing an initial configuration, see Messaging Server Initial Configuration.
5. Enable the MMP and disable other product components.
   - In legacy configuration, run these commands:

     ```
     configutil -o local.mmp.enable -v 1
     configutil -o local.store.enable -v 0
     configutil -o local.imta.enable -v 0
     configutil -o service.http.enable -v 0
     ```

   - In Unified Configuration, run these commands:

     ```
     msconfig set mmp.enable 1
     msconfig set store.enable 0
     msconfig set mta.enable 0
     msconfig set http.enable 0
     ```

Chapter 13. Installation Scenario - Messaging Server Webmail Server

Installation Scenario - Messaging Server Webmail Server Version 7 Update 5

Beginning with Messaging Server 7 Update 5, you need to decide if you want to use Unified Configuration or legacy configuration. Unified Configuration is an improved, streamlined process to configure and administer Messaging Server. Unlike in legacy configurations (Messaging Server 7 Update 4 and prior releases), Unified Configuration uses validation to verify configuration accuracy, and employs a single tool to configure the entire Messaging Server configuration (with a few exceptions). For more information, see Overview of Messaging Server Unified Configuration.

Topics:

- Assumptions
- Which Software Components and Downloads Do You Need?
- Installing and Configuring Webmail Server
- Configuring Webmail Server Examples

Assumptions

This scenario shows how to install the Messaging Server Webmail Server (`mshttpd`) on a separate host. The Webmail Server acts as a front end that handles the HTTP protocol retrieval of messages from the message store. This component is used by Convergence and Communication Express to provide web-based access to end users.

The scenario makes these assumptions:

- You are deploying Communications Suite on multiple hosts or Solaris zones.
- This Webmail Server is one functional component of your multi-host deployment.
- You are installing the Webmail Server on a separate host; you are not bundling the Webmail Server with other Communication Suite products on the same host.
- If you are distributing multiple Webmail Servers across several hosts, you can follow these instructions for each host on which you install the Webmail Server.
- You are installing only the Webmail Server front end; you are not installing message store or SMTP functions.

Which Software Components and Downloads Do You Need?

- Communications Suite: for the Webmail Server

Download site: Get the Software.

Installing and Configuring Webmail Server

Before Installing the Webmail Server

1. Ensure that DNS is running and configured properly. For details, see DNS configuration.

2. Make sure you do not configure conflicting port numbers on a machine when various components are running on a single machine. For a list of port numbers used by Messaging Server, see Default Port Numbers.

To Install and Configure the Webmail Server

1. Use the following worksheet to gather configuration information for the Webmail Server: Configuration Worksheets - Messaging Server.
2. Run the Communications Suite installer.
   When the Communications Suite Installer lists the components to install, choose Messaging Server.
   Make sure that the other components are not selected.
3. When the software installation has finished, run the Messaging Server `configure` command.
   - To configure a legacy configuration, run the `configure` command.
     For more information on options to the `configure` command, see To Run the Configure Program.
   - To configure a Unified Configuration, run the `configure --xml` command.
     For more information on options to the `configure --xml` command, see CommSuite:Messaging Server Unified Configuration Command-line Utilities.
     For detailed instructions on performing an initial configuration, see Messaging Server Initial Configuration.
4. Disable the Message Store and MTA on the WebMail Server host.
   - For legacy configuration:

     ```
     configutil -o local.store.enable -v 0
     configutil -o local.imta.enable -v 0
     ```

   - For Unified Configuration:

     ```
     msconfig set store.enable 0
     msconfig set mta.enable 0
     ```

5. (Optional) Set the following options.
   If you want to use a different store administrator or a non-standard IMAP port, use the following options for the back-end IMAP server(s):

Unified Configuration Option	Legacy Configuration Option	Description
`base.proxyadmin`	`local.service.proxy.admin`	Default back-end store administrator login name. (Restart of HTTP service required; Restart of IMAP service required). Syntax: string Default: `admin`
`base.proxyadminpass`	`local.service.proxy.adminpass`	Default store administrator password. (Restart of HTTP service required; Restart of IMAP service required). Syntax: string Default: <*admin.password*>
`base.proxyimapport`	`local.service.proxy.imapport`	Default IMAP port number for backend store servers. (Restart of HTTP service required; Restart of IMAP service required). Syntax: integer Default: 143

The Webmail Server can communicate with multiple back-end IMAP servers. If the IMAP servers use different values for these options, you must set individual values for each host, as follows:

Unified Configuration Option	Legacy Configuration
`proxy:`*hostname*`.admin` `proxy:`*hostname*`.adminpass`	`local.service.proxy.admin.`*hostname* `local.service.proxy.adminpass.`*hostname*
`proxy.`*hostname*`.imapport`	`local.service.imapport.`*hostname*

where *hostname* is the name of the host on which each back-end IMAP server is running.

> **Note**
> In general in Unified Configuration, for proxy-related options there should me two scopes for the same option:
> - `base.`*option* is the global scope.
> - `proxy:`*hostname.option* is the host-specific scope.
>
> Currently, an error in Unified Configuration causes the same option to have two different names depending on the scope. Thus, `base.proxyimapport` is equivalent to `proxy:`*hostname*`.imapport`, `base.proxyimapport` is equivalent to `proxy:`*hostname*`.imapport`, and `base.proxyimapadminpass` is equivalent to `proxy:`*hostname*`.imapadminpass`. In addition, there is no host-specific form for `base.proxyimapssl`. It is a single global setting.

Configuring Webmail Server Examples

Topics in this section:

- Legacy Configuration
- Unified Configuration

Legacy Configuration

For one back-end IMAP server:

```
configutil -o local.service.proxy.admin -v myadmin
configutil -o local.service.proxy.adminpass -v <password>
configutil -o local.service.proxy.imapport -v 143
```

For multiple back-end IMAP servers:

```
configutil -o local.service.proxy.admin.host1.siroe.com -v admin1
configutil -o local.service.proxy.adminpass.host1.siroe.com -v
<password>
configutil -o local.service.proxy.imapport.host1.siroe.com -v 143

configutil -o local.service.proxy.admin.host2.siroe.com -v admin2
configutil -o local.service.proxy.adminpass.host2.siroe.com -v
<password>
configutil -o local.service.proxy.imapport.host2.siroe.com -v 143
```

Unified Configuration

For one back-end IMAP server:

```
msconfig set base.proxyadmin -myadmin
msconfig set base.proxyadminpass <password>
msconfig set base.proxyimapport -143
```

Chapter 14. New Features

New Features in Oracle Communications Unified Communications Suite Version 7 Update 4

This document summarizes the features in Oracle Communications Unified Communications Suite 7 Update 4 that are new or have been enhanced since Oracle Communications Suite Unified Communications Suite 7 Update 4 for the following components:

Oracle Communications Unified Communications Suite Products and Components Version 7 Update 4

Product	Version
Oracle Communications Messaging Server	7 Update 5 (Patch 28)
Oracle Communications Instant Messaging Server	9 (Patch 3)
Convergence	2 (Patch 6)
Oracle Communications Calendar Server	7 Update 3 (Patch 10)
Delegated Administrator for Oracle Communications Unified Communications Suite	7 (Patch 7)
Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite	8
Indexing and Search Service for Oracle Communications Unified Communications Suite	1 Update 4 (Patch 16)
Messaging Server HA Agent (MS_SCHA)	7
Instant Messaging HA Agent (IM_SCHA)	7.3
Dssetup for Oracle Communications Unified Communications Suite (`comm_dssetup`)	6.4 Patch 24

Check Communications Suite Component Patches for current patches that have shipped since the initial Communications Suite 7 Update 4 release.

This document contains the following sections:

- New Features in Messaging Server 7 Update 5
- New Features in Messaging Server 7.0.5.29.0
- New Features in Convergence 2 Patch 6
- New Features in Calendar Server 7 Update 3 Patch 10
- New Features in Indexing and Search Service 1 Update 4 Patch 16
- New Features in Instant Messaging 9
- New Features in Delegated Administrator 7 Patch 7
- New Features in Connector for Outlook 8
- New Features in DSsetup 6.4 Patch 24

New Features in Messaging Server 7 Update 5

Messaging Server 7 Update 5 includes the following new features:

- Messaging Server Minor Features

- Unified Configuration
- ICU 4 Support
- Password Aging Support
- Scan Message Store for Newly Discovered Viruses and Spam
- Enhanced Support for Microsoft Exchange 2007 Journaling Format
- Support for Sieve Vacation Seconds Extension
- iMIP Support
- Messaging Multiplexor Now Honors Most Authentication and LDAP-Related `configutil` Settings
- Support for IMAP STARTTLS when Proxies Connect to Back-end
- Support for IMAP Response Codes
- Store Options to Support Third-Party Authentication Co-process
- MTA OSYNC Option
- Support for -size Option in imsimta test -rewrite
- New Rewrite Rule Metacharacters $, and $>
- SMTP Client Trace Level Debugging Support
- SMS Gateway Server Can Deliver Content in Subject Header Line
- MMP and IMAP Performance Improved on Solaris by Use of Solaris Event Ports
- MMP Scalability Improvements: mmp.numprocesses
- Updates to the Sieve Address Test
- Enhanced SPAMFILTERx_RECEIVED (x=1,8) MTA Options
- MTA Rejects UIDs That Begin With a Hyphen (-)
- Enhanced V Transaction Log Entries
- Some LDAP URL and DNs Errors Ignored
- IMAP Authentication Messages Now Include Session ID
- ENS Events Include Quota Information
- smtps: Negotiation Failures Produce O and C Records
- MMP, watcher, and msprobe Scalability and Performance Improvements
- ugldapport Option
- Diagnostic Improvements to nslog (Message Store and MMP)
- Increase Default Log File Rollover Size Limits (Message Store and MMP)
- Enable IMAP CONDSTORE extension by default
- The IMAP Non-Standard XSERVERINFO Extension Is Now Disabled by Default
- Support for Extended IMAP Access Control List (ACL; RFC4314) Has Been Added
- Access to a Disabled User's Shared Folders Is Now Prevented

Messaging Server Minor Features

Features Introduced in Messaging Server 7 Update 5

Unified Configuration

Unified Configuration is an improved facility to configure and administer Messaging Server. Unlike with the legacy configuration method (Messaging Server 7 Update 4 and prior releases), Unified Configuration uses validation to verify configuration accuracy and employs a single tool to configure the entire Messaging Server configuration (with a few exceptions). It features improved security, with obfuscated password stored in separate file from the configuration file. Unlike the legacy method, with Unified Configuration, most of the settings are stored in one file. The automation of configuration management tasks is supported using a programming language-like interface.

New installations use the legacy configuration method by default. However, a Unified Configuration can optionally be generated and used instead. If you use Unified Configuration in a new installation and later decide to revert to the legacy method, configuration changes made to the Unified Configuration are not back ported to the legacy configuration. There is no migration path to convert a Unified Configuration to a legacy configuration.

Upgraded installations can also convert from the legacy configuration method to Unified Configuration.

> **Note**
> Unified Configuration is only supported on 64-bit platforms.

For more information, see: Overview of Messaging Server Unified Configuration

ICU 4 Support

To better support some international characters, Messaging Server now includes support for ICU 4 (library which provides Unicode and Globalization support). Because this version of the library is not currently available on Solaris 10 or Linux, it is bundled with the Messaging Server package instead of depending on a version installed with the operating system.

Password Aging Support

(Bug: 12093863)

The Messaging Server now honors LDAP password policies. It sends an IMAP ALERT when a user's LDAP password is about to expire. Refer to Directory Server documentation for setting this up (see Oracle Identity Management documentation). You can use MeterMaid to limit the frequency of warnings.

Scan Message Store for Newly Discovered Viruses and Spam

(Bug: 12266635)

You can configure the Message Transport Agent (MTA) to scan the message store for newly discovered viruses and spam. To do this, set the `ENABLE_SIEVE_BODY` parameter to `1` in `option.dat`.

Enhanced Support for Microsoft Exchange 2007 Journaling Format

Messaging Server can be configured to generate Microsoft Exchange 2007 format journaling messages using the JOURNAL_FORMAT attribute.

Support for Sieve Vacation Seconds Extension

You can specify minimum values for vacation `:days` and `:seconds` parameters using the new `VACATION_MINIMUM_TIMEOUT` parameter.

iMIP Support

iMIP is now supported to provide better integration between Calendar and Messaging Servers. (Refer to RFC2447.) See Using the iSchedule Channel to Handle iMIP Messages for more information.

Messaging Multiplexor Now Honors Most Authentication and LDAP-Related `configutil` Settings

The Messaging Multiplexor (MMP) honors most authentication and LDAP-related `configutil` settings (such as `sasl.*, local.ugldaphost, and local.ugldapbinddn`) if the equivalent setting is not also set in the separate MMP configuration file. As a result, there is no longer a need for the files `ImapProxyAService-def.cfg, PopProxyAService-def.cfg,` and `SmtpProxyAService-def.cfg` in the configuration directory.

Support for IMAP STARTTLS when Proxies Connect to Back-end

When `service.imap.plaintexmincipher` is set to a non-zero value, the back-end IMAP server will not permit password authentication without use of SSL or STARTTLS. The MMP, mshttpd and IMAP shared folder functions now detect this situation and attempt to negotiate SSL/TLS prior to authenticating. SSL must still be enabled for the relevant proxy (although the client is not required to negotiate SSL for this to work, nor does the proxy have to be configured to require SSL for authentication). For example, `ImapProxyAService.cfg` should contain `"default:SSLEnable yes"`.

(MMP, `mshttpd`, IMAP Shared Folders)

Support for IMAP Response Codes

IMAP response code support (RFC5530) is implemented in both the IMAP Server and MMP.

Store Options to Support Third-Party Authentication Co-process

Support for third-party authentication co-processes such as MMP has been added through the new options `sasl.default.authenticationserver` and `sasl.default.authenticationldapattributes`. See `examples/tpauth/authserver.txt` for more information.

MTA OSYNC Option

The `OSYNC` MTA option has been added enable the use of `O_SYNC` when creating queue entries. If `OSYNC` is set to `1`, the `O_SYNC` flag is set when creating queue entries. The default is `0`.

Support for -size Option in imsimta test -rewrite

The MTA option `-size=`*n* simulates the SMTP SIZE extension to verify size-based restrictions.

New Rewrite Rule Metacharacters $, and $>

Two new metacharacters in rewrite rules, `$`, and `$>`, are available to validate top-level domains.

SMTP Client Trace Level Debugging Support

You can now enable trace level debugging (`TRACE_LEVEL=2`) for certain SMTP clients. To do this, specify `$G` in the `PORT_ACCESS` mapping entry.

SMS Gateway Server Can Deliver Content in Subject Header Line

Gateway profiles may now request that the SMS Gateway Server place the entire content of an SMS message gatewayed to email only in the email message's Subject: header line. No content is placed in the email message's body.

Set the new `TEXT_TO_SUBJECT` option to `1` to enable this behavior.

When `TEXT_TO_SUBJECT=1`, the `EMAIL_BODY_CHARSET` option is ignored for that gateway profile. The default value of the `PARSE_RE_0` option becomes `[\t]([^(])[ \t](.)`.

MMP and IMAP Performance Improved on Solaris by Use of Solaris Event Ports

On Solaris, event ports are now used by default instead of the `poll()` system call. This improves MMP

and IMAP scalability.

MMP Scalability Improvements: mmp.numprocesses

A single MMP process is not as effective as multiple MMP processes in using the resources of a multicore processor. To create multiple MMP processes, set `mmp.numprocesses` to the number of processes you want. The default value of `mmp.numprocesses` is `1`.

For installations using the legacy `configutil` configuration method instead of Unified Configuration, the only way to change the value of `mmp.numprocesses` is to use the `service.mmp.numprocesses` `configutil` setting.

Note that setting `mmp.numprocesses` to a value greater than 1 is incompatible with POP before SMTP and that POP before SMTP is now deprecated (see Deprecated and Removed Features for Messaging Server).

Updates to the Sieve Address Test

The Sieve address test now uses the heuristic address parser instead of the strict parser.

Enhanced SPAMFILTERx_RECEIVED (x=1,8) MTA Options

`SPAMFILTER`*`x`*`_RECEIVED (x=1,8)` options now accept a value in the range of `0-2`.

- `0`: don't add a synthetic `Received:` field to the message content passed to the spam filter
- `1`: add a synthetic `Received:` field to the message content passed to the spam filter (default value)
- `2`: add an additional clause of the form
  `(envelope-sender <MAIL-FROM-ADDRESS>)`
  to the header. This clause is used by some SpamAssassin configuration as a source of `MAIL FROM` addresses instead of using the standards-compliant `Return-path:` field.

MTA Rejects UIDs That Begin With a Hyphen (-)

The MTA now rejects UIDs that begin with a hypen (-) because they conflict with IMAP ACL formats. The Message Store also continues to perform this validation.

Enhanced V Transaction Log Entries

V transaction log entries now contain a reason field specifying at what point in the transaction the failure occurred and the routine that logged the failure.

Some LDAP URL and DNs Errors Ignored

Errors in LDAP URLs or DNs encountered during group access check or `EXPN` command processing are now ignored

Previously, such errors halted the expansion process.

IMAP Authentication Messages Now Include Session ID

IMAP Authentication messages now include the session ID. You can optionally include the session ID in the IMAP response text using `imap.logauthsessionid` (for Unified Configuration) or `local.imap.logauthsessionid` (for the legacy configuration method).

ENS Events Include Quota Information

ENS Events triggered from modifications to the message store now include quota information.

smtps: Negotiation Failures Produce O and C Records

`smpts:` negotiation failures now produce `O` and `C` records in the connection log and affect the associated counters.

MMP, watcher, and msprobe Scalability and Performance Improvements

The MMP now tracks when it is stressed due to either a shortage of file descriptors or during a backlog of LDAP connections. When stressed in these situations, the MMP notifies the watcher, which prevents a request from msprobe to restart the MMP from taking effect. (An MMP restart is likely to exacerbate a stress situation). If the MMP stops making progress (connecting incoming users to their *mailhost*), the stress state expires and an msprobe restart request becomes viable again. How long the process remains stressed is controlled by the Unified Configuration `base.stressperiod` option, which defaults to 20 seconds. This setting is not available for legacy configuration.

When the MMP becomes stressed, it stops accepting new connections until it is no longer stressed. If desired, you can disable this feature by setting the `base.stressfdwait` Unified Configuration option (`local.stressfdwait` for legacy configuration) to 0.

ugldapport Option

If the `ugldapport` option is set to 636, SSL LDAP is always used, regardless of value of the `ugldapusessl` option.

Diagnostic Improvements to nslog (Message Store and MMP)

During startup, errors are sent both to `stderr` and the log file. After startup, `stderr` errors from non-Messaging Server libraries (such as `assert()`) are recorded in the primary `nslog` log file.

Increase Default Log File Rollover Size Limits (Message Store and MMP)

The default log file size limit used in determining when log rollover occurs has been increased from 2 MB to 20 MB. The maximum space allowed to be used by all log files for a specific service has also been increased accordingly. That is, the log file option `logfile.`**`.maxlogfilesize`** **now defaults to 20 MB, and the option** **`logfile.`**`.maxlogsize` defaults to 200 MB.

Enable IMAP CONDSTORE extension by default

The IMAP CONDSTORE extension has now been enabled by default. The Mozilla Thunderbird client currently uses the CONDSTORE extension if available and provides for significant data transfer reduction on large folders.

The IMAP Non-Standard XSERVERINFO Extension Is Now Disabled by Default

Since the server no longer provides any useful information to clients, the mere presence of the `XSERVERINFO` capability still causes clients such as Mozilla Thunderbird to issue an `XSERVERINFO` command. This wastes a full client-server roundtrip.

Support for Extended IMAP Access Control List (ACL; RFC4314) Has Been

Added

The following are new rights:
k: create sub-folder
x: delete folder
t: delete message (set deleted flag)
e: expunge folder

Access to a Disabled User's Shared Folders Is Now Prevented

When a user is disabled, the IMAP operations `SELECT`, `EXAMINE`, `APPEND`, and `COPY` are denied using IMAP response code `UNAVAILABLE`.

When a user is forced off, all the IMAP sessions accessing the user's folders are also forced off.

New Features in Messaging Server 7.0.5.29.0

Messaging Server 7.0.5.29.0 includes the following new features:

- Access to Intermediate Address Information in Forward Mapping
- New Destination-Channel Keyword for Reducing Message Headers to a Specified Number of Bytes
- New USE_REVERSE_DATABASE Bit Settings Allow Originator-Based Restrictions
- Logging Has Been Enhanced to Include Individual Conversion Tags in Filter Log Entries

Access to Intermediate Address Information in Forward Mapping

Bit 7 (value 128) of `USE_FORWARD_DATABASE`, if set, now includes the initial address presented for alias processing in the `FORWARD` mapping probe. Bit 8 (value 256), if set, now includes the current intermediate address in the `FORWARD` mapping probe. These addresses appear immediately before the final recipient address.

New Destination-Channel Keyword for Reducing Message Headers to a Specified Number of Bytes

A new destination-channel keyword, `headercut,` has been added. If specified, `headercut` cuts the current message header down to no more than a specified number of bytes, using a heurestic algorithm that removes or truncates header fields based on their relative importance. `headercut` requires a single nonnegative integer argument. A value of 0, the default, disables header cutting.

New USE_REVERSE_DATABASE Bit Settings Allow Originator-Based Restrictions

Bits 13 (value 8192) and 14 (value 16384) in the `USE_REVERSE_DATABASE` MTA option have been defined so that, if set, they disable source block and recipient limit settings and capture actions based on the envelope from (MAIL FROM) address (bit 13) and authenticated sender address (bit 14).

Logging Has Been Enhanced to Include Individual Conversion Tags in Filter Log Entries

If the `LOG_FILTER` MTA option is set, a conversion tag added with either the `setconversiontag` or the `addconversiontag` Sieve action is now logged in `mail.log*`.

New Features in Convergence 2 Patch 6

Convergence 2 Patch 6 includes the following changes and new features:

- Support for Tablets
- Support for Tablet Browsers and Operating Systems

Support for Tablets

Convergence 2 Patch 6 provides support for standard 9-inch or 10-inch tablets.

Support for Tablet Browsers and Operating Systems

Convergence 2 Patch 6 now supports Safari on iPad iOS, starting with 6.1.1, and Chrome on Android Jellybean, starting with 4.2.

New Features in Calendar Server 7 Update 3 Patch 10

Calendar Server 7 Update 3 Patch 10 includes the following changes and new features:

- Authenticating Against a Directory External to the Calendar Server Environment
- Booking Window for Calendars
- Changes to the davadmin Command
- Enable and Disable Account Autocreation
- LDAP Pools
- New Configuration Parameters
- New Languages
- New populate-davuniqueid Utility
- New Schema Objects
- Non-active Calendar Accounts Are No Longer Searched or Fetched
- Remote Document Store Authentication

Authenticating Against a Directory External to the Calendar Server Environment

(Bug: 13515972)

Calendar Server 7 Update 3 Patch 10 enables authentication against a separate, LDAP directory external to the Calendar server environment. Such a configuration is useful in hosted environments for delegating one administrative aspect to a provider (managing the Calendar Server front- and back-end hosts and LDAP directory with non-sensitive data), while maintaining control over the LDAP user passwords in the internal, corporate network. In this setup, Calendar Server would use the external directory for authentication.

For more conceptual information on Calendar Server and external authentication, see Calendar Server and Directory Server Integration. To configure Calendar Server for authentication against an external Directory Server, see Configuring External Authentication.

Booking Window for Calendars

(Bug: 13064057)

Calendar Server 7 Update 3 Patch 10 supports the use of a system-wide minimum booking window for calendars through the use of the new `davcore.scheduling.minbookingwindow` configuration parameter. This new parameter compliments the existing maximum booking window support (`davcore.scheduling.maxbookingwindow`) parameter. In addition, starting in Calendar 7 Update 3, you can set account-level minimum and maximum booking window properties through the `davadmin`

`account` command or clients that use the WCAP `set_accountprops` command. The minimum and maximum booking window values define a window of time relative to current time, between which Calendar Server allows the account to be scheduled. Calendar Server enforces the booking window by returning a busy response to the free/busy check done by the scheduling agent if the requested time is outside the booking window. In addition to setting the booking window, you should also set the account's scheduling flag to "decline on conflict" for the window to take effect. The booking window setting also affects calendars configured to auto accept invitations. In the case where auto decline is also configured, it takes precedence over auto accept.

To configure both the minimum and maximum booking windows for accounts, you can use either the `davadmin` command or the `set_accountprops.wcap` interface. In absence of an account property, Calendar Server defaults to using the corresponding system-wide booking window configuration.

Upfront Free/busy Check for Control of Doublebooking and Booking Window During Scheduling

A scheduling attempt requested for an account that has its attendance flag set to "decline on conflict" (the attendance flag is set either by a `CommSuite:set_accountprops.wcap` command or `davadmin account` command), triggers Calendar Server to perform a special free/busy check. This check happens as part of the scheduling process for both CalDAV and WCAP clients. Because scheduling is an asynchronous process, the event organizers are made aware of an error only after they have made the booking. However, for clients that use the WCAP protocol, the same check is performed upfront. This enables the organizer to get an immediate error if the event request results in a conflict for the calendar.

Changes to the davadmin Command

(Bug: 12310347, SR: 1-742597505)

In Calendar Server 7 Update 3 Patch 10, the `davadmin` command has been updated with the following changes:

- The `passfile` option has been updated to accommodate setting a password on the remote document store and corresponding password entry in Calendar server front end that needs to communicate with the document store.
- A new command, `davadmin ldappool`, has been added to support LDAP pools, which are used in configuring external Directory Server authentication.
- The `davadmin account list` command now displays a list of all users in the database and their details.

For more information, see CommSuite:Calendar Server 7 Command-Line Utilities.

Enable and Disable Account Autocreation

(Bug: 12263479)

Calendar Server 7 Update 3 Patch 10 provides the capability to enable or disable, on a system-wide basis, the calendar account autocreation, either on login or invite. For more information, see the `davcore.autocreate.enableautocreate` parameter in Calendar Server 7 Configuration Parameters.

LDAP Pools

Starting with Calendar Server 7 Update 3 Patch 10, you can create LDAP pools for use in authenticating against an external directory. For more information, see the `davadmin ldappool` command and also Configuring External Authentication.

New Configuration Parameters

Calendar Server 7 Update 3 Patch 10 introduces the following configuration parameters:

- `davcore.autocreate.rescalcomponents`: Assigns the default autocreation setting for supported calendar components for a new resource calendar
- `davcore.scheduling.allowownerdoublebooking`: If set, owners of resource calendars can double book even if the resource account prevents doublebooking
- `davcore.scheduling.minbookingwindow`: Specifies the start of a booking window, in days, from the time of scheduling, from which a calendar can be booked in advance

For more information, see Calendar Server 7 Configuration Parameters.

Calendar Server 7 Update 3 Patch 10 also includes the `service.host` parameter for the document store `ashttpd.properties` file.

New Languages

For Calendar Server 7 Update 3 Patch 10, the product configuration program and all notifications that are sent by the server have been localized into the following additional languages: German, Spanish, Korean, Simplified Chinese, and Traditional Chinese.

New populate-davuniqueid Utility

(Bug: 13573588)

Calendar Server 7 Update 3 Patch 10 introduces a new LDAP attribute named `davUniqueId`. This attribute replaces the problematic `nsUniqueId` attribute, whose value is lost when an LDAP entry is deleted and then recreated. (See Changing User uuid for more information about the issues with the `nsUniqueId` attribute.)

To set the value of the `davUniqueId` attribute to the current value of the `nsUniqueId` attribute for existing LDAP entries, use the new `populate-davuniqueid` utility.

For more information, see Calendar Server Unique Identifier.

New Schema Objects

The following LDAP schema objects are added to Calendar Server 7 Update 3 Patch 10 to support authentication against an external Directory Server:

- `externalAuthPreUrlTemplate`: This attribute is used for authentication by using external Directory Servers. Its value is an LDAP URL that defines how users must be searched for in the external Directory Server against which authentication is performed.
- `externalAuthPostUrlTemplate`: This attribute is used for finding the internal Directory Server entry for a user who authenticated by using external Directory Servers. Its value is an LDAP URL that must be used to map the external Directory Server authenticated user to a user in the internal Directory.

The following LDAP schema attribute is also added:

- `davUniqueId`: This attribute can be used to define a unique ID for any `davEntity` user, group, and resource object, much like the operational attribute `nsUniqueId`. It is recommended that `davUniqueId` be used as the value of the `davcore.uriinfo.permanentuniqueid` configuration parameter.

> **Note**
> These new elements are required by Calendar Server 7 Update 3 Patch 10. Schema changes are applied to Directory Server when you run the `comm_dssetup` script. When upgrading to Calendar Server 7 Update 3 Patch 10, you need to first apply the `comm_dssetup` 6.4 patch (at least 6.4-24.02) and run the updated `comm_dssetup` script against your Directory Server instances. See Upgrading Calendar Server for more information.

Non-active Calendar Accounts Are No Longer Searched or Fetched

(Bug: 13398830)

Starting with Calendar Server 7 Update 3 Patch 10, if a calendar account's LDAP `icsStatus` attribute is populated and is not set to `active`, the account is not searched nor are any results fetched for that account when running Calendar Server `davadmin` or WCAP commands. That is, Calendar Server returns search results only for active accounts and does not return unusable data such as inactive calendars.

Remote Document Store Authentication

Calendar Server 7 Update 3 Patch 10 provides enhanced security for remote document stores. A remote document store now requires password authentication for the connection between the Calendar Server and the remote document store server. The password needs to be known by both the document store client (which runs in the Calendar Server itself) and the remote document store server (which runs on the remote host where the store is located). The password is stored in a password file (called a *wallet*) on each of the hosts.

For information on configuring the remote store password, see To Configure Remote Document Store Authentication.

New Features in Indexing and Search Service 1 Update 4 Patch 16

Indexing and Search Service 1 Update 4 Patch 16 includes the following changes and new features:

- Periodic ISS Account Check and Synchronization with Messaging Server
- Recovery after Messaging Server reconstruct Command
- Watcher Service and High Availability Improvements
- Performance Improvements
- Java 7 Support

Periodic ISS Account Check and Synchronization with Messaging Server

(Bugs: 13517733, 13257862, SR: 3-5561340981)

This feature checks every ISS account against Messaging Server accounts at regular intervals to detect differences, for example, from a reconstructed folder or lost event notifications, that ISS can then automatically correct.

Two items control this periodic check:

- Periodic auto-sync: A periodic scan to check that all active ISS accounts are in sync.
- Periodic auto-bootstrap: A scan for accounts unknown to ISS and adding these accounts to a list to be automatically bootstrapped. It is the bootstrap action that is periodic, not the error scanning. The scanning for accounts that need to be bootstrapped occurs continuously as new events arrive

and errors are detected. ISS adds the unknown accounts to the auto-bootstrap "to-do" list whenever trigger conditions are met. The periodic nature of the auto-bootstrap prevents too many accounts from being bootstrapped simultaneously, should many errors show up at once. This process enables the workload to be spread out among the Messaging Server and ISS hosts, instead of trying to correct every such error immediately.

For more information, see Administering Periodic Automatic Synchronization for Indexing and Search Service Accounts.

Recovery after Messaging Server reconstruct Command

(Bug: 13517733)

This feature fixes an issue where ISS becomes out-of-sync when a folder has been reconstructed on Messaging Server. When the `reconstruct` command runs, it may cause the UID validity value and/or UIDs assigned to emails in a folder to change, but does not trigger event notifications to notify ISS of the change. ISS now detects the UID validity mismatch while processing events and re-bootstraps the folder to get it back in sync.

Watcher Service and High Availability Improvements

This feature is designed for the implementation of highly available (HA) ISS nodes, however the service itself is useful even when you do not use HA (which is why it is included in this release). The watcher service provides local host monitoring of ISS services and alerts you, with log file messages and email warnings, when it detects a service outage. Once alerted, you can take the appropriate corrective action, such as restarting a service. The services that are monitored are dependent on the type of ISS installation on which the watcher is running. The `iss.cluster.install` parameter in the `jiss.conf` configuration file defines the ISS installation type:

- `standalone`
- `multi-machine`
- `cluster`
- `clusterv2`

For more information, see Administering the ISS Watcher Service.

Additionally, one of the HA improvements is to enable the cluster search service to run on the back-end nodes, making exposing NFS to the web tier unnecessary. For more information, see Configuring Indexing and Search Service for clusterv2.

Performance Improvements

The following performance improvements for this release are targeted at both general memory and time reductions, and to speed up specific styles of search queries:

- Search service: Email folder manager optimization reduces the number of `indexReaders` opened during search
- `jmqconsumer` process: Candidate file write optimization reduces the IO overhead during event processing of candidate file writing
- Index service: `folderflag` optimization reduces the average size of flag records for folders containing a large number of emails

Java 7 Support

(Bug: 12816657)

Starting with this release of Indexing and Search Service, Java 7 is recommended, as Java 6 is entering

end of life. If you generated your ISS indexes while on Java 6, once you upgrade to Java 7, you should regenerate the indexes. See Upgrading Indexing and Search Service for more information.

New Features in Instant Messaging 9

Instant Messaging 9 Patch 1 includes the following changes and new features:

- Group Messaging
- Offline Messaging
- Default Password Changed
- Manually Configuring httpbind
- Protecting Deployed Instant Messaging Components
- New Configuration Parameter
- New Features in Instant Messaging 9 Patch 3

Group Messaging

You can configure Instant Messaging so that end users can send a message to an LDAP group, which can be either dynamic or static.

- LDAP dynamic group: Membership, rather than being maintained explicitly in a list, is determined by search criteria using an LDAP URL. Dynamic groups use the groupOfURLs object class and the memberURL attribute to define LDAP URLs with the criteria (search base, scope, and filter) to be used for determining members of the group.
- LDAP static group: A static group is one whose entry contains a membership list of explicit DNs. You can define a static group by using the groupOfUniqueNames object class and by explicitly specifying the member DNs using the member attribute.

To enable end users to view dynamic and static LDAP groups in search results and add them to their instant messaging client contact list, you need to include groupOfUrls objects in search results.

For more information about Group Messaging, see Managing Instant Messaging's LDAP Access Configuration.

Offline Messaging

When the offline chat message delivery feature is enabled on the Instant Messaging Server, regular instant messages (chat messages) that are sent to offline users are not discarded. They are available on the Instant Messaging Server, and delivered to the user when the user comes online. This feature can be enabled at deployment level or at domain level using the whitelisting facility. This feature can be disabled using the blacklisting facility.

However, Instant Messaging alerts are managed differently. The feature is enabled or disabled at the user level. Similar to offline chat messages, the Instant Messaging Server stores the alerts for the offline recipient, and delivers them when the user logs in next time. This is, if the user has configured to receive offline alerts during the next login.

> **Note**
> If you install Calendar Server with Instant Messaging, you can configure your deployment such that you receive Instant Messaging alerts about your calendar todos and events, as pop-up messages. As long as you are logged in to Instant Messaging (you are online), you receive Calendar Server HTML pop-up reminders on your desktop. If you are offline, you receive the alerts the next time you login, if you have configured to receive offline alerts during the next login.

For more information about Offline Messaging, see Managing Instant Messaging Messages for Offline

Users.

Default Password Changed

Starting with Instant Messaging 9 Patch 1, the default value for password configuration properties is `random`.

Manually Configuring httpbind

Starting in Instant Messaging Server 9 Patch 1, you can manually configure httpbind connections to "follow through" by using this command:

```
<im-svr-base>/sbin/imconfutil -u set-listener-prop -c
<im-svr-base>/config/iim.conf.xml s2s protocols=s2s,component,c2s
```

Protecting Deployed Instant Messaging Components

Starting with version 9 Patch 1, Instant Messaging deployments are more secure. In previous versions of Instant Messaging, the server listened to connections on the port defined by the `iim_server.port` parameter (the default value is port 5269) in various situations. These situations include a peer in a server pool, components such as external gateways, `cal-agent`, `sms-agent`, `httpbind`, and so on. In Instant Messaging 9 Patch 1, the server now listens to this port only when at least one of these options is configured.

New Configuration Parameter

The `gwdomain-id.multihosting` parameter in the `httpbind.conf` file, if set to `true`, allows a packet destined to a domain, which is not pre-configured in `httpbind.conf`, to be sent to Instant Messaging Server. You use this parameter for a hosted domain setup. The default value for this parameter is `true`. For more information, see Gateway Domain ID Key Parameters for httpbind.

New Features in Instant Messaging 9 Patch 3

Instant Messaging 9 Patch 3 includes the following changes and new features:

- New Configuration Properties
- DIGEST-MD5 SASL Authentication
- Support for GlassFish 3
- Changes for Bug 15958098

New Configuration Properties

Instant Messaging Server 9 Patch 3 provides the following new configuration properties:

- `iim_server.sasl.usemechanism.DIGEST-MD5`: Enables the DIGEST-MD5 authentication mechanism
- `iim_ldap.plaintextpasswords`: Specifies if the passwords in LDAP are stored in clear text
- `iim_server.filter.enable`: Specifies if the file filter providers should be enabled or disabled
- `iim_server.filters`: Specifies the list of file filter providers

DIGEST-MD5 SASL Authentication

Starting with version 9 Patch 2, Instant Messaging Server supports the DIGEST-MD5 SASL authentication method for password-based authentication. DIGEST-MD5 is a challenge/response

authentication mechanism defined in RFC 2831.

To Configure Instant Messaging Server for DIGEST-MD5 SASL Authentication

Prerequisite: To use the DIGEST-MD5 authentication mechanism, the passwords in LDAP should be in plain text.

1. Use the `imconfutil` command to set the `iim_server.sasl.usemechanism.DIGEST-MD5` to **`true`** and to set the `iim_ldap.plaintextpasswords` property to **`true`**.
   For example:

   ```
   $IM_BASE_DIR/sbin/imconfutil set-prop -c
   $IM_BASE_DIR/config/iim.conf.xml
   iim_server.sasl.usemechanism.DIGEST-MD5=true
   iim_ldap.plaintextpasswords=true
   ```

2. Restart Instant Messaging Server.
   For example:

   ```
   imadmin stop
   imadmin start
   ```

Support for GlassFish 3

Starting with version 9 Patch 2, Instant Messaging Server supports the use of GlassFish Server 3 as the web container.

Changes for Bug 15958098

A ByteStreamFilter is a server plugin module that can be used to control, alter or discard all byte stream data going through the server. Starting with Instant Messaging Server 9 Patch 2, these filters can be specified and enabled by using the new configuration properties, `iim_server.filter.enable` and `iim_server.filters`.

New Features in Delegated Administrator 7 Patch 7

This version of Delegated Administrator 7 (Patch 7) in Communications Suite 7 Update 4 includes bug fixes only.

New Features in Delegated Administrator 7 Patch 7

Delegated Administrator 7 Patch 7 includes the following changes and new features:

- Ability to Use LDAPS
- New Configuration Parameter
- New config-commda Option

Ability to Use LDAPS

Starting with Delegated Administrator 7 Patch 7, you can enable LDAP over SSL (LDAPS) for Delegated Administrator communications with Directory Server. This applies only to Direct LDAP mode. For more information, see Configuring Delegated Administrator for LDAPS.

New Configuration Parameter

Delegated Administrator 7 Patch 7 includes the following new configuration parameter (applies to Direct LDAP mode only):

- `ldaphost-usessl`: When set to `true`, this parameter enables LDAP over SSL (LDAPS) for Delegated Administrator communications with Directory Server.

New config-commda Option

Delegated Administrator 7 Patch 7 includes the following new option to the `config-commda` initial configuration command:

- `-relaxugcheck`: Bypasses the LDAP check on if the default organization RDN is the same as the User/Group suffix. This check was performed to work around an issue in Access Manager mode. However, if your existing directory structure is such that the default organization RDN is the same as the User/Group suffix, and you plan to use Direct LDAP mode, then you would use this option to bypass the restriction.

New Features in Connector for Outlook 8

Microsoft Connector for Outlook 8 includes the following changes and new features:

- Support for Microsoft Outlook 2010 (32-bit)
- Connector for Microsoft Outlook Profile Conversion and Upgrade Support

Support for Microsoft Outlook 2010 (32-bit)

This version of Connector for Outlook provides support for Microsoft Outlook 2010.

Connector for Microsoft Outlook Profile Conversion and Upgrade Support

In Connector for Microsoft Outlook 7.3 and earlier versions, you had to create a new profile to modify or upgrade user profiles linked to Connector for Microsoft Outlook 7.1 and later versions.

A new hidden configuration parameter, `ModifySun71PlusProfile`, located in the *setupfilename*`.ini` file, enables or disables the conversion of Connector for Microsoft Outlook 7.1 (and later versions) user profiles. To not modify the Connector for Microsoft Outlook 7.1 (or later version) user profile, set the `ModifySun71PlusProfile` parameter equal to **`0`**. To modify the user profile with the configured values, set the `ModifySun71PlusProfile` parameter equal to **`1`**

> **Note:**
> The `ModifySun71PlusProfile=0/1` parameter is not enabled if the Create new user profile without conversion/upgrade option is chosen in the user profile settings of the Connector for Microsoft Outlook configuration program.

New Features in DSsetup 6.4 Patch 24

In this release of DSsetup new attributes and object classes have been added for use by Calendar Server 7 Update 3 Patch 10. See New Schema Objects for more information. Also, the `nabStatus`, `nabDomainAcl`, `nabDomainNames`, and `nabStore` objects have been assigned for future use with Network Address Book.

In addition, Dssetup no longer automatically removes `71sun-am.ldif` if Access Manager schema is found in `99user.ldif`.

Chapter 15. Release Notes

Oracle Communications Unified Communications Suite Release Notes
Version 7 Update 4

This book contains release information, feature descriptions, known problems, requirements, and other information about the following products for Oracle Communications Unified Communications Suite:

- Unified Communications Suite Release Notes
- Convergence Release Notes
- Calendar Server Release Notes
- Messaging Server Release Notes
- Indexing and Search Service Release Notes
- Instant Messaging Server Release Notes
- Delegated Administrator Release Notes
- Connector for Microsoft Outlook Release Notes

Calendar Server Release Notes

View Source

Oracle Communications Calendar Server Version 7 Update 3

These Release Notes contain important information available at the time of the general release of Oracle Communications Calendar Server, including:

- About Calendar Server 7 Update 3
- New Features in This Release of Calendar Server 7 Update 3
- Requirements for Calendar Server 7 Update 3
- Calendar Server 7 Update 3 Installation Notes
- Calendar Server 7 Update 3 Upgrade Notes
- Calendar Server 7 Update 3 Compatibility Issues
- Problems Fixed in Calendar Server 7 Update 3
- Problems Fixed in Calendar Server 7 Update 3 Patch 10
- Problems Fixed in Calendar Server 7 Update 3 Patch 12
- Known Problems in Calendar Server 7 Update 3
- Documentation Updates
- Redistributable Files for Calendar Server 7 Update 3

About Calendar Server 7 Update 3

See Introduction to Calendar Server 7. Note that the product has been renamed to Oracle Communications Calendar Server.

New Features in This Release of Calendar Server 7 Update 3

See the New Features document.

Requirements for Calendar Server 7 Update 3

- Requirements for Communications Suite 7 Update 4
- Client Requirements for Calendar Server 7 Update 3

Calendar Server 7 Update 3 Installation Notes

To start the Communications Suite installation process, see the Communications Suite Installation Guide. Detailed information on installing Calendar Server 7 Update 3 is located at Installation Scenario - Calendar Server.

Calendar Server 7 Update 3 Upgrade Notes

See Upgrading Calendar Server for information on upgrading to Calendar Server 7 Update 3.

Calendar Server 7 Update 3 Compatibility Issues

The following table describes compatibility issues with Calendar Server.

Calendar Server Compatibility Issues

Functionality	Incompatibility	Comments
Using Connector for Microsoft Outlook to manage Calendar Server 7 calendars	Prior to Calendar Server 7 Update 2 and Connector for Microsoft Outlook 7.3 Update 1 patch 13	See the Connector for Microsoft Outlook User's Guide for more information.
Using Calendar Server virus scanning	Prior to Calendar Server 7 Update 2 and Messaging Server 7 Update 4 patch 23	See Configuring and Administering Virus Scanning in Calendar Server for more information.

Problems Fixed in Calendar Server 7 Update 3

This section lists problems fixed in this release of Calendar Server.

Problems Fixed

Service Request (SR) Number	BugDB Number	Description
3-6500382089	15940719	Setting Password Expiration Policy Assumes `o=isp` Suffix Exists
3-6421541451	15874556	Unicode Line and Paragraph Separators Sent by Calendar Cause Convergence Errors
3-6385972361	15854809	`init-config` Fails when Specifying the Organization
NA	14812114	Timezone Information of `PACIFIC/APIA` is incorrect
3-6321417431	14787715	Need Ability to Provide Organizer Information to Store to Store External Invites
NA	14781101	`populate-davuniqueid` Should Handle Entries with or without `davEntity` Object Class Better
NA	14779166	`get_all_timezones` JSON Response Has Multiple Standard/Daylight Objects Per Timezone
NA	14775825	`fetchby_lastmod.wcap` Returns Deleted Events with `lastmod` Parameter Is Empty
3-6438197813	14757999	Document Store Cannot Be Started When a Non-Default Data Directory Is Used in `configure-as`
3-5828775171	14733178	After Changing a Resource Attendance Flag from 3 to 0, You Get a Doublebook Error

Problems Fixed in Calendar Server 7 Update 3 Patch 10

This section lists problems fixed in Calendar Server 7 Update 3 Patch 10.

Problems Fixed

Service Request (SR) Number	BugDB Number	Description
3-6552442671	16031592	There is no informative error message when passwords are out of sync between Calendar Server front end and document store
3-6802479941	16264675	Freebusy lookup sometimes fails with a concurrent-modification exception
3-6342137291	14836353	Not all details of events with class:confidential are shown to resource owner
NA	14846993	Confidential event doesnt have 'class : confidential' attribute in subscribed calendar
3-6541894251	15978790	Long UID causes migration to fail
NA	15922086	Modifying a recurring event that initially had no due date does not update attendees' `RRULE`
3-6471438031	15995408	Command `davadmin backend create` returned status 256
3-6907351933	16453589	`populate-davuniqueid` fails to handle long DNs
3-6574596531	16021937	The `init-config` script provisions the `smtphost` parameter as the mailhost of the `calmaster` user
3-6931817621	16491327	`davadmin db backup` command does not succeed when user name is all uppercase

Problems Fixed in Calendar Server 7 Update 3 Patch 12

This section lists problems fixed in Calendar Server 7 Update 3 Patch 12.

Problems Fixed

Service Request (SR) Number	BugDB Number	Description
3-6533761531	16009154	`master_log` should report the correct number of errors
3-7007103336	16592981	Reminder messages are not translated into non-English locale
3-7133766721	16759092	Unable to retrieve information for 'calendar,' due to `dtstartdtend` description
NA	16802381	An attachment file name containing a slash does not migrate from Calendar Server 6 to Calendar Server 7
3-7484437481	17065419	Unable to delete a calendar account marked as 'inactive' when using the `davadmin` command
3-7388931691	16976513	Migration should mark but not fail for legacy events with 'by now' gone attendee
3-7452645100	17041420	Migration responds with `backend error:MAX_DEPTH_REACHED` error when migrating events with attachments

Known Problems in Calendar Server 7 Update 3

These Release Notes contain important information available at the time of the general release of Oracle Communications Calendar Server.

Cannot Delete Attachment Doc from Lightning Client, Deleted Doc

SR number: NA
Bug number: 12297683 (SUNBT6966124)

If you create an event with an attachment by using Apple iCal, then delete the attachment by using Thunderbird Lightning, and save and close the event, the attachment is gone when viewed from Thunderbird Lightning, but it still shows in Apple iCal. Additionally, the iCal content is displayed from the CalDAV browse servlet.

OCUCS:Apostrophes Do Not Display in Some Cli Messages in French

SR number: NA
Bug number: 14554698

Because of a bug in Java, single quote marks (') do not display correctly in some messages in French.

CALDAV - "Report" Should Support "starts-with" (Used by ICAL)

SR number: 3-5856070191
Bug number: 14571911

Apple CalDAV clients that use the the `principal-property-search match-type="starts-with"` expect to get results that match `mail=`*user@domain**. However, the server returns results that match `mail=`**user@domain**.

fetchattachment.wcap Returns 87 in Case the Attachment Is Added Through ICAL

SR number: NA
Bug number: 14582650

If you create an event in iCal and then add an attachment, it is not saved.

Workaround: Add the attachment through Convergence.

Group Invitations that Have Not Been Responded to Will Cause Members to Appear

SR number: 3-6119610411
Bug number: 14589084

Group invitations that have not been responded to cause members to appear busy. This affects both Convergence and CalDAV clients.

Ability to Reset davadmin Parameters to Their Default Values

SR number: 3-6210735191
Bug number: 14636740

Currently, to reset a configuration parameter to its default value, you need to know what the default value is, as specified in the documentation.

Should Perform Free/busy Check Regardless Of attendanceflag 0x02 Setting

SR number: NA
Bug number: 14680050

Ideally, the booking window check and the free/busy check should be separate checks, and the attendance flag should only take effect based on how Calendar Server handles recurring and free/busy instances. With the current behavior, the attendance flag setting also affects whether Calendar Server performs the booking window check.

Allow JMS Notification Message to Expire

SR number: NA
Bug number: 14691095

Currently, Calendar Server treats JMS notifications as persistent, thus, they do not ever expire.

davadmin cale create -F Doesn't Parse Input File Correctly if It Contains ACL

SR number: NA
Bug number: 14692418

If you create a calendar through the `davadmin -F` command and the batch file contains an ACL, the calendar is created but the ACL is not set.

Workaround: Manually set the ACL after the calendar has been created.

Documentation Updates

These release notes and as well as the New Features page (known as What's New in prior releases) have been reorganized and reformatted for consistency with other Oracle Communications products' documentation.

Redistributable Files for Calendar Server 7 Update 3

This release of Calendar Server does not contain any files that you can redistribute.

Connector for Microsoft Outlook Release Notes

Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite Release Notes Version 8

These Release Notes contain important information available at the time of the general release of Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite (Version 8).

Topics:

- About Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite
- New Features in This Release of Connector for Microsoft Outlook
- Deprecated and Removed Features for Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite
- Requirements for Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite
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- Redistributable Files for Connector for Microsoft Outlook

Third-party URLs are referenced in this document and provide additional, related information.

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About Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite

Connector for Microsoft Outlook enables Outlook to be used as a desktop client with Oracle Communications Unified Communications Suite.

Connector for Microsoft Outlook is an Outlook plug-in that must be installed on the end-user's desktop. Connector for Microsoft Outlook queries Messaging Server for folder hierarchies and email messages. It converts the information into Messaging API (MAPI) properties that Outlook can display. Similarly, it uses WCAP to query Calendar Server for events and tasks which are then converted into MAPI properties. With this model, Connector for Microsoft Outlook builds an end-user Outlook view from three separate information sources: mail from Messaging Server, calendar information from Calendar Server, and contacts from the address book server.

When users create and modify items through Outlook, Connector for Microsoft Outlook passes the new message along to the appropriate server depending on its message type. It sends new outgoing email to

an SMTP mail server for delivery, and sends modified email messages back to the user's IMAP folder for storage. New calendar events and tasks are converted into a standard format to be stored in the Calendar Server database.

The address book service makes use of Web Address Book Protocol (WABP) and enables users to have their personal address book accessible from Outlook, Convergence, and Communications Express.

> **Note**
> The package that is Connector for Microsoft Outlook does not include any migration tools. You need those tools if you have users that are currently on Microsoft Exchange and would like to use Outlook with Oracle Communications Unified Communications Suite. Oracle provides a migration service to help move data and users from an existing Exchange deployment to Oracle Communications Unified Communications Suite.

New Features in This Release of Connector for Microsoft Outlook

See the New Features#New Features in Connector for Outlook 8 document.

Deprecated and Removed Features for Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite

The following features have been deprecated in Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite:

- Microsoft Outlook and Windows Versions
- Connector for Microsoft Outlook Versions

Microsoft Outlook and Windows Versions

Support for the following products is deprecated:

- Windows XP and Windows 2003 Terminal Server, specifically Microsoft Outlook 2007 on Windows XP and Microsoft Outlook 2007 on Windows 2003 Terminal Server
- Microsoft Outlook 2003

Connector for Microsoft Outlook Versions

Support for the following versions of Connector for Microsoft Outlook is deprecated.

- Connector for Microsoft Outlook 7.1
- Connector for Microsoft Outlook 7.2
- Connector for Microsoft Outlook 7.3

Going forward, no new features will be added to Connector for Microsoft Outlook versions 7.1, 7.2, and 7.3. These versions have been deprecated in favor of Connector for Microsoft Outlook 8. Version 7.3 will be in maintenance mode.

Requirements for Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite

See Requirements for Communications Suite 7 Update 4 and Requirements for Connector for Outlook.

Connector for Microsoft Outlook Installation Notes

Connector for Microsoft Outlook is an Outlook plug-in that requires installation on the end users' desktop. A deployment and configuration program is provided to aid the organization in deploying Connector for Microsoft Outlook.

> **Note**
> Before you install Connector for Microsoft Outlook, check the Get the Software page for the latest information about any required patches.

Installing Connector for Microsoft Outlook

Installing and deploying Connector for Microsoft Outlook involves the following three high-level steps:

1. Installing the administrator package
2. Creating an installation package for the end user
3. Deploying the installation package

The Connector for Microsoft Outlook packages ships an installer for the administrator package. The system administrator should prepare a special installation package called the Setup Wizard for the end user. The Setup Wizard installs and configures the Connector for Microsoft Outlook software on the end user's desktop. This installation package is designed to simplify and automate the installation process.

For installation, configuration, and deployment instructions see the following information:

- Connector for Microsoft Outlook Profile Conversion and Upgrade Support describes enabling or disabling the conversion of Connector for Microsoft Outlook 7.1 (and later versions) user profiles.
- Deploying Connector for Microsoft Outlook describes the deployment of the Connector for Microsoft Outlook.
- Installing the Desktop Deployment Toolkit describes how to install the administrator package.
- Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite Administration Guide describes how to create an installation package for the end user using the Deployment configuration Program.

Converting Data

One of the optional steps that can be performed during setup and configuration of Connector for Microsoft Outlook is the conversion of data that resides on the desktop. This conversion process is invoked only if the administrator checks the Convert existing profile option during the creation of the end user installation package. This conversion process is not intended to, nor does it replace the need for server-based migration. Oracle provides a migration service to help move data and users from an existing Exchange deployment to Oracle Communications Unified Communications Suite.

LDAP Attributes

For Connector for Microsoft Outlook to function correctly, index the following LDAP attributes in the Directory Server for at least presence and equality to improve the overall performance:

- `icsCalendar`
- `mail`
- `mailAlternateAddress`

For more information on these attributes, see the Communications Suite Schema Reference.

Connector for Microsoft Outlook Compatibility Problems

Refer to the following Technical Notes for information about compatibility problems with Connector for Microsoft Outlook and other products or applications:

- Does Connector for Microsoft Outlook Coexist with Windows Search?
- Configuring Calendar Server for Connector for Microsoft Outlook describes specific configuration tasks and other considerations for Calendar Server 6 to work with Connector for Microsoft Outlook.
- Tuning LDAP to Improve Searches in Communications Services Clients provides tips for improving searches in Connector for Microsoft Outlook.

> **Note**
> Starting with version 7.3 Patch 13, Connector for Microsoft Outlook supports Oracle Communications Calendar Server (also known as Calendar Server 7, and formerly known as Oracle Communications Calendar Server for CALDAV Clients).

Problems Fixed in This Release of Connector for Microsoft Outlook

This section lists problems fixed in this release of Communications Suite.

BugDB Number	Description
14779434	Relogin To User Profile Switches Offline To Online Mode
14778818	Switching Between the Default User Task/Subscribed Task For Multiple Times Crashes Outlook
14760788	Not Able to Create/Modify Contact in SSL Mode
14741276	Unsubscribed Calendars and Tasks Are Listed after Relogin
14741209	Outlook Crash Is Seen on Vista, `icsstatus` Is Changed and Accessing Subscribed Calendar
14741188	Outlook Crash Is Seen when Permission Is Revoked and Accessing Subscribed Calendar
14657732	Cert-Auth Profile Creation Fails on Windows Vista With Connector for Outlook 8
14627962	Publisher Name Is Different across Different Places in the Product
14626784	Application Crashes while Selecting Send Using Email Option from Excel 2010
14597450	Not able to create or modify a contact in SSL mode
14544374	Cannot Install User Package in Korean
14465317	Debug Dialog Message Shows in English
14459129	Not Able to Install User Package in Zh_Cn Due to MAPI Services
14408244	Upgrade Version 7.0 Option Value in DCP Is Not Getting Saved to `ini` Settings
14403877	All Upgraded Profile Uses Default `SJOC.pst`
14403366	Connector for Outlook Crashes when Opening the Permission Tab
14397573	Creating a Profile in a Fresh System Doesn't Exit the User Package Processes
14368913	`Readme-En.Html` Page Points to Wrong Location of Docs
14340029	Default Calendar Permissions Are not Seen after Creating the New Profile.
14340014	Installing Connector for Outlook Asks for Machine Restart on Different Cases
14308181	Non-English DLL Should Change the Server Configuration to SSL Ports by Default
14307481	[INTEROP] Inviting Resource from Convergence Doesn't Show up
14302767	Suggested Contacts Translation Must Be Same as Microsoft Outlook
14247695	"INSTALL This Application For" Option Is not Seen on Windows Vista
14241697	User Login Window Title Content Exceed the Width of Dialog
14224202	Inability to Process Events with Rdate
14224064	Recurring Meeting Created in Rdate Format in Convergence Is not Displayed
14214012	Schedule Permissions Drop Down List Are out of Layout
14213441	GAL Contacts Are Missing in Japanese
14196057	Dtstart And Dtend Entry Is Seen with Zulu Time Zone
14195920	Cannot Create New Contact and Contact Group in Suggested Contacts
14195002	Non Default Calendar Creation Shows Three Calendars in Calendar Pane
14173664	Profile Creation Fails on Windows Vista
14171835	Creating Profile Displays Unwanted Warning Message

14150588	Default Calendar Permissions Are not Seen after Creating the New Profile
14136260	User Package Creation Fails on Japanese Window Vista
14134510	Message Source Label and Icon Names Are Missing on Email-Message Window
14123352	Doing Empty/Resync of Owner Calendar Remove the Resource Calendar Entry
14123160	Empty/Resync for Large Mailbox With 50k Messages, Hangs Connector for Outlook
14122522	Legacy Content with English Message Resources
14121845	Message Needs to Change while Changing Log Level
14112878	Displaying Incorrect Product Version
14110959	Cert-Based Authentication not Working for GAL Access
14107150	Connector for Outlook Crashes when Opening the Meeting Click on Scheduling Tab
14107109	Unwanted Pop-Up Message Is Displayed During User Profile Configuration
14106626	Subscribed Calendar Events Behave Differently in Calendar 6.3 and Calendar 7
14100204	Connector for Outlook Crashes while Disabling sjui Add-In's
14095154	English Sentence Split, Cannot Be Translated in Admin DLL
14090241	Connector for Outlook Crashes While Saving an Event after Enabling the sjui Add-Ins
14090220	Add-Ins Button Functionality Doesn't Work after Enabling It
14089039	Connector for Outlook Crashes when Disabling sjui Addins and Enabling It
14080052	Free/Busy Info Is not Seen when User Opens the Scheduling Tab
14079675	Changes Required for New Ribbon UI
14079446	Vacation Duration Is Changed from the User Defined Value - Out Of Office Message
14079345	Non Connector for Outlook Profiles are Displaying New Ribbon UI
14074047	Schedulepermission Tab Permissions List Box Is out of Layout in Korean
14057915	Without Subscribing Click On Query Results in the List of All Shared Calendars
14057483	Add Shared Calendar Window Is Garbled in Japanese
14057441	Shared Calendars Folder Subscription Window Texts Are Garbled in Japanese
14057339	Shared Inbox Event Time Is Missing in Email Body of Subscribed User Inbox
14056698	Connector for Outlook Crashes when Importing a Specific csv File into the Inbox
14056159	Proposed New Time Not Updated In Non Default Calendar
14051375	Calendar Resource Response Status Revert Back to the Accepted Status
14047187	Single User Tab Note Section Is out of UI Label in Non-English
14046664	UI Freezes for Synchronizing Contacts on Non-English OL
14042579	Calendar Delegation Xcap Failure on Shared Calendar of a User
14042336	Description Formatting And Styles Are Stored in Calendar Appointment
14041913	User Package Successful Installation Does not Close the Pop-Up
14035697	Moving a Mail to Contacts Folder Using "MOVE" Option Throws an Error
14035336	Connector for Outlook Crashes when Selecting User From Auto-Complete List
14034909	Importing a Contact Folder into a Mail Folder Creates Blank Mails
14031356	Importing a Mail Folder into a Contact Folder Creates Blank Contacts
14030608	":" Colons Are in Next Line under the GAL Address Book User Attributes View Tab
14030455	Non-Default Calendar Creation Does not Display on Navigation Calendar Pane
14029752	"SCHEDULE Permission" Tab Is Lost while Executing Particular Steps
14029701	"INTERNAL Operation (XCAP) Failed." Error Comes while Going to Calendar Tab
14025597	Blocked User Mail Lands up in Inbox Instead of Junk Folder
14025026	Horizontal Line Is Getting Lost on Context Switch
14016923	Mail Is Not Delivered after Coming to Online Mode
14016529	Gal Doesn't List the Users First Time after Creating New Profile and Accessing
14010633	Re-Opening the Mail Doesn't Have Add-Ins
14010377	Contents of Encrypted Messages are Displayed in Reading Pane
14010010	Querying Always Displays ehe Non-Default Calendar Even Not Shared
14006038	Sending Meeting To LDAP Group Fails
14005752	Fails to Create Vacation Message for a Day

14001176	Connector for Outlook Is Limited to Copying Calendar To 3 When Calendar Name In Outlook Format Is Set 0
13999481	Upgrade Does not Remove the Existing Installation
13985308	Not Able to Load Specific User Profiles
13975325	Logfile Path Is not Setting to Specified Location
13975214	Attachments Are not Viewable in Forwarded Message
13965553	Deployment Module UI Fix for Non-English DLLs
13944526	Remove UWC Info from Ini File
13944508	Messages Are not Getting Delivered from Outbox
13944407	Unable to Create Vacation Msg, when There Is No Value in "MSG To Other Senders"
13943944	Color Category Set for a Mail in the Inbox Does Not Persist
13943208	The Mail Category Color Is not Retained when Sending a Mail
13943053	Connector for Outlook Crashes when Opening the Invitation Mail from the Outbox
13943046	Sending Invitation Mail Fails when "GENERATE Ical For Invitations" Is Set 1
13934455	Connector for Outlook Error Message Is Blank when Internet Is Inactive
13929761	Creating Profile Displays Unwanted Warning Message
13929465	Converting IMAP Profile Crashes
13924741	Mail Filter Action "COPY Message to" Doesn't Work
13924392	Address Book Server URL Example Needs to Be Changed
13924384	The Date Fields in The OOO and Mail Filters Window Display Dates with a Space
13923271	"SYNCHRONIZING Calendar.." Doesn't Show Clear Message for Non Default Calendar
13919205	People Pane Options Must Display Related Info Based on the Criterion
13918987	Importing Large Size of ics File Takes Longer Time
13914779	Importing Recurring Event Loses Recurrence and Attachments
13914462	Crash when Accessing the Subscribed Default/Non Default Calendar
13914444	Inconsistent: Folders Are Behaving Differently
13914066	Reminder Automatically Get Set to the Event Invitation
13913231	Mail Status for The Calendar Is Confusing
13913213	Deleting Canceled Meeting and Doing Empty/Resync Creates the Meeting Again
13908197	Crash on Confirming a Recurring Event
13907748	Workoffline Option Is not Available in Optimize Mode
13907447	Never Save Option Is Allowing to Save Password
13906304	Gal Does Not Show up when Accessed through the Quick Step Options in Mail Window
13906152	Outlook Crashes when Opening the Canceled Recurrence Invitation Mail
13902552	Calendar Server Error (XCAP:-1). Is Seen while Accepting the Occurrence Of Event
13901467	Formatted Text Is Replaced with Normal Text in Event Description
13901202	Conversion from Multilingual Rc to Monolingual Rc on Shared_Cal, S1oc, Ab, Sjtp
13897651	Cancel Meeting Status Is not Updating Properly
13897190	Decline Meeting Is Available again after Empty/Resync
13897012	Connector for Outlook Crashes when Invitation Is Sent to More than One User
13896137	Gal Contacts Are not Added to the Suggested Contacts Folder
13886690	Crash When Publisher Opens the Contact Deleted By the Subscriber
13886430	No Mail Response Received in "ON Behalf Of" Case
13886145	Schedule Permission Doesn't Work Properly for Resource Calendar
13876362	Subscribed Contact Folder Visible after the Permissions Have Been Revoked
13876266	Calendar Doesn't Unsubscribe even after Revoking the Calendar Permission
13876198	Resource Calendar Is Missing when Permission Is Revoked
13875821	"SCHEDULE Permission" Tab Grayed out Once any Modification Is Done
13875118	Contacts Deleted By the Subscriber Are Still Visible in the Publisher's Profile
13874683	User Cannot Unsubscribe the Suggested Contacts Folder
13874596	Free/Busy URL Location Is Set Wrong when Profile Is Configured for Calendar Server 6.3

13874545	Connector for Outlook Crashes when Doing "OPEN In New Window" Operation
13870831	Subscriber Cannot Unsubscribe from Multiple Contact Folders at Once
13870697	Subscriber Cannot Subscribe to Multiple Contact Folders at Once
13869618	Subscriber Can View the Mail Folder even after the Permissions Have Been Revoked
13869291	Upgrade Is not Working for 7.3.1 Patch15 to Connector for Outlook 8
13869163	"USER Name" Is not in the Proper Place of Calendar Tab
13865679	Unable to Log in for the First Time with a Newly Created Profile
13865577	Running Package File (.EXE) for a Profile Takes Longer Time
13865472	Crash when Accessing the Subscribed Folder, after Permissions Are Changed
13865257	Organizer Will Be Added to the "NOT Responded" List in People Pane
13859496	Schedule A Meeting From "ACTION" Button Doesn't Add Invitee into "TO" Field
13853542	Unexpected Crash Is Seen Many Times
13853518	"SEND Me A Status Report When This Task Is Complete" Doesn't Work for Task Requeue
13853502	"KEEP An Updated Copy Of This Task On My Task List" Doesn't Work Properly
13853464	Copyright Info Is Wrong in Help
13853458	Help Needs To Be Changed Accordingly
13853446	Build Date Is Wrong
13853438	Under Calendar Server Tab the Name Should Be Changed
13853424	Under Mail Tab, Convergence Style to Be Added
13853385	Deployment Program, Outlook 2010 Version, to Be Added in Process Tab
13853373	Copyright Info Needs to Be Updated
13853359	Invitee Still Listed Into To Field Even After Removing It
13853339	Invitee Does not Get "ACCEPT/DECLINE/TENTATIVE" Option into the Invitation Mail
13853291	Profile Creation Fails
13853282	Attendee's Calendar Status Is not Updated with Proper Message
13853276	Proposed New Timing for Invitation Is not Working Properly
13853250	Response Will Be Totally Wrong In Case Of "DON'T Send The Response" Option
13853233	All Invitation's Responses Are Gone after Some Time
13853219	Response Status Is not Updating Properly in Calendar Invitation
13853210	Invitee Becomes the Organizer after Accepting the Event
13853123	Unexpected Behavior in Outlook 2010
13853090	"THIS Event Invitation Is Not Available.." Message while Accepting Invitation
13850080	Meeting Cannot Be Found in the Calendar Is Seen in the Invitation Mail
13850065	Meeting Cannot Be Found in the Calendar after Accepting It
13850045	"WCAP Returned Errno: 62" Is Seen in Logs when Accepting the Invitation
13850020	Not Able to Accept/Decline the Task Request
13850008	Outlook 2010 Goes into not Responding Mode
13849983	Outlook 2010 Crashes when Clicking on Properties Window
13849955	Help Is not Available
13849942	About Display Wrong Version
13849803	sjoc Log File Should Display the Proper Name
12714470	Translations not Matched
12703757	Invalid Trans - Autoarchive
12701131	Untranslated Tab Mail
12700202	Strings To (RE) Translate - Not Found in Repository
12533569	Where is The Hotkey Taken from?
12244456 (SUNBT6729792)	Simplified Chinese Characters Are not Allowed to Input in Mail Subject
12967448	Tzid Supplied even when Timestamps Are in Zulu
12700408	Documentation for Calendar Server 7 Feature
12700241	No Help Document For Permissions, Schedule Permission Functionality
12681628	Multiple Lines in Event Description Are Collapsed and Displaying as a Single Line
12668525	Creating A Copy Of Calendar Throws Same Dialog Box Many Times

12252973 (SUNBT6769972)	First Instance of a Series Disappears after Empty Resync Once it Is Accepted Individually
13603244	Address Book Server URL Example Needs to Be Changed
13584768	Need to Change IMAP Folder Name Mapping Options
13500598	"NO Folder Found For Given Userid" when You Try Query Based on Email ID
12700400	OLH Files Need to Be Updated Specifically for Calendar Server 7
12309218 (SUNBT7026223)	Setup with "RUN As Administrator" or Packaging Fails
12295324 (SUNBT6955732)	Support For 32-bit Outlook 2010

Known Problems in Connector for Microsoft Outlook

This section describes the known problems that exist in this release of Connector for Microsoft Outlook.

Topics in this section:

- Limitations in Connector for Microsoft Outlook
- General Problems in Connector for Microsoft Outlook
- Installation and Upgrade Problems in Connector for Microsoft Outlook
- Calendar Problems in Connector for Microsoft Outlook
- Address Book Problems in Connector for Microsoft Outlook
- Localization Problems for Connector for Microsoft Outlook
- Convergence Interoperability Problems for Connector for Microsoft Outlook
- Communications Express Interoperability Problems for Connector for Microsoft Outlook
- No Bug Number
- Microsoft Exchange Interoperability Problems
- Microsoft Outlook Problems

Limitations in Connector for Microsoft Outlook

Some limitations exist in this release of Connector for Microsoft Outlook. The key limitations are:

- Connector for Microsoft Outlook 8 supports only 32-bit Outlook 2010 and Outlook 2007.
- Every distinct identity in the Directory Server (for example, users, resources, conference rooms) must have an email address.
- Rich text in the appointment and meeting description field is lost once the same calendar event is modified in the Communications Express client.
- Message recall functionality is not available.
- Description of events is not available when checking availability.
- Free/busy lookup does not display TENTATIVE or OUT-OF-OFFICE color coding.
- Free/busy lookup using SSL is not supported.
- Installing Connector for Microsoft Outlook on Exchange servers is not supported.
- Offline limitations:
    - During an offline session, if any item in a Calendar, Task, mail, or Contact folder is modified using Outlook, and then another client on the server is used to modify the same item, the changes made offline are lost when the user returns to online mode in Outlook. The changes made by the other client on the server remain.
    - When creating a new event in offline mode, the invitation is saved to the user's Outbox. If, while still in offline mode, the user opens the invitation, the invitation disappears from the Outbox once it is closed.
- Junk Mail Filter does not work for Outlook 2007 and Outlook 2010.
  The Junk Mail feature available in Outlook 2007 and Outlook 2010 does not function with Connector for Microsoft Outlook. Senders that are set to be filtered using this tool are not filtered. Because Outlook's Junk Email feature relies on the client to filter unwanted messages, Oracle

recommends using a server-side solution. In client filters, like the one Outlook utilizes, the messages arrive in the user's Inbox, which is then moved to the Junk folder. This could potentially create unnecessary network traffic and slower response time.

Users can choose the Mail Filter option from the Tools menu, which utilizes the server-side filtering function. A more efficient solution would be to use a server-side virus or junk mail filter that is compatible with Messaging Server. Unsolicited email may be rejected at the MTA (message transfer agent) level and never arrive in the user's Inbox, saving resources and disk space. For a list of third-party partners, see Partner Lists.

- Quick Steps, a new feature in Microsoft Outlook 2010 that applies multiple actions at the same time to email messages, is not supported.
- Events with an RDATE property are not supported.

General Problems in Connector for Microsoft Outlook

This section describes the known problems of a general nature that exist in this release of Connector for Microsoft Outlook.

Forwarding a Meeting with Social Connector Enabled Results in Crash

SR number: NA
Bug Number: 14591522

Mail Quota and Folder Size dialog and documentation are not localized

SR number: NA
Bug number: No number

Installation and Upgrade Problems in Connector for Microsoft Outlook

This section describes the known installation problems that exist in this release of Connector for Microsoft Outlook.

Upgrading from 7.3 Update 1 patch 15 to Connector for Outlook 8 starts as new installation

SR number: NA
Bug number: 14024924

Starting the Connector for Microsoft Outlook `setup.exe` file on an existing installation of version 7.3 Update 1 does not prompt you to upgrade, instead, the process proceeds as if it were a new installation.

Calendar Problems in Connector for Microsoft Outlook

This section describes the known calendar problems that exist in this release of Connector for Microsoft Outlook.

Subscriber cannot copy subscribed folders with manage permission

SR number: NA
Bug number: 14006451

Connector for Outlook hangs (not responding) when trying to delete the calendar group

SR number: NA
Bug number: 13995863

Changing permission from free/busy and invite to None updates server but Connector for Outlook still

shows free/busy and invite

SR number: NA
Bug number: 13901159

Calendar status is always "Updating" under Calendar Group

SR number: NA
Bug number: 13934168

Multiple XCAP failed error pop-ups seen while accessing subscribed deleted calendar

SR number: NA
Bug number: 14135536

Mouse hover on calendar shows wrong message

SR number: NA
Bug number: 13934266

Converting Exchange Profile Fails with Outlook 2010

SR number: NA
Bug number: 13929508

Attachment icon is changing and file name is disappearing from event

SR number: NA
Bug number: 14287428

Outlook 2007 cannot open the Internet Calendar (.ics) file when a non-default calendar is shared through email

SR number: NA
Bug number: 12208507 (SUNBT6589461)

When you open an Internet Calendar email attachment in Outlook 2007, for example, `Sample.ics`, the following error message is displayed:

```
The file "Sample" is not a valid Internet Calendar file. You cannot
create a new folder here.
```

Workaround: Perform the following steps:

1. Save the `Sample.ics` file from your email on your desktop.
2. From Outlook Connector File menu, select Import and Export.
3. Select the Import an iCalendar (`.ics`) or vCalendar file (`.vcs`) option from the actions list and click Next.
4. Click the `Sample.ics` file that you have saved on your desktop.
   The Do you want to open this calendar as a new calendar or import its items into your calendar dialog box appears.
5. Click Import.
   The contents of the Internet Calendar file are imported to the default calendar folder.

Need to specify minimum version of mapi32.dll

SR number: NA

Bug number: 12269151 (SUNBT6835766)

When you try to install Outlook Connector on a machine that has Groupwise installed, the following error message is displayed:

```
Error 5351 -- unable to install Mapi service directories
```

Workaround: If you have Groupwise installed in your system prior to installing Outlook Connector, you must replace the existing `mapi32.dll` with the latest one from another machine that has the same Outlook version.

Unable to remove attachment from an instance of a recurring event

SR number: NA
Bug number: 12160173 (SUNBT6409671)

If a user creates a recurring event that includes an attachment, then attempts to remove the attachment from a single instance of the recurring event, the attachment is not deleted because an attachment usually gets created for a series and not for a single occurrence.

Workaround: None.

No Bug Number

The following are additional problems related to the calendar portion of Connector for Microsoft Outlook that do not have bug numbers.

If delegate accepts or declines an invitation from the organizer's Shared Inbox, the calendar event is added to delegate's calendar, but not to the organizer's calendar.

- Microsoft TNEF messages are sent when sending calendar attachments. iTIP and iMIP calendar attachments are not supported.
- All Day events may become a non-All Day events (one event scheduled from 12:00am until 12:00pm) if the desktop time zone is different from the Calendar Server calendar time zone.
- Changing permissions of a calendar requires restarting Outlook for the new permission setting to take effect for the Calendar folder in the Shared Calendar.
- Tasks displayed in Shared Calendars are the login user's tasks, not the subscribed user's tasks. The calendar view always shows the login user's tasks.
- If you create a recurring invitation in Outlook, but delete a single instance of that event, the recipients (attendees) do not see the deleted invitation if Calendar Server has not processed the initial recurring invitation before the deletion.

Address Book Problems in Connector for Microsoft Outlook

This section describes the known address book problems that exist in this release of Connector for Microsoft Outlook.

Unsubscribing a contact folder creates a () structure in the folder list

SR number: NA
Bug number: 13874601

Deleting a contact from Communications Express does not delete it from Outlook

SR number: NA
Bug number: 12108811 (SUNBT6225049)

The Communications Express configuration parameter `delete_perm` in the `db_config.properties` file needs to be set to false for Outlook to capture contact entries which have been deleted from Communications Express. The entry should be:

```
delete_perm=false
```

The default is `true`. The entry can be found at `/var/opt/SUNWuwc/WEB-INF/config/ldapstore/db_config.properties` .

Workaround: Manually fix the entry.

Cannot delete a contact photo from Outlook Connector

SR number: NA
Bug number: 12249035 (SUNBT6752539)

When you right-click the contact photo and select Remove Picture, the photo is not deleted from the contact.

Workaround: None.

Shared contact does not get removed from Address Book after you have unsubscribed

SR number: NA
Bug number: 12118508 (SUNBT6267180)

After you have unsubscribed to a shared contact, it is not removed from the "Show Names from the" list of the Address Book.

Workaround: There are two workarounds:

- If the subscribed contact has been added to the "Show Names from the" list of the Address Book," you should clear the "Show this folder as an email Address Book" option from the "Outlook Address Book" property page before you unsubscribe from the contact.
- Remove the contact directly from the address book properties.

In Outlook 2007:

1. Choose Account Settings from the Select Tools menu.
2. Click Address Books.
3. Select Outlook Address Book from the list of services set up in your profile.
   The Microsoft Outlook Address Book properties window is displayed.
4. Select the item to remove from your address book and click Close.

Note that user must log out and log in again for the change to take effect.

In Outlook 2010:

1. Choose Account Settings from the File menu.
2. Click Address Books.
3. Select Outlook Address Book from the list of services set up in your profile.
   The Microsoft Outlook Address Book properties window is displayed.
4. Select the item to remove from your address book and click Close.

Note that user must log out and log in again for the change to take effect.

Localization Problems for Connector for Microsoft Outlook

This section describes problems that affect the localized versions of Connector for Microsoft Outlook.

Shared calendars folder subscription window texts are garbled in zh_cn

SR number: NA
Bug number: 14554132

Suggested contacts translation must be same as Microsoft Outlook in zh_cn

SR number: NA
Bug number: 14553920

Suggested contacts translation must be same as Microsoft outlook in zh_tw

SR number: NA
Bug number: 14553896

":" colons are in next line under the GAL user attributes view tab in zh_tw

SR number: NA
Bug number: 14553792

Self-extractor titles window are garbled for Asian languages

SR number:
Bug number: 14472204

Shared calendar folder garbled in Korean

SR number: NA
Bug number: 14058339

Canceled appointment garbled on the invitees calendar in non-English

SR number: NA
Bug number: 14058339

Hotkey of user contact details of office is showing ':' as hotkey

SR number: NA
Bug number: 14247311

Mail box labels are garbled on non-English user mail pane

SR number: NA
Bug number: 14042085

Modifying cn should reflect on subscribed calendar names

SR number: NA
Bug number: 15835685

Convergence Interoperability Problems for Connector for Microsoft Outlook

This section describes the known Convergence interoperability problems that exist in this release of Connector for Microsoft Outlook.

Cannot view attachment icon and name in Connector for Outlook when event is imported from Convergence

SR number: NA
Bug number: 16028666

If you create an event with an attachment in Convergence, then export and import the event to Connector for Outlook, the import succeeds however the attachment name and icon are missing. You can see the content of the attachment.

Imported events from Convergence to Connector for Outlook show one hour before actual time

SR number: NA
Bug number: 16027530

Tasks that are marked completed or deferred in Connector for Outlook are not displayed in Convergence

SR number: NA
Bug number: 16020349

Cannot perform any action from Convergence on contact group created in Connector for Outlook

SR number: NA
Bug number: 15921396

For example, if you create a contact group in Connector for Outlook, then try and rename that group from Convergence, you receive the following message: "An error occurred while renaming." You are not able to rename the group.

Communications Express Interoperability Problems for Connector for Microsoft Outlook

This section describes problems that relate to the interoperability between Connector for Microsoft Outlook and Communications Express.

Email ID is a must for Outlook

SR number: NA
Bug number: 11949157 (SUNBT4969029)

If a person with a calendar ID but no email ID is invited to an event in Communications Express, this person is not displayed as an attendee in Outlook. An email ID is required for Outlook.

Workaround: None.

Configuration parameter needs to be set in order for address book server contacts to be properly synchronized

SR number: NA
Bug number: 12109640 (SUNBT6229276)

Workaround: The Communications Express configuration parameter `delete_perm` in the `db_config.properties` file needs to be set to false in order for Outlook to capture contact entries which have been deleted from Communications Express. The entry should be:
`delete_perm=false`

The default is true. The entry can be found at
`/var/opt/SUNWuwc/WEB-INF/config/ldapstore/db_config.properties` .

Limitations in calendar alarms

SR number: NA

Bug number: 12142832 (SUNBT6351914)

Because of the difference in how Outlook and Communications Express handle alarms and reminders, changes in one interface are not reflected in the other. Outlook utilizes pop-up windows as alarms, while Communications Express (Calendar Server) sends email reminders. In order to not replicate alarms when both interfaces are used (having both a pop-up and email reminder sent), Connector for Microsoft Outlook allows alarm synchronization upon creation of events in a single direction only. For example, when a new event is created using Communications Express, the alarm is copied to the Outlook event (as a pop-up). But when creating an Outlook event, the alarm is not set on the server.

Workaround: To allow the synchronization to work from Outlook to Communications Express, a registry value can be set in outlook: `HKEY_CURRENT_USER\Software\Sun Microsystems\Outlook Connector\Sync Cal` To turn this on, set the value to 1, and to turn it off, set the value to 0 (or remove the key). Setting the registry value has effect only when creating new events. Modifying existing events only affects the alarm type associated with the client performing the modification.

No Bug Number

The following are additional issues related to Communications Express interoperability that do not have bug numbers.

- **RTF formatting in Outlook is not preserved if the description text is edited using Communications Express.**
- **Differences exist in privacy classes between Outlook and Communications Express.**

Outlook has two privacy classes (Private and Public), while Communications Express has three classes (private, Date and Time only, and Public). In Outlook, a private event is created as a "Date and Time only" event in Communications Express. A public event in Outlook maps to the public event in Communications Express. Similarly, a Communications Express "Date and Time Only" event maps as a private event in Outlook, and a public event maps as a public event in Outlook. A Communications Express private event also maps to Outlook as a private event. To create a private event in Outlook so it appears as a private event in Communications Express, select "Free" from the "Show time as:" field. The Communications Express private event cannot be seen in a shared Calendar folder by another user.

- **There are differences in the way free/busy is implemented in Outlook and Communications Express.**

The default private event is free in Communications Express. If the event is to be included for free/busy lookup, then it should manually be set to busy. In Outlook the default events are busy for both private and public events.

- **If you export an event from Communications Express to a file in Outlook format, you cannot import the event from the same file into Outlook.**
- **Incompatibilities exist in how recurring tasks are implemented in Outlook and Communications Express.**

Recurring tasks in Outlook do not conform to RFC 2445 while Communications Express is specifically designed to work with RFC 2445-compliant information. This causes problems when recurring task information is passed between Outlook and Calendar Server.

Information stored locally by Outlook does not always match information which is stored on the Calendar Server. Connector for Microsoft Outlook, for example, does not transfer any information dealing with the recurrence of a task to the Calendar Server. Any tasks created in Outlook (recurring or non-recurring) appears in Communications Express as single tasks. A task that is created in Communications Express only uses the recurring information from the Calendar Server when that task is written for the first time in the Outlook client and not during any modification of any existing task on Outlook.

For these reasons, recurring tasks viewed in Outlook and tasks viewed in Communications Express appear different in many cases. We recommend that users who work with recurring tasks choose either

Outlook or Communications Express and not attempt to work with recurring tasks in both clients interchangeably.

- **If a message is sent from Outlook in Rich Text format, the message contains a plain text body with no formatting and a `WINMAIL.DAT` attachment.**

The `WINMAIL.DAT` attachment contains the Rich Text message along with any other attachments that may have been added. Because the format is Microsoft proprietary, only Outlook can read the `WINMAIL.DAT` attachment. Communications Express (and any other client) sees only the unformatted text message and a `WINMAIL.DAT` attachment. It is recommended that HTML format be used instead of Rich Text format to send messages.

- **If contacts groups in Outlook contain external SMTP mail recipients or other contacts groups, they are not seen by Communications Express.**

Communications Express and Convergence cannot send mail to these recipients.

- **Communications Express and Convergence cannot decode and display Microsoft TNEF format.**

Outlook saves calendar events and tasks (any calendar folder not under the Calendar folder tree), contacts (any contacts folder not under the Contacts folder tree), notes, and journals in the Messaging Server. Because the data is saved as Microsoft TNEF format, Communications Express and Convergence cannot decode and correctly display them.

Microsoft Exchange Interoperability Problems

This section describes the known Microsoft Exchange interoperability problems that exist in this release of Connector for Microsoft Outlook.

Free Busy Proxy for Exchange does not return complete Free/Busy information

SR number: NA
Bug number: 12097110 (SUNBT6174201)

Workaround: None.

Receipt of a message with embedded OLE objects and HTML in RTF from Exchange (versions 5.5, 2000, and 2003) to Connector for Microsoft Outlook does not work

SR number: NA
Bug number: No number

Workaround: None.

Microsoft Outlook Problems

The following are problems with Microsoft Outlook.

> **Note**
> These general problems with Microsoft Outlook are not specific problems with Connector for Microsoft Outlook.

Conflicts with Windows Search Service (WSS)

SR number: 3-5696893361
Bug number: 14197933 (SUNBT6953237)

Outlook Connector might not work as expected if Windows Search Service is enabled.

Workaround:

To work around this issue, turn off Windows Search Service.

See Does Connector for Microsoft Outlook Coexist with Windows Search? for complete details.

Connector for Outlook does not support 64-bit version of Outlook

SR number: 3-6948764711, 3-6141957431
Bug number: 14565888

Redistributable Files for Connector for Microsoft Outlook

Connector for Microsoft Outlook does not use any redistributable files.

Documentation Updates

These release notes and as well as the New Features page (known as What's New in prior releases) have been reorganized and reformatted for consistency with other Oracle Communications products' documentation.

Redistributable Files for Connector for Microsoft Outlook

Connector for Microsoft Outlook does not use any redistributable files.

Convergence Release Notes

Convergence Release Notes Version 2

These Release Notes contain important information available at the time of the general release of Convergence 2, including:

- About Convergence 2
- New Features in Convergence 2
- Requirements for Convergence 2
- Convergence 2 Installation Notes
- Bugs Fixed in Convergence 2 Patch 7
- Bugs Fixed in Convergence 2 Patch 6
- Bugs Fixed in Convergence 2 Patch 5
- Known Problems in Convergence
- Documentation Updates
- Redistributable Files for Convergence

About Convergence 2

See Introduction to Convergence.

New Features in Convergence 2

See the New Features document.

Requirements for Convergence 2

For Communications Suite requirements, see the Requirements for Communications Suite 7 Update 4.

For requirements specific to Convergence, see the Requirements for Convergence 2.

Convergence 2 Installation Notes

See the Communications Suite Installation Guide for information on installing Convergence.

Running the Convergence Initial Configuration Program in Secure Mode

In some configurations, the Convergence `init-config` program fails when Convergence uses the `secure=true` option to run the GlassFish Server `asadmin` commands. Specifically, the `asadmin` commands invoked by `init-config` fail in this situation.

Situation: This issue occurs when GlassFish Server is configured to run in non-secure mode, and the Convergence `init-config` program is configured to run the GlassFish Server `asadmin` commands in secure mode. In the Convergence `init-config` program, the **Secure Administration Server** check box is checked by default.

Solution: If you are running GlassFish Server in non-secure mode, when you run the `init-config` program, uncheck the **Secure Administration Server** check box in the GlassFish Server: Administration Instance Details panel.

If you are running GlassFish Server `asadmin` in secure mode, you can accept the defaults when you run

`init-config`.

Bugs Fixed in Convergence 2 Patch 7

This section lists problems fixed in Patch 7 of this release.

Service Request (SR) Number	BugDB Number	Description
3-6296212633	12237251	Email ID Always Appends Default Domain While Sending Mail.
3-7467750401	12244866	Subscribing and Selecting the Subscribed Calendar Makes Events.
3-5785700121	12251058	Calendars Listed Under "Subscribed" Rather than "My Calendars."
3-4073530001 3-3228550883 3-3233693871 3-6892560901 3-5675014901	12530514	Upon Logging into Convergence, if Password is Expiriing, Client Should Show Message.
3-4073530001 3-3228550883 3-3233693871 3-6892560901 3-5675014901	12793104	Email Reminder is Not Sent to Invited User.
3-4691903403 3-4691547981 3-6112674451 3-6139032393	13079210	Selecting Multiple Messages Using Checkboxes and Shift Key Does Not Work.
3-7117402981 3-7133930901	13086148	Autocomplete Doesn't Show All Email IDs of Contact; Incorrectly Adds Primary Email Address.
3-7166556351	13390486	Task List Fails to Load if Call List Long Tasks in Unchecked Calendars are also Fetched.
3-7073809291	13633826	Quick Add of Events Should not be Allowed without a Title.
3-7738646381 3-5190099794	13639768	Display Non-compliant 'Multipart/Related' and 'Multipart/Mixed'.
NA	13715874	Month View: Events Created in Other View/Cloned Events Not Shown without Refresh.
3-7256977341	13772613	Editor: First Line Append with Second Line when Switch From RTF to Plain Text.
3-5918808471	13876229	Internet Explorer: Calendar View Grid Moves, Can End Up with Time Mismatch.
3-7378452941	13876553	After Calendar Advanced Search, Event Form/Balloons Don't Close after Event Creation.
3-5133632531	13916307	Events with Duration are Mishandled in Client.
3-5675750961	14046542	With Three or More All-Day Events, the Last Event is Cut Off.
3-5778153111 3-7008624451	14197534	When 'Get Mail' is Clicked, Convergence Can't Handle Some Sub-Folders.
3-5838374941	14204848	Convergence Dates: Setting Any Date after 2032 Brings and Odd Error Message.
3-5943404101	14310997	Resizing Left Pane of Mail View Results in Corrupted View.
3-6045978055 3-7354831541	14474108	Calendar Advanced Search: Searches Containing Space Result in Error 60.
3-5785700121 3-6007980253	14611431	WCAP7 Client Needs to Support "X-S1CS-DEFAULTCALENDAR".
3-7133930901 3-7117402981	14785827	Add from AB Dialog: Only One of Contact's Email Addresses Displayed.
3-6797953521	16364235	"Show as Free" Events are Stored in Attendee Calendar as "Show as Busy."

3-7007649681	16622470	Auto Completion Works Fine for Invitations but Does Note Work for Reservations.
3-7215940231	16656143	Change Certificate for SMIME Applet.
3-7047218921	16688136	In-Reply-To: And References: Headers Contain Draft Copy Message-IDs.
3-7437746012 3-7095031176	16710152	Time Field Not Displayed in Replied Mail.
NA	16733805	Tablet: Click on Compose Form Options Bring Up Keyboard.
NA	16736808	Message No Longer Exists Error When Trying to Edit and Save Drafted Reply Message.
3-7167777201	16768077	Access Blocked to Subscribed Folder Gives "The Reply Contains Invalid Data Format".
3-7171962241	16773836	"Display Declined Invitations" Shown as Active, but No Declined Invitation Shown.
NA	16779689	Prelogin IP Should Be Stored in a Cookie While Loading a Login Page.
NA	16793808	Search by Display Name for Contacts Having More than One Email is Broken.
NA	16838599	S/MIME: Attachment Gets Corrupted with Save Draft.
NA	16937772	Inline Image Sent from Thunderbird not Displayed in Convergence Properly.
3-7157486941 3-6430704611 3-7366215031	16944188	Calendar Client Becomes Unusable if Certain Strings are Used.
NA	17007609	Internet Explorer: Switch to Plain Text Adds One Extra Line in Every Line.
NA	17028795	S/MIME: First Time Selecting Message Shows Security Warning Pop-Up.
3-7526897441	17162185	Calendar Invitation Filters are being Disabled.
3-7609463351	17282581	German Outlook CSV File is not Recognized as CSV File during AB Import.
3-7600346301	17296719	IWC-mail, Reply-to and Save, Original Text Disappears.
3-7648950758	17306419	Printing Document in Convergence Mail Gives Partial Print.
NA	17310269	Webkit: Plain Text Mode Every Blank Line Gets Doubled in Received Mail.
NA	17326628	Internet Explorer: Plain Text Mode Editor Adding Two Empty Lines on Top (New or Reply Window).
3-7688200451 3-7687715291	17329155	Mail Quota Usage Bar is Too Wide and is being Truncated.

3-7926100371 3-7881353371 3-7784824811 3-7887951871 3-7962088701 3-7824190391 3-7883552311 3-7906267991 3-7901584081 3-7900236492 3-7899416381 3-7940774461 3-7953618711 3-7831923421 3-7817234241 3-7884170901 3-7705499683 3-7714566161 3-7706041821 3-7719428311 3-7710714941 3-7714388078 3-7697233311 3-7702224141 3-7731922721 3-7791996921 3-7764832951 3-7720475071 3-7803933071 3-7830637061 3-7816491411 3-7785392191 3-7784407231 3-7803086711 3-7800571711 3-7735045371 3-7729018161 3-7719637551 3-8023066331 3-8047434261 3-8047012999 3-8047712591 3-8063441301 3-8053073421 3-8078289381 3-8045123431 3-8097456589 3-8046123341 3-8023586179 3-8018098681 3-8046583461 3-8069807521 3-8047120678 3-8063905762 3-7790821681 3-8079080211	17336270	Convergence Does Not Load in Chrome 29 - "node.getAttribute is not a function."

3-7962088701 3-7940774461 3-7883552311 3-7884170901 3-7735045371 3-7714566161 3-7791996921 3-7697233311 3-7702224141 3-7729018161 3-7830637061 3-7784407231 3-7764832951 3-7803086711 3-8053073421	17353827	Chrome 29: Problems with IM (Buddy List, 1:1 Chat, MUC) Windows.
3-7052018771	17365063	No Calendar Tab for User with Relationship to Non-existing Calendar Error 20.
3-7767889851	17417508	"Insert Image" Icon Missing from Options->Identities-> Under Signature Toolbar.
3-7767717391	17424201	If Reply-To Contains More than One Address, Only the First is Used When Replying.
NA	17464532	Message Viewer Shows Attachment that has Content-ID while Thunder Bird, Outlook Do Not.
NA	17498265	"</X>" Appears when Spell Checking - Another Variation.
NA	17498307	Convergence Spell Check Ignores Words with Numbers - More Variations.
NA	17508712	All Day Event with Duration Present: IWC Stuck at Calendar Loading/Displays No Events.
NA	17738870	Add from Address Book Shows Contacts without Emails.

Bugs Fixed in Convergence 2 Patch 6

This section lists problems fixed in Patch 6 of this release.

Service Request (SR) Number	BugDB Number	Description
3-6681726831	16183879	Accepting an event in Convergence returns an error 60.
3-6681726838	16183957	An event accepted in Unified Web Client or Lightning is not seen as being answered in Convergence.
NA	16281795	Online help is broken for German locale.
3-5116786481	14006228	Unable to limit the group search when inviting groups to an event.
NA	16175002	Clicking on event invitations does not pop up a balloon with RSVP options.
NA	15905635	Difficult to click the checkbox in the mail grid.
NA	16197668	End date cannot be entered in calendar's advanced search.
NA	15921396	IP: Cannot perform any action from Convergence on contact group created in Outlook.
NA	16393805	Mail preview pane broken--message always open in new tab.
NA	16281160	P-14051391 Address book not available in Convergence when CALDAV service is not configured.
NA	16302446	P-16302414 Internet Explorer 9: frame resize makes the compose window fields empty--looks bad.
NA	16360376	Problems with online help on desktop browsers.
NA	16321595	Sent invitations in Calendar Server 6 non-default calendars wrongly shown as received invites.
NA	15882867	Address Book Quick Search's tooltip not localized.

Bugs Fixed in Convergence 2 Patch 5

This section lists problems fixed in this release of Communications Suite.

Service Request (SR) Number	BugDB Number	Description
3-4138580931 3-5665826531	12923003	Events with Invitations Created in Resource Calendar Could Not Be Edited
3-4667964481	13062136	Convergence Patch Process Overwrote `custom-useroptions.properties` File
3-3495550381	12305655 (SUNBT7008231)	Convergence Could Not Be Called from an iFrame
3-5053440651	14028773	Task Type Drop Down List Behavior in Convergence UI Has Been Corrected
3-5169312121	13610120	`patchadd` and `postpatch`: made `xlate-inetorgperson.xml` user friendly
NA	13583962	`cal.autoprovision` turned off out-of-the-box

3-5254156241	13769138	vacationstartdate and vacationenddate was X Hours Off From Expected Start and Stop
3-5360163841	13771512	S/MIME applet in Convergence Did Not Check Validity Date Before Counting Certs
3-5644159031	14114968	In French locales, Over Quota Message Was Displayed in English
NA	14016866	`iwcadmin` Did Not Update Configuration Parameter Because of Invalid Character in `config-mappings.xml` File
3-5551096721 3-5636036731	13936799	When Attempting to Accept Resource Invitation as Owner, Received Error 60
3-5448454361	13915730	Event Display was Slow if There Were Many Attendees
3-5457807351 3-5818060981	13853431	When Switching Auto-Reply Off, the following popup window appeared, "Start Date is Before Today"
3-5492489671	13882282	Validated and Disallowed Inbox or Other System Sub-folder Names
3-4762216261	13100494	Owner of Resource Saw "Can You Attend" Pop-up Window with Auto-Acceptance
3-6112241548	14542604	Anonymous Calendar View as IFrame Did Not Work on Remote Server
3-5944986671	14356325	When There Was No Corporate Address Book, the Subscribe Feature for Calendar Should Have Been Disabled
3-5024144311 3-5846763291 3-3902028571 3-3920439961	12743962	Saving Calendar Tasks Without Due Dates Failed
3-3902028571 3-3920439961	12298704 (SUNBT6971213)	Creating a Task on Calendar Failed Intermittently When It Did Not Contain a Due Date and It Contained Special Characters
3-5351686751 3-5846763291 3-6116692381 3-6107876371 3-5895924261	13773048	Saving Calendar Tasks That Did Not Have Due Dates Failed When Default Reminder Option was Set
3-3936878861 3-4027710663	12743995	Changes to Some Task Detailed Were Not Reflected Immediately in Task View
3-5872223901	12249631 (SUNBT6755541)	Internet Explorer: Mail Message Viewer: Could Not Copy Text from the Viewer
3-3401502230	13014056	Events Did Not Appear to be Automatically Accepted in Resource Calendars
3-5664432531	14344764	Internet Explorer 8: Compose Form Was Slow in Displaying
3-5664432531	14349147	Internet Explorer 8: Create Event Form Was Slow in Displaying
3-5553068141	14000700	Unable to Save Event with Semicolon in Title/Description when Reminder Was Set
3-5443800771 3-5991275571	13918281	Convergence 2/Calendar Server 7: Events with CUTYPE:ROOM Were Not Displayed as Reservations

3-5449688451 3-5702229211 3-5838143611	13893700	Convergence Didn't Recognize Organizer Without ';CN=<SOME USER>'
3-5238166781 3-5583339281	13780709	Importing an `*.ics` File Displayed the Information Incorrectly
3-4139227177 3-5551096721	12802491	Owner of Resource Was Unable to Respond to Invitations
3-4682026471	13067917	Message List Display Order Only Partially Applied to Current Session
2-8223873 3-5036149661	12305076	`substring-any` foo Was Not Being Used in Corporate Address Book Search Filters
NA	14773854	Mail Compose Window Did Not Accept Valid URLs When Creating Link in Mail Body

Known Problems in Convergence

The Convergence known problems are grouped in the following categories:

- Known Problems: General and Authentication
- Known Problems: Configuration
- Known Problems: Mail
- Known Problems: Calendar
- Known Problems: Address Book
- Known Problems: Instant Messaging
- Known Problems: Options
- Known Problems: Customization
- Known Problems: S/MIME

Known Problems: General and Authentication

GlassFish Enterprise Server 2.1.1 Patch 15 (v2.1 Patch21) (9.1_02 Patch27 with HADB) Causes Errors

SR number: NA
Bug number: NA

There are known problems when Convergence is deployed with GlassFish Enterprise Server 2.1.1 Patch 15 (128643-29/128644-29/128645-29). Therefore, do not to use this particular GlassFish patch. See also GlassFish bug: *13705971 - Recycle of Parametercount is Not Done*, which causes Convergence user session corruption.

Beginning with Sun GlassFish Enterprise Server 2.1.1 Patch 16 (v2.1 Patch22) (9.1_02 Patch28 with HADB) (128643-30/128644-30/128645-30), the errors appear to have been fixed.

Configurator does not allow for ISS Proxy Authentication

SR number: NA
Bug number: 12295290 (SUNBT6955552)

To enable ISS Proxy Authentication with Convergence, run `iwcadmin` with the following configuration parameters:

```
iwcadmin -u admin -o ISS.enable -v true
iwcadmin -u admin -o ISS.enablessl -v true (if SSL is used)
iwcadmin -u admin -o ISS.host -v <FQDN of ISS host>
iwcadmin -u admin -o ISS.port -v <ISS port>
iwcadmin -u admin -o ISS.proxyadminid -v <uid of proxy user>
iwcadmin -u admin -o ISS.proxyadminpwd -v <plaintext password of proxy
user>
```

If ISS Proxy Authentication is enabled in Convergence 1.x and you upgrade to Convergence 2, attachment search will not work until you set the Proxy Authentication user name and password when enabling ISS Proxy Authentication in Convergence 2 as shown in the above table.

Convergence cannot be used with Oracle Directory Server Enterprise Edition 7.0 if VLV indexing is enabled

SR number: NA
Bug number: 12293332 (SUNBT6947126)

VLV indexing causes crashes in Oracle Directory Server Enterprise Edition 7.0.

> **Note**
> With Convergence 2, use Oracle Directory Server Enterprise Edition 11g Release 1 (11.1.1), Oracle Directory Server Enterprise Edition 6.x, or 5.x. Refer to Additional Product Requirements for Convergence 2.

Creating a group saves the help text if the user does not enter any values

SR number: NA
Bug number: 12237920 (SUNBT6702002)

If pop-up windows are blocked in the user's browser, functions such as printing dialog, IM, timeout warning, and navigate away warnings do not work

SR number: NA
Bug number: 12237334 (SUNBT6699051)

From the user's perspective, it appears that these functions do not work. Convergence does not display a dialog telling users to enable pop-ups.

Timeouts are reported in dialogs as formatting errors

SR number: NA
Bug number: 12235184 (SUNBT6691137)

If you take an action such as creating a mail folder and wait until the action times out, the error dialog tells you there was a formatting error in the folder label. It does not say that your action timed out.

Pressing the Tab repeatedly gives usability issues in Create Contact

SR number: NA
Bug number: 12235075 (SUNBT6690719)

When creating an Address Book contact, click the work email field then keep pressing the Tab key. After the Notes field, if you press the Tab key, focus shifts to the Buddy List.

The Show Contact in presence alert should highlight the contact in the roster

SR number: NA
Bug number: 12233759 (SUNBT6686064)

Reloading the page causes the Mail tab to be displayed, no matter which tab was displayed originally.

SR number: NA
Bug number: 12213298 (SUNBT6610071)

For example, if you are viewing the Address Book and reload the page, the Mail view is displayed.

Known Problems: Configuration

No known configuration problems at this time.

Known Problems: Mail

Chrome Browsers: Inline Image Sent from Thunderbird does not Display in Preview Pane after the First Time it is Viewed.

SR number: NA
Bug number: 17811612

When the user disables the preview pane or double clicks on the message, the image displays.

While saving a `*.csv` attachment from a Mail message when using Internet Explorer 8, the attachment is automatically saved as an `*.xls` attachment

SR number: NA
Bug number: 12351452

This scenario only occurs when the mail recipient is reading the message on a PC on which Microsoft Excel is installed and the message has been sent from a PC on which Microsoft Excel is installed. The `.csv` attachment is marked as `Content-type: application/vnd.ms-excel` in the message source.

Email subject search does not work when search string contains space

SR number: NA
Bug number: 12297417 (SUNBT6965282)

How search is enabled for Convergence may yield different results. The results returned by an IMAP SEARCH will differ depending on whether or not Messaging Server is configured with `service.imap.indexer.enable` to use the Indexing and Search Service. The IMAP specification states that a SEARCH operation should ignore white space. However, the search operation by the Indexing and Search Service is done as whole-word searches.

Attachment Search does not work properly with CCJ character set file names

SR number: NA
Bug number: 12275399 (SUNBT6863476)

This issue occurs only when there are 2 or more complete characters of the file name in the search.

On Internet Explorer, if you open a compose window and try to paste a list of addresses into the To: or CC: field that exceeds 4000 characters, the field is populated with blank spaces. If you highlight the field, you can see the addresses

SR number: NA

Bug number: NA

This is a known IE issue. It does not occur with other browsers.

Workaround: You can fix this problem with a registry modification. For details, see http://support.microsoft.com/kb/240121.

When you perform a mail function that takes time to complete, the dialog buttons that handle the function are not disabled, and the cursor does not change to a wait symbol

SR number: NA
Bug number: 12236181 (SUNBT6694440)

For example, if you select all messages in a folder, the related dialog button should be disabled and the cursor should become a wait symbol until all messages are selected.

An error message inadequate for end users is displayed when the Messaging Server goes down during a mail session in Convergence

SR number: NA
Bug number: 12235940 (SUNBT6693443)

If you are using mail in Convergence and the Messaging Server goes down, a pop-up error message states "Mail Service: connection refused" rather than displaying a user-friendly message such as "A temporary problem has occurred. We'll be back soon," or "Working on your request..."

A message being composed is not auto-saved if the only change was in message priority or receipt status

SR number: NA
Bug number: 12235562 (SUNBT6692400)

If you compose a message and make any change since the message was created or since the last save, the message will be saved automatically at the end of the auto-save period (by default, every five minutes). However, auto-save does not occur if the only change is in message priority or receipt status.

Agenda and invitations week print view shows events in the following week

SR number: NA
Bug number: 12800495

The agenda and invitations week print show events for Tuesday this week - Monday next week. The issue is also evident when there are events only on Monday this week and a print is initiated from Agenda/Invitations view. The print view shows "No items to display." The problem is seen only with the print view and not with the agenda/invitations calendar views.

POP: second time login password dialogue will not show unsaved user account passwords

SR number: NA
Bug number: 12850593

From folder dialog box, new folder creation creates under system folders

SR number: 3-5487263651
Bug number: 12876944

If user wants to create a new folder and set the 'Place a copy in:' option, Convergence creates folders under 'Sent, Trash, Draft folder.' Folder should be created in main folder tree.

Firefox 5 only: Saved draft opens in plain text instead of RTF

SR number: NA
Bug number: 12887902

Known Problems: Calendar

"Delete Subscribed Calendar" Dialog Displayed Instead of "Delete Calendar" Dialog

SR number: NA
Bug number: 17802834

This issue is seen when there are one or more subscribed calendars. When there are no subscribed calendars, the title of the Delete Calendar dialog correctly displays "Delete Calendar".

Even though Instant Messaging 9 provides support for event alarms in Calendar Server 7, Convergence does not support this feature.

SR number: NA
Bug number: NA

"Settings for" Label in Privacy Settings is Not Aligned Correctly for Japanese Locales

SR number: NA
Bug number: 13495595

If you login to Convergence with a Japanese locale and click Privacy Settings in Calendar Properties of the Calendar tab, the "Settings for" label is incorrectly aligned. The issue occurs on Firefox and Safari browsers only. On Internet Explorer, the "Settings for" label is correctly aligned.

A user is no longer able to send an invitation to a non-default calendar

SR number: 3-3345530321
Bug number: 12285898 (SUNBT6913955)

This functionality was removed. Users can invite people and resources, but not calendars or non-default calendars to meetings.

Calendar print functionality in daily and weekly views has changed between Convergence 1.x and Convergence 2

SR Number: NA
Bug Number: NA

If you print daily or weekly calendars, they print as an agenda-style format instead of a grid-style format. The agenda-style calendar is better at showing the details of an event, particularly when there are multiple events or overlapping events in a single day.

If you choose to print a month view calendar, it prints in a grid-style format.

> **Note**
> You are still able to view daily and weekly calendars in Convergence in both grid-style as well as agenda-style formats.

<, >, &, and " are shown as HTML entities in calendar name tooltips

SR number: NA
Bug number: 12298402 (SUNBT6969741)

If you create a calendar with a name containing special characters (&, ", <, >), the tooltip will display HTML entities when you hover over it.

Cannot Convert Recurring Event to Non-recurring Event

SR number: NA
Bug number: 12298131 (SUNBT6968391)

This issue is found in Calendar Server 7 (Oracle Communications Calendar Server), not in Calendar Server 6 (Oracle Communications Sun Calendar Server).

Anonymous Calendar Access in Calendar Server 7 Requires a minimum of Read Access for Calendar Sharing

SR number: NA
Bug number: 12307415 (SUNBT7016012)

A minimum of Read access for anyone is required when allowing anonymous calendar access on shared calendars in Calendar Server 7. If you do not enable Read access to anyone, you might see the following error when trying to access the calendar URL anonymously: `Error 0020: Your account details could not be loaded.`

Cannot save an attachment in a recurring task

SR number: 3-5837068171
Bug number: 12298718 (SUNBT6971242)

Unable to save Annual Events when setting recurrence with Advanced checkbox

SR number: 3-3901596101, 3-3937667251, 3-5038395141
Bug number: 12298201 (SUNBT6968766)

Logging in as calmaster might result in DavException "Recipient is on another internal server"

SR number: NA
Bug number: 12292410 (SUNBT6943472)

In Calendar Server 6/Calendar Server 7 co-existence setup, the Calendar Server 7 Administrator LDAP entry must have the `davcore.scheduling.localuserattr` attribute set appropriately prior to running Convergence Configurator. Otherwise, Configurator will not verify credentials.

CalDAV redirect URL for availability info should always include a port number

SR number: NA
Bug number: 12287958 (SUNBT6925057)

In Calendar Server 6 configuration, the Convergence UI is unable to handle a redirect URL without a port number (default:80).

Workaround: The value for `service.wcap.freebusy.redirecturl` in `ics.conf` should always include the port number.

Quick Add Functionality Does Not Work Correctly in non-English languages

SR number: NA
Bug number: 12270149 (SUNBT6840464)

The Convergence calendar module enables you to quickly add and event by using the quick add event functionality. This functionality enables users to create an event based on the description provided in the

quick add callout. For example, if the user provides the description 1pm lunch at the Counter in the quick add callout, the event attributes that are assigned to the time, location, and title are 1pm, the Counter, and lunch respectively. However, for non-English locales, the order in which the description is typed might change as the semantics of the language might differ from English. Users are forced to provide the event description in the English language order for the quick add function to work correctly in non-English locales.

If you select a subscribed calendar on which you have limited permissions, you cannot create events or edit your own user-owned calendar

SR number: NA
Bug number: 12256018 (SUNBT6780373)

This issue occurs when you select a calendar to which you have subscribed, when your permissions on the subscribed calendar are limited. When you then try to modify your own calendar by, for example, adding an event or editing event details, you are unable to do so.

In calendar, in the Next 7 Days view, the Refresh button does not work

SR number: NA
Bug number: 12245896 (SUNBT6737224)

If you open the Next 7 Days view in calendar, and an action modifies your calendar, clicking the Refresh button does not display the modification. For example, if another user invites you to an event or an event is deleted from the Convergence Server, these changes do not appear after you click Refresh.

The More link in a calendar continues to be displayed after the calendar is deleted

SR number: NA
Bug number: 12235453 (SUNBT6691971)

If you add events to a calendar until the **More** link appears, and then delete the calendar, the **More** link remains displayed until you refresh the browser.

In Agenda view, if you add an event and change the calendar you are viewing, the new event continues to show up in the second calendar until you refresh the browser

SR number: NA
Bug number: 12235430 (SUNBT6691933)

In Agenda view, the same event is shown twice, once in the original calendar and once in the second calendar.

A recurring event specified to end "never" actually ends after 60 recurrences

SR number: NA
Bug number: 12222250 (SUNBT6645274)

If you specify that a recurring event end "never," Convergence uses the default value for the number of recurring events, which is 60. You can only find out about this limit by scrolling through your calendar, as Convergence does not indicate the limit.

When you add a new event in month view, using natural language to specify its duration does not yield the correct event duration

SR number: NA
Bug number: 12221257 (SUNBT6641358)

For example, if you add a new event in the Calendar, specify event details such as "Lunch at 1:15

tomorrow for 45 minutes," the event is created as one hour long (1:15 - 2:15) instead of 45 minutes. Note that if you enter event details using a different format, such as "Lunch tomorrow 1:15 P.M. - 2:00 P.M.," the correct duration is created.

Workaround: Change the length of the event in day or week view, or edit the event.

Safari Browser: day/week/next7days views: focus moves to midnight after event creation

SR number: NA
Bug number: 12774109

After a creating an event, and then returning to the day/week/next7days calendar views of that event, the time shown in the UI is starting from midnight, even though the time shown in the prior view is a different time (for example, evening).

Convergence Does Not Allow Invitation By (Non-default) Sub-calendar

SR number: 3-3345530321
Bug number: 12400084

Calendar Express and Communications Express allowed invitation by user (which automatically selected the default calendar) or by `calid`.
Convergence does not have this functionality.

Agenda and invitation day views show all day events on following day as well

SR number: NA
Bug number: 12800541

All day events are shown on the day of the event as well as on the following day in the agenda and invitations day view. '

Sent invitations not shown if invite in another status is present on same day

SR number: NA
Bug number: 12822157

If an invitation in another status (open/accepted/declined/tentative) is present, then the sent invitations for that day aren't shown in the Sent invitations Print view.

After print checking/unchecking, calendar is not working in tasks/agenda/invitation views

SR number: NA
Bug number: 12822222

After printing a calendar in the Invitations/Tasks views, checking and unchecking calendars does not refresh the agenda/invitations/tasks views.

Known Problems: Address Book

Address Book Scroll Bar is Not Working When Chrome Browser Zoom is Less Than 100%

SR number: NA
Bug number: 14184608

Convergence login fails if user has large number of `pistore` entries

SR number: NA

Bug number: 12813939

Convergence login fails if user has large number of `pistore` entries

Workaround:

1. Reset following convergence parameters to accommodate long LDAP command delay:

```
@ ugldap.timeout =
@ ab.storeentrieslimit
@ ab.pstore.lookthrulimit
```

2. Wait for `ugldap.timeout` to expire then refresh the Convergence login screen.

Error in iwc/iwc_admin Log after Configuring Multiple Corporate Directories

SR number: 3-4124748511, 3-5418585761
Bug number: 12296971 (SUNBT6963032)

After correctly configuring two corporate directories in an organization, log files show errors after restarting Application Server.

No option to set default photo or delete photo

SR number: NA
Bug number: 12236938 (SUNBT6697453)

There is no option to set default photo or delete photo from the Address Book. Address Book should have the same kind of option as in Instant Messaging for setting default photo.

Restoring the default photo from the Avatar properties widget does not ask for confirmation before saving

SR number: NA
Bug number: 12234537 (SUNBT6688678)

In Address Book, the Manage Group option does not have a rename option

SR number: NA
Bug number: 12238408 (SUNBT6704130)

Workaround: Right-click on the list of contact groups in the left panel of the UI. This displays the context menu, which includes a rename option.

In IE7, apostrophes are not accepted in the Group Name text box

SR number: NA
Bug number: 12235598 (SUNBT6692504)

In IE7, when you create an address-book group and try to use an apostrophe in the group name, the text box does not accept or display the apostrophe. This is not an issue in Firefox.

The print option does not take all the contents in a contact

SR number: NA
Bug number: 12231221 (SUNBT6676645)

When you print an address book contact, some fields, such as the country, nickname, and notes, are not

printed.

In the address book, no contact is displayed when the wildcard search value is set to greater than 0

SR number: NA
Bug number: 12225061 (SUNBT6654530)

By default, the value of the `ab.pstore.wildcardsearch` property is set to 0. This enables the wildcard search function to begin returning results as soon as the end user enters the first character.

The feature does not operate as expected if you set `ab.pstore.wildcardsearch` to greater than 0. For example, if you set the property to 2, the user must enter two characters before the wildcard search returns results. That is, a value of 2 functions as follows: `2 - entry/displayname=aa*`

Workaround: Reset the value of `ab.pstore.wildcardsearch` to 0.

The Address Book Properties window displays incorrect information

SR number: NA
Bug number: 12223550 (SUNBT6649025)

In the Address Book, the Sr/Jr option is not displayed in view mode

SR number: NA
Bug number: 12222669 (SUNBT6646169)

When you create or edit a contact, you can select the Sr or Jr option to add to the contact's name, but the Sr or Jr does not appear when you view the contact.

When you create or edit a contact in the Address Book, the contact fields such as email address and phone number are not validated

SR number: NA
Bug number: 12220601 (SUNBT6638802)

You can enter any text in these fields, such as alpha characters in the phone number field.

Advanced Search in the Address Book is not working

SR number: NA
Bug number: 12220347 (SUNBT6637775)

When you select the Advanced Search option in the Address Book, enter search criteria, and press Search, no results are returned.

Incorrectly formatted address/bad address still shows "map" in address book

SR number: NA
Bug number: 12213279 (SUNBT6609983)

If you incorrectly specify an address book address entry (home or business), the resultant "map" entry points to an invalid place. The fields are not marked and bogus entries still get mapped.

User is not able to copy contacts from one address book to another group using drag and drop

SR number: NA
Bug number: 12230235 (SUNBT6673188)

Cannot make default address book as corporate address book

SR number: NA
Bug number: 12234348 (SUNBT6688097)

In the corporate address book, details of a contact are displayed in the right pane, though no contact is selected in the search pane

SR number: NA
Bug number: 12235072 (SUNBT6690711)

Pressing the Enter Key opens the Compose Mail screen

SR number: NA
Bug number: 12235604 (SUNBT6692518)

When selecting an Address Book contact and pressing the Enter key, the Compose Mail screen is opened. Because an Edit screen is associated with the contact, the Edit screen should be opened when pressing the Enter key.

Localization: French Only - UI Dialog for "Add from Address Book" has alignment issues

SR number: NA
Bug number: 12864380

Internet Explorer 9 only: search by email/display name and phone hangs when user has more entries

SR number: NA
Bug number: 12887221

Search for a string by Display Name or Email ID that is not in the contact list will not return anything and hangs.

Safari only: Clicking on + sign in the new contact page moves the page to the left

SR number: NA
Bug number: 12905669

Information is not properly shown on the right side pane for new contact form when user tries to add more information by clicking on + sign under other information.

Known Problems: Instant Messaging

Even though Instant Messaging 9 provides support for event alarms in Calendar Server 7, Convergence does not support this feature

SR number: NA
Bug number: NA

If Instant Messaging is configured with `iim.userprops.store = file`, Avatar upload fails

SR number: NA
Bug number: 12298392 (SUNBT6969715)

If Instant Messaging server is configured with a user properties file, end users are unable to upload Avatars. When using Instant Messaging in Convergence, the `iim.userprops.store` parameter should always be set to `ldap` not `file` in `iim.conf`.

Performance Issues seen with concurrent users on Convergence with Instant Messaging enabled

SR number: NA
Bug number: 12278826 (SUNBT6881061)

Convergence experiences performance issues when a number of concurrent login and logout operations are performed. The issue is seen when Instant Messaging is enabled in Convergence deployed on Sun GlassFish Enterprise 2.1 patch 02.

Provide avatar support for Instant Messenger in Server to Server deployment

SR number: NA
Bug number: 12268036 (SUNBT6830940)

Convergence does not provide avatar support in a server to server deployment. When two Instant Messaging servers are configured with Convergence and server to server communication is enabled between the two Instant Messaging Servers, the avatars are not uploaded when users chat from Convergence Instant Messaging client.

The avatar properties widget should indicate the file-size limit or image dimension limit that can be uploaded

SR number: NA
Bug number: 12236828 (SUNBT6696906)

By default, a text message should indicate these limits, as in the following example: "You can only upload a file size up to 100KB & image dimension up to 2000 x 2000." Without this warning, users are more likely to try to upload oversized pictures for their avatars that will fail to upload properly.

In Instant Messaging, adding from the Address Book always adds the buddy to Friends group

SR number: NA
Bug number: 12236667 (SUNBT6696027)

Workaround: Manage the group then add the contact.

Buddies in the Instant Messaging roster can be duplicated in the same group

SR number: NA
Bug number: 12234762 (SUNBT6689431)

You cannot delete the duplicate entry; if you delete one entry, all the entries for that buddy are deleted.

Instant Messaging chat window: Click a URL link in chat, opens up new tab in chat window not main browser window

SR number: NA
Bug number: 12233202 (SUNBT6684054)

Users in a buddy list who are in Do Not Disturb or Away status are not sorted

SR number: NA
Bug number: 12228977 (SUNBT6668868)

If you sort users (for example, in alphabetical order), the users in the following modes are not sorted: Do not disturb; Away; BRB; On the phone; Out to lunch; Gone home.

Offline messages do not show up or are not emailed.

SR number: NA
Bug number: 12228241

If a user opens a chat session with another user and one user refreshes the browser, messages are not received if messages were sent before the user's browser has been refreshed.

When you create a new chat session and refresh or reload the browser, the old chat session remains

SR number: NA
Bug number: 12228237 (SUNBT6665897)

The old chat session should be closed after a browser reload or refresh.

You cannot add the first contact to any group other than Friends

SR number: NA
Bug ID: 12227758 (SUNBT6664158)

When a user adds the first contact to the buddy list, that first contact must be in the Friends group.

An IM user cannot receive chat messages if the user started the session with "block pop-up windows" configured

SR number: NA
Bug number: 12227392 (SUNBT6662902)

Known Problems: Options

The Print option does not take all the contents in a contact

SR number: NA
Bug number: 12231221 (SUNBT6676645)

If you create a contact with all the details then choose Print > Print Group, not all details are displayed.

The Mail Forwarding options page displays a warning message that the page contains unsaved changes when no changes were made

SR number: NA
Bug number: 12225088 (SUNBT6654595)

There is no option that allows you to save a custom (or personalized) message

SR number: NA
Bug number: 12223408 (SUNBT6648561)

Known Problems: Customization

Default format for IWCP commands still in XML and invalid commands return XML only

SR number: NA
Bug number: 12807684

Response of invalid commands with explicit `fmt-out=text/json` only return XML.

When adding a new right-to-left language such as Arabic or Hebrew to Convergence, the UI text is not right-to-left

SR number: 1-473996841, 1-584006005, 1-622051802
Bug number: 12247522 (SUNBT6745772)

This issue occurs if you enable customization and perform the steps to add a custom language to Convergence, then log in as a user created in LDAP with a language preference set to the custom language (for example, Arabic). The UI displays text and aligns widgets left-to-right instead of right-to-left.

When adding a new language to Convergence, it hangs if no `resources.js` file is directly under the `allDomain` directory

SR number: NA
Bug number: 12247514 (SUNBT6745757)

This issue occurs if you enable customization and perform the steps to add a custom language to Convergence, creating a directory structure as shown in this example:

```
/iwc_static/c11n/allDomain/nls/
/iwc_static/c11n/allDomain/nls/<new language>/
/iwc_static/c11n/allDomain/nls/<new language>/resources.js
```

In this situation, Convergence does not load the files; it does not bring up the UI.

Workaround: Add an empty `resources.js` file directly under the `/iwc_static/c11n/allDomain/nls/` directory. Note that you still must create the `resources.js` file under the `/iwc_static/c11n/allDomain/nls/<new language>/` directory. For example:

```
/iwc_static/c11n/allDomain/nls/
/iwc_static/c11n/allDomain/nls/resources.js
/iwc_static/c11n/allDomain/nls/<new language>/
/iwc_static/c11n/allDomain/nls/<new language>/resources.js
```

Known Problems: S/MIME

Cannot send signed or encrypted messages if a multiple user certificate is installed on web browser

SR number: NA
Bug number: 12279141 (SUNBT6882555)

When using S/MIME on Windows Vista with JDK6u1.1, the browser hangs for smart card users if the first message in the user's inbox is encrypted

SR number: NA
Bug number: 12256501 (SUNBT6781802)

After the user logs in, as soon as the inbox loads, it tries to decrypt the first message and tries to access the Private key of the user from the smart card. The browser hangs and the user cannot perform any further operations.

Documentation Updates

These release notes and as well as the New Features page (known as What's New in prior releases) have been reorganized and reformatted for consistency with other Oracle Communications products' documentation.

Redistributable Files for Convergence

Convergence 2 does not contain any files that you can redistribute.

Delegated Administrator Release Notes

Delegated Administrator for Oracle Communications Unified Communications Suite Release Notes Version 7

These Release Notes contain important information available at the time of the general release of Delegated Administrator for Oracle Communications Unified Communications Suite Version 7, including:

- About Delegated Administrator for Oracle Communications Unified Communications Suite
- New Features in This Release of Delegated Administrator
- Deprecated and Removed Features for Delegated Administrator for Oracle Communications Unified Communications Suite
- Requirements for Delegated Administrator 7
- Delegated Administrator Installation Notes
- Delegated Administrator Compatibility Issues
- Problems Fixed in This Release of Delegated Administrator
- Known Problems in Delegated Administrator
- Documentation Updates

About Delegated Administrator for Oracle Communications Unified Communications Suite

Delegated Administrator for Oracle Communications Unified Communications Suite enables you to provision organizations (domains), users, groups, and resources in an LDAP directory used by Communications Suite applications such as Messaging Server, Calendar Server, and Instant Messaging.

Delegated Administrator has two user interfaces:

- A utility (a set of command-line tools) invoked with the `commadmin` command
- A console (a graphical user interface) accessible through a Web browser

Online help in the Delegated Administrator console describes how to use the GUI to provision users in an LDAP directory.

With Delegated Administrator, you can provision users in an LDAP Schema 1 and Schema 2 directories. LDAP Schema 1 support is only in Direct LDAP mode while LDAP Schema 2 support can be in Access Manager or Direct LDAP mode.

For information about configuring and managing Delegated Administrator, see the Delegated Administrator Administration Guide. For a description of the Delegated Administrator `commadmin` command-line tools, see Delegated Administrator Utility (commadmin) Reference.

> **Note**
> Support for Access Manager is deprecated. For more information, see: Access Manager Support Deprecation.

New Features in This Release of Delegated Administrator

See the New Features document.

Deprecated and Removed Features for Delegated Administrator for Oracle Communications Unified Communications Suite

Topics in this section:

- Delegated Administrator 6.4
- Deprecated Platforms: Version 3 of Red Hat Linux (effective in Communications Suite 6)
- iPlanet Delegated Administrator (effective in Communications Suite 5)

Delegated Administrator 6.4

Going forward, no new features will be added to Delegated Administrator 6.4. It has been deprecated in favor of Delegated Administrator for Oracle Communications Unified Communications Suite.

Deprecated Platforms: Version 3 of Red Hat Linux (effective in Communications Suite 6)

Support for Communications Suite (including Delegated Administrator) on the following versions of Red Hat Linux has been deprecated and may be removed in a future release:

- Red Hat Enterprise Linux Advanced Server (32- and 64-bit versions), version 3 (all updates)
- Red Hat Enterprise Linux Enterprise Server (32- and 64-bit versions), version 3 (all updates)

For information on currently supported versions of Red Hat Linux, see Operating System Requirements.

iPlanet Delegated Administrator (effective in Communications Suite 5)

iPlanet Delegated Administrator has been deprecated in favor of the Delegated Administrator for Oracle Communications Unified Communications Suite. Oracle, Inc. will announce an end-of-life time line for iPlanet Delegated Administrator at a future date.

> **Note**
> Although iPlanet Delegated Administrator has been deprecated, the iPlanet Delegated Administrator `imadmin user purge` command has been updated to be compatible with Messaging Server 6.3. For more information about the updated command, see Purging Users with iPlanet Delegated Administrator and Messaging Server 6.3.

Requirements for Delegated Administrator 7

See Requirements for Communications Suite 7 Update 4 and Client Requirements.

Delegated Administrator Installation Notes

For the detailed steps required to install and configure Delegated Administrator, see Installation Scenario - Delegated Administrator and Delegated Administrator Initial Configuration.

ACI Consolidation

For large-scale installations with Access Manager, Messaging Server, and an LDAP Schema 2 directory, you might want to consolidate the Access Control Instructions (ACIs) in your directory.

When you install Access Manager with Messaging Server, a large number of ACIs initially are installed in the directory. Many default ACIs are not needed or used by Messaging Server. You can improve the performance of Directory Server and, consequently, of Messaging Server look-ups, by consolidating and reducing the number of default ACIs in the directory.

For information about how to consolidate and discard unused ACIs, see Consolidating ACIs for Directory Server Performance.

Delegated Administrator Compatibility Issues

The following table lists the known incompatibilities between Delegated Administrator for Oracle Communications Unified Communications Suite and earlier versions.

Delegated Administrator Compatibility Issues

Incompatibility	Impact	Comments
Access Manager in Realm Mode (version 7.x style) Note: Access Manager has two install types: Realm Mode (version 7.x style) and Legacy Mode (version 6.x style). Legacy Mode is the default.	At installation, you must choose Legacy Mode as the install type on the following panel: `Access Manager: Administration (1 of 6)`	If the Realm Mode install type of Access Manager is installed, you are not able to run Delegated Administrator.
Directory Server releases 5.2.4 and earlier	The Directory Server feature that enforces unique values for mail attributes is not available with versions earlier than 5.2.4.	Solution: Upgrade to Directory Server 5.2.5 or later. You also can install Directory Server 5.2.4, but you must apply patch 5.2_Patch_4_6313027. For detailed instructions, see Enforce Unique Values for Mail Attributes.

Problems Fixed in This Release of Delegated Administrator

This section lists problems fixed in this release of Delegated Administrator.

Problems Fixed in This Release of Delegated Administrator

Service Request (SR) Number	BugDB Number	Description
NA	12132427 (SUNBT6316832)	Minor typo in the `config-commda` script
NA	12189933 (SUNBT6512860)	Server Needs to Explicitly Set the Password Expiration Policy on the Administrative Users to Never Expire
NA	12212879 (SUNBT6607925)	When the `config-commda` Script Fails, it Should Return the Appropriate Error
3-5335238691	12232909 (SUNBT6683171)	First Login Attempt Gives "Session Timeout" Error Message on Application Server 9.1
NA	12235824 (SUNBT6693227)	Text in Warning Dialog When Creating Service Package Has Typo
NA	12257167 (SUNBT6784367)	Could Not Add OUA in Organization Properties When Logged in as OUA in All Locales
NA	12266549 (SUNBT6824749)	Delegated Administrator 7.0 Online Help Is Displayed in English even on Japanese Environment
NA	12266569 (SUNBT6824794)	Enabled and Disabled Options Are Not Translated on Menu Selection under Advanced Search
NA	12266675 (SUNBT6825301)	Online Help Is Displayed in English even when Logging in to Delegated Administrator with its Language Set to French.
3-3653531431, 3-3653200761	12596299	Delegated Administrator hangs when creating user with long user ID
3-3986869481, 3-3948121173	12725980	Cannot create user for shared organization
3-5246101701	13695730	Delegated Administrator, `icsFirstDay` valid range should be 1-7, not 0-6
NA	13693713	Populate `davUniqueId` attribute for `davEntity` object
NA	12189933 (SUNBT6512860)	Server needs to explicitly set the password expiration policy on the administrative users to never expire
NA	13595032	When deleting a user, `removed` is an allowed value for `icsStatus`
NA	12284899 (SUNBT6909351)	Include the required version of `comm_dssetup` in the Delegated Administrator 7 patch README
NA	13416535	The `comm_dssetup` version and revision strings should be compared separately
NA	12295307 (SUNBT6955619)	The `config-commda` command needs to obey `sunNameSpaceUniqueAttrs` before importing the default domain's LDIF
NA	12298458 (SUNBT6970041)	Patchadd 124581 does not handle `config-commda` failure (`comm_dssetup.pl` version check)
NA	12828994	Delegated Administrator does not create email for Calendar Server user (which is required)
3-5363061223	13773566	`commadmin` *user* `delete -S im` should not set `inetUserStatus` to `deleted`
NA	13910101	Remove anonymous access from LDAP ACI
NA	14028269	Configurator failed to run when using Java 64-bit
3-5890211611	14296843	When having multiple entries with the same `cn` attribute, only one entry is displayed
3-5880583454	14299014	When running `commadmin -i` (interactive mode), it is not possible to manage the data

Problems Fixed in Patch 7

The following bugs were fixed in Delegated Administrator 7 Patch 7:

Problems Fixed in This Release of Delegated Administrator

Service Request (SR) Number	BugDB Number	Description
NA	16429662	After Applying Patch 7 to a Deployment Running Patch 6, Top Level Administrators Are Unable to Log in to Delegated Administrator
NA	16313143	Unable to Use the Default Organization RDN Value for the User/Group Suffix
3-6189198958	14615555	Configuring jdapi Properties Does not Work
3-5874202641	14239499	Delegated Administrator 7 Direct LDAP Mode Does not Support LDAP/SSL (LDAPS)

Known Problems in Delegated Administrator

This section describes known problems with Communications Suite Delegated Administrator in the following areas:

- Delegated Administrator Installation, Upgrade, and Configuration Problems
- Delegated Administrator Console and Command-Line Utilities
- Delegated Administrator Localization and Globalization Problems

Delegated Administrator Installation, Upgrade, and Configuration Problems

Delegated Administrator Configurator Hangs When Directory Server is Installed in a Different Location

SR number: NA
Bug number: 14397971

If Directory Server is located in a different location from Delegated Administrator, the configurator hangs. Therefore, LDAP scripts such as `ldapmodify`, `ldapdelete`, and `ldapsearch` do not work.

Workarounds:

Option 1:

1. Create the directory `opt/SUNWdsee/dsee6` and create a softlink:

```
ln -s /opt/DS7/dsee7/dsrk/bin /opt/SUNWdsee/dsee6
```

2. Rerun the configurator.

Or:

Option 2:

Copy the `SUNWdsee` folder from another machine into the `/opt` directory.

Delegated Administrator Console and Command-Line Utilities

In the Delegated Administrator console, the Calendar service Advanced Rights interface is missing the calendar group double-booking option

SR number: NA
Bug number: 12250825 (SUNBT6760564)

When the group calendar account functionality was added in Calendar Server 6.3, a new bit was added to the `icsAllowRights` LDAP attribute:

```
bit 15 : allowGroupDoubleBook : "Double booking of group calendars"
```

The Delegated Administrator console is missing a field to "Allow double booking for new group calendars" by setting bit 15 of the `icsAllowedRights` attribute. (The Advanced Rights fields are in the Calendar Service section of the Organization Properties page in the Delegated Administrator console.)

Workaround:

Use the `commadmin domain create -R` or `commadmin domain modify -R` command to set the advanced rights properties (bits) in the `icsAllowRights` attribute.

When you add dynamic members to a group In the Delegated Administrator console, you cannot test a manually constructed LDAP URL

SR number: NA
Bug number: 12127916 (SUNBT6300923)

When you create a new group and add dynamic members to the group, you can either manually construct an LDAP URL or use the fields available in the drop-down menus to construct the LDAP URL. If you use the drop-down menus, you can click the Test LDAP URL button. If you manually construct the LDAP URL, this feature is disabled.

Delegated Administrator Localization and Globalization Problems

No localization issue exist for this release.

Documentation Updates

These release notes and as well as the New Features page (known as What's New in prior releases) have been reorganized and reformatted for consistency with other Oracle Communications products' documentation.

Indexing and Search Service Release Notes

Indexing and Search Service for Oracle Communications Unified Communications Suite Release Notes Version 1 Update 4

Topics:

- About Indexing and Search Service
- New Features in This Release of Indexing and Search Service
- Deprecated and Removed Features
- Requirements for Indexing and Search Service
- Product Version Compatibility Requirements
- Problems Fixed in Indexing and Search Service 1 Update 4
- Problems Fixed in Indexing and Search Service 1 Update 4 Patch 16
- Problems Fixed in Indexing and Search Service 1 Update 4 Patch 17
- Known Problems in Indexing and Search Service
- Documentation Updates
- Redistributable Files for Indexing and Search Service

About Indexing and Search Service

Indexing and Search Service for Oracle Communications Unified Communications Suite is a general-purpose indexing and searching server. As email inboxes become increasingly larger, the importance of a fast, efficient indexing and search service cannot be underestimated. Consequently, Indexing and Search Service (ISS) supports email data in the message store, including embedded data in a variety of formats. ISS provides a RESTful web services interface for search, thus any client capable of interacting with such a service is supported. Oracle Communications Messaging Server consumes ISS services to bring search services to any IMAP-based mail client. Message body searches done from your mail client can use the ISS engine to perform fast, comprehensive searches of message bodies and attachments.

ISS supports Oracle Communications Unified Communications Suite data such as the Messaging Server message store. This includes embedded data in text, HTML, XML, OpenOffice, Microsoft Office, and PDF formats. Also, metadata is indexed for JPEG files.

For more information, see Overview of Indexing and Search Service.

New Features in This Release of Indexing and Search Service

See the New Features document.

Deprecated and Removed Features

Support for some features might be eliminated in a future release, has already been removed in this release, or was removed in a previous release. For more information, see Deprecated and Removed Features.

Requirements for Indexing and Search Service

See Unified Communications Suite Release Notes.

Product Version Compatibility Requirements

See Communications Suite 7 Update 4 Product Version Compatibility Requirements.

Problems Fixed in Indexing and Search Service 1 Update 4

The following problems have been fixed in Indexing and Search Service 1 Update 4.

Problems Fixed

Service Request (SR) Number	BugDB Number	Description
NA	14787183	`runqueuecheck` Never Completes During Scalability Testing
NA	14770985	Multiple Meta Documents for Single Email Causes Search and Other Errors
NA	14770040	`issearchalive` Changes the Timeout of Search Objects in Proxy Pool
NA	14770013	GlassFish Runs Out of Memory After Serving a Sequence of Large Searches
NA	14764030	Watcher Does Not Detect It Is Already Running
3-6309794131	14712464	Restarting JMQconsumer Causes Severe Log Entry: JMSSecurityException C4079
NA	14707419	Missing Flags Not Corrected By `--sync` Command
NA	14499950	Search Query Parse Failure: Brackets in Search Terms
NA	14324034	NPE in Rest if Proxypool Fails to Init
NA	14653091	Watcher Doesn't Log the Cause at Loglevel Warning and Repeats Same Level Message
NA	14606712	Search Query Parse Failure: Special Characters in Search Terms
NA	14463643	getaccountstate Times Out Fetching Multiple Account States
3-6230331711	14463680	autosync Candidate Notify For Dropped Event Is Too Expensive
NA	14484814	Watcher Email Interval Config Variable Not Setup Correct in Code and `jiss.conf`
NA	14500284	Account Failure In Autosync/Bootstrap Prevents Other Account Processing
NA	14546440	State File For `postpatch_restart.sh` Doesn't Update Current Entries
3-6230331711	14558968	Autobootstrap Candidate Notify For Failing Event Is Too Expensive
NA	14571546	`setup -s` *file* `-D` Complains About Watcher Files Not Being Set
NA	14571592	`postpatch_restart.sh` Leaves the searchui War Deployed
NA	14571600	Have `postpatch_restart.sh` Support the `-b` Option
NA	14589297	Account Name Containing Tilde Character Not Handled Correctly
3-6358128971	14642854	`iss.tmp.dir` Not Getting Cleaned Up
3-6230331711	14643183	JMQ Broker Queue Buildup When Messaging Server `imapd` Is Crashing or Slow
3-6230331711	14661811	Autosync Candidate Notify Results in Duplicate And Unknown Entries
NA	14667746	Parse Exception Searching for a Term Containing ':' Character
NA	14687475	Received Event Log Message Needs Timestamp Diff Calculation
3-6230392691	14694753	High Memory Usage With Autosync Enabled
NA	12266628 (SUNBT6825112)	Multimachine Deployment: Apache Server Is Not Stopped and Hence Reinstall Fails
NA	12267959 (SUNBT6830555)	`redhat init.d` Files Should Support the 'SERVICE' Command
NA	12269853 (SUNBT6839144)	`issadmin.sh --checkaccount` Can Miss Out-Of-Sync State

NA	12284533 (SUNBT6907522)	Using an Invalid User Name Generates Exception In GlassFish Server Log File
NA	12540753	JMQ Consumer Queue Is Not Cleared Soon After Account Is Deleted
NA	12583910	`clustermgr.sh` Errors Difficult to Understand
NA	12618123	Linux: `rpm -e` Should Stop ISS Services Like `pkgrm` Does
NA	12761637	`setup` Should Check that JDK Location Contains JDK6
NA	12770700	Need Better Error Reporting in `configure_mq.sh` (called by `setup`) on LDAP Failure
NA	12790320	Poor Behaviour when `svc_control.sh` Cannot Start `indexSvc`
NA	12816657	Support for Java 7 with ISS
NA	12816734	JMQ Consumer Buffered Autosync Candidates not Saved on Shutdown
NA	12842352	Search Service Returns Incorrect Response Code
NA	12922116	Reduce Search Overhead from Old Unused Folder Flag Implementation
NA	12932180	Reduce IO when JMQ Consumer Buffered Autosync Candidates Saved
NA	12999093	Index Failure after Messaging Server Reconstruct on Folder
NA	13004534	`setup -D -S` not Covered in Usage and Restarts Services Where it Should not
NA	13009853	Need Better Error Reporting from `setup` when `jndi ldap` Parameters Are Missing
NA	13032084	User Indexed Twice: Once from Bootstrap and Once from Autoprovisioning
NA	13032387	`setup` Should Have an Option to Verify that Installation Is Successful
NA	13032393	Need a Way to Ignore Certain Folders Across all Users
NA	13032403	Attachment File Names Should Be Broken up into Substrings and Indexed in Body
NA	13032436	If Using File-based JNDI, `ldap.host` not Being Set Causes Failures During Setup
NA	13032439	`checkIss` Needs to Check More Parameters
NA	13035946	REST/STOREUI WAR Files Cannot Be Redeployed without Restarting GlassFish Server
NA	13067130	`setup` Should Validate the the `mail.imap.admin.password` Is Correct
NA	13092761	Folder Thread Pool Size not Refreshed Completely
NA	13147445	Various Flag Term Searches Fail or Return Incorrect Results
NA	13147572	`postpatch_restart.sh` Needs to Have Non-interactive Mode
NA	13254800	Extend Scope of Recovery after Messaging Server Reconstruct on Folder
NA	13257204	Unpublished Options Are Removed from `jiss.conf` when `postpatch_restart.sh` Is Run
NA	13257751	Provide Sample End-to-End Probes for Inclusion in Monitoring Systems
NA	13257800	Need Easier Way to Extract Search Rate and Event Rate
3-5561340981	13257862	Need a Way to Ensure Users Are in Sync with Messaging Server
NA	13263476	Parts of the "From" Search Are Not Working
NA	13352425	`--unignorefolder` on Non-Existent Folder Creates the Folder
NA	13397762	`liststat` Output Is Cluttering Log File
NA	13397846	`issadmin.sh --listactiveservices` Output Is Too Cryptic
NA	13397871	`issadmin.sh --checkaccount` Output Is Confusing
NA	13420400	Copy from Another Account's Shared Inbox Folder Breaks Auto-reconstruct Recovery

NA	13448072	Regression: Account Created when Bootstrapping Non-existent Account
NA	13453196	Multi-machine Errors for Retrieving Thumbnails Difficult to Understand
NA	13454004	Have `setup` Clearly Define Multi-machine Install Options
NA	13454024	Web Nodes in a Multi-machine Deployment Cannot Retrieve Thumbnails
NA	13454033	Add Support to Run Cluster Search Service in the Back-end to Avoid Web Tier NFS
3-5001282601	13456128	RESTful Web Service Should Recognize when `searchSvc` Is Down and Return Error
NA	13476309	`ignorefolderlist` Configuration Parameter Fails when Using `--accountlist`
NA	13517733	Reconstruct not Detected by Events Requires Periodic Check to Correct
NA	13543090	Events Directed to Folder Name Containing only Blank Spaces Are Not Synced
NA	13545757	`checkiss` Intermittently Fails Checking Producers on Mail JMQ
NA	13548481	Out of Order Candidates Prevents Correct Autosync
NA	13568372	`--sync` Causes Duplicate Meta Docs in Account which it Cannot Correct
NA	13588747	Running Two `issadmin.sh --checkaccount` Commands May Conflict
NA	13605911	`issadmin.sh --checkaccount --sync` Output Missing Foldername/Username/Hostname
NA	13605979	`issadmin.sh --checkaccount --sync` Should Repair Mismatched UIDVALIDITY
NA	13646070	Running `listbrief` Creates Exception when `createaccount` Is Running
NA	13657825	`indexSvc` Startup Should not Wait for Autosync to Complete, Delay is Too Long
NA	13689580	`issadmin.sh` Failure when Services not Running
3-6301265031	13714966	Single System Installation: `setup -u` Removes the MQ User and Then the Next `setup` Fails
NA	13717834	Have Watcher Support Refresh Configuration Parameters While Running
NA	13718424	Update Third-party Library: MQ
NA	13718906	`utilSvc` and `JMQconsumer` Need to Recreate `iss.log.dir` if Needed
NA	13719475	Update Third-party Library: Metadata Extractor
NA	13729451	If All or Many Accounts Are out of Sync, Fall Back to IMAP Search
NA	13733473	`isadmin.sh --listactiveservicess` Needs to List User Being Synced
NA	13775281	`--checkaccount` Must Warn when State Is Not "A" and `--sync` Must Not Leave Account in "I" State
NA	13776863	File Slow to Index and Consumes Too Much Memory
NA	13780980	`--bootstrap` Command Should Generate Error if Account Already in Bootstrap State
NA	13781000	Users XYZX and X_.X Cannot Both Get Created
NA	13781633	All Services Should Print Version Sting in Startup and Shutdown Messages in Log Files
NA	13785437	`issadmin.sh --listactiveservices` Sometimes Has a NULL:FOLDER-NAME:W Entries
NA	13787331	Bootstrap Hangs Until Broker Restart

NA	13795792	`postpatch_restart.sh` May Fail and Leave SMF Entries Missing
NA	13795911	`check_conf.sh` Returns Not Found
NA	13795926	Periodic Autosync Locks out Other Admin Functions
NA	13796156	Bootstrap Failure Collides with Autosync
NA	13797264	`--checkaccount --sync` Failures Leave Entries in `--listactiveservices`
NA	13799944	`JMQconsumer` Stopped Processing Events until ISS Restarted
NA	13811088	`configoptiontest` Fails
NA	13811968	`patchrm` Hangs in Large Deployment and Depends on GlassFish Server Being Available
NA	13816568	Duplicate Account Created by Delete/Create Events when `--useramdir` in Effect
NA	13827244	Errors During Events in Recovery From UID VALIDITY and Expunge
NA	13837637	IMAP Session Timeout Fails to Trigger a Retry
NA	13846259	`indexSvc` Fails to Start when Port 52222 is not Running
NA	13873525	`checkIss` Should Warn if `indexSvc` Is Close to the Limit of Open File Descriptors
NA	13882075	Default Groups Allocation Policy Assigns Wrong Group Number Sometimes
NA	13921493	`JMQconsumer` Does not Free Service Proxy when Heap Size Exceeded
NA	13921585	Exception in Autobootstrap Test
NA	13927256	Autobootstrap on Two Accounts Simultaneously Causes One to not Sync
NA	13967656	Queries Sent to IMAP (body search) Are not Successful and Cause IMAP to Core
NA	13972803	After Startup, `indexSvc` Takes Too Long to Process Initial Real-time Events
NA	13982371	Postpatch Upgrade Did Not Add Watcher Parameters
NA	13992306	Watcher Alert Is Triggered Only for Index and Search but Not for `JMQconsumer` and `utilSvc`
NA	13997089	Watcher Log Levels Are Not Honored
NA	14002919	Watcher Alert Should Be Retried if it Fails the First Time
NA	14028894	Exception when Upgrading from ISS 1 Update 3 Patch 12 to ISS 1 Update 4
NA	14029291	Autoboot Is Triggering Repeatedly on Existing Accounts, Leading to Lost Events
NA	14045218	Allow ISS to Use Non-persistent Delivery Mode for IMQ Messages
NA	14045269	RFE: Watcher On and Notification Is Routed Through sendmail, Notification Should Work
NA	14045362	`--sync` Command Fails to Delete Extra UIDs from Index
3-5662308281	14055760	ISS Should Time Out and Drop `Newmsg/Updatemsg/Copy` Events if IMAP Is Slow
NA	14072095	On Web, LDAP, and MQ Nodes, `logs` Directory is not Present so Watcher Complains
NA	14072175	LDAP Only Mode: `svc_control.sh stop` and `start` Tries to Start and Stop All Services
NA	14076115	`--sync` Fails to Delet Folders with Names Containing Non-alphanumeric Characters
NA	14082134	Cluster Install on Index Node Does not Set `java.naming.factory.initial` Correctly
3-5711436821	14082811	Uncaught Exceptions in Rest Can Cause IMAP to Core Dump

NA	14114311	`setup` Should Call `checkIss` Script Selectively in Multi-machine Environments
NA	14142090	`Changeflag` Event Updates Indes Incorrectly, Flags Are Out of Sync
NA	14158968	Watch Cluster Setup: Cannot Access Accounts on SearchUI Nor RESTful
NA	14164654	Overquota and Underquota Events Should Be Dropped
NA	14170933	Possible Performance Issue with Autosync
NA	14171012	`indexSvc` not Able to Keep up with Peak Event Loads
NA	14171110	`JMQconsumer` Stops Dequeuing from Broker for More Than 20 Minutes, Causing Queue Buildup
NA	14276341	Lucene 3.6 Features Disabled
NA	14284017	`\t` Characters Are Printed in Help for ISS Commands on OEL
NA	14284038	`checkStack` Does Not Return Enough Information
NA	14284189	clusterv2 Install Can Hang GlassFish Server on OEL and Red Hat Linux
NA	14285043	Error when `--setautobootlist` Used with No Default Host Name Specified
NA	14300950	Regression: Search Gives Wrong Records
NA	14312760	Regression: Account Sync Creates More Than One Document for the Same UID
NA	14323822	`configure_merge.pl` Fails if Passwords Need to Be Added or Changed
NA	14324248	Upgrading with `commpkg upgrade` Needs to Provide More Information
NA	14354935	Multi-machine Installation Is Broken
NA	14377891	`setup` of Web Node Should Display Message Requesting GlassFish Server Restart
NA	14383306	`setup` for clusterv2 Does not Ask the Correct Questions
NA	14395043	`utilSvc` Stops Responding after Five Severe Errors Are Detected
NA	14463748	`runAutoBootLoop SEVERE: Exception during periodic bootstrap loop` Error
NA	14467650	Autosync Account List Does not Reset
NA	14498938	Deadlock During Autoprovisioning/Autobootstrap

Problems Fixed in Indexing and Search Service 1 Update 4 Patch 16

The following problems have been fixed in Indexing and Search Service 1 Update 4 Patch 16.

Problems Fixed

Service Request (SR) Number	BugDB Number	Description
3-6888515101	16439356	`jmqconsumer`: `runQueueCheck` should complete within a reasonable time period and should not cause out of memory condition or exception
3-6888515101, 3-6734374171	16403932	When `jmqconsumer` drops its connection to INDEXMS, causes broker failure with possible impact to Messaging Server
NA	16522844	Poor performance when dIndex grows large from copy events
NA	16212002	Timeout exception during heavy load prevents dequeuing from INDEXMS
NA	16464427	Cached documents use excessive memory

Problems Fixed in Indexing and Search Service 1 Update 4 Patch 17

The following problems have been fixed in Indexing and Search Service 1 Update 4 Patch 17.

Problems Fixed

Service Request (SR) Number	BugDB Number	Description
3-7068916131, 3-6734374171	16403855	Time to index `expungemsg` and copy events is too long
NA	16668044	Replace flood of `clearffcache` `IndexSvc` messages with summary line
NA	16746057	`IndexSvc` is leaking file descriptors
3-7170454321	16776807	Null pointer exception in autosync during `selectperiodicsynccandidates`
NA	16777022	Null pointer exception in `jmqconsumerutils` during `logprocessingmsg`

Known Problems in Indexing and Search Service

Special Note When Updating From Patch 14 or Earlier

SR number: NA
Bug number: NA

Indexing and Search Service 1 Update 4 Patch 15 contains a fix for bug 14712464 (Restarting JMQconsumer Causes Severe Log Entry: JMSSecurityException C4079).

After updating from Patch 14 or earlier to Patch 15, you must manually remove orphaned JMS temporary destinations created before this bug fix. Otherwise, if the `JMQconsumer` process reuses the temporary destination names when it is restarted, exception error conditions can result.

To prevent these types of errors, perform the following steps after updating to Indexing and Search Service 1 Update 4 Patch 15 and running `postpatch_restart.sh`:

1. Run *iss-base-dir*`/bin/svc_control.sh stop`.
2. Run *iss-base-dir*`/examples/jmqtempcheck -d`.
   This checks for and deletes JMS orphan temporary destinations.
3. Run *iss-base-dir*`/bin/svc_control.sh start`.

No search capability yet for calendar, address book, and instant messaging content

SR number: NA
Bug number: NA

This feature might be supported in a future release.

Unable to match strings with underscore, /, . etc characters

SR number: NA
Bug number: 12224418

Punctuation characters are generally treated as spaces. Try searching for substrings delimited by them. This issue might be addressed in a future release.

issadmin.sh --storepath option fails silently when index service is running

SR number: NA
Bug number: 12247355

The `--storepath` option to `issadmin.sh` requires that the index service not be enabled at the time that the command is run. If the index service is running, it executes the command by using the configured store path, not the non-standard path provided by the `--storepath` option.

An OpenOffice document with a .doc extension may not be detected as an OpenOffice document

SR number: NA
Bug number: 12254693

An OpenOffice document with a `.doc` extension might fail indexing and might be categorized as a compressed document. First, the document might fail to be converted by the Microsoft Word converter, then it might be detected as a zip (compressed) file rather than specifically as an OpenOffice document.

When running as root, running issadmin.sh with folder names like jeff's email will not work

SR number: NA
Bug number: 12257671

If the folder name contains a single quote or other characters that need to be escaped on the command line, then commands cannot be run as root on the folder name. Instead, run the command as the ISS user, for example:

```
/opt/sun/comms/jiss/bin/issadmin.sh --user jeff --checkfolder --folder
jeff\'s\ email
```

Count of emails containing attachments is not maintained correctly

SR number: NA
Bug number: 12267562

`issadmin.sh` returns a count of emails containing attachments. This count is correct after an account is bootstrapped, but it is not maintained properly as changes are made to the account.

Real-time updates and issadmin.sh --sync command may conflict

SR number: 3-6207485861
Bug number: 12288231

If events arrive while the `--sync` command is running, they are processed until after the command completes. Because the account already reflects the changes, applying the events afterwards might cause errors, resulting in the account not being in sync.

After bootstrap exits from "corrupt" mailbox account is created (wrongly) with "A" state

SR number: NA
Bug number: 12290899

When an account on the Messaging Server that is corrupted is bootstrapped, the failure is not detected properly, and the account is left in the Active state.

Terminating issadmin.sh command does not stop server side command

SR number: NA
Bug number: 12307720

When the `issadmin.sh` command is used while the Index Service is operational, the work is done in the server process, and the `issadmin.sh` waits for it to respond with completion. If you terminate the `issadmin.sh` command (by using Control-C for example), only the `issadmin.sh` command itself stops, not the services in the server. These continue to run until completion. To stop these tasks, use the `--listactiveservices` command to find which tasks need to be terminated. The output from this command indicates identifiers that can be used with the `--stopservice ID` command to shutdown the set of tasks left running. See Interrupting Commands for an example of the use of this feature.

issadmin.sh --listbrief (1M users) causes JMS exception - exceeds message size limit

SR number: NA
Bug number: 12307730

Whenever the output from `--listbrief` (or any `--list*` command) is very large, internal broker or Java heap limits might be exceeded, causing the command to fail, leaving the `issadmin.sh` command hanging. If this happens, you can retry the command by adding the `--altoutput` *FILE* option, where *FILE* is the path to a disk file where the output is directed.

searchRun.sh tool does not work on HA/cluster node

SR number: NA
Bug number: 12597590

The `searchRun.sh` tool cannot be used on an HA/cluster node. It can be used on back-end nodes only.

Server shutdown leave accounts in inactive or bootstrap state

SR number: NA
Bug number: 14223395

If the Index Service does not complete its shut down within a minute, it is killed immediately. Any events or commands (including autosync and autobootstrap) still being processed when this occurs are not cleaned up, and accounts being modified might be left in the Inactive or Bootstrap state. You must correct these accounts before service can be restored to them. Use the `-setstate A` command on each account before restarting the server. The accounts are then again included in autosync processing. Depending on the number or size of the accounts, you could also use manual `--sync` or `--bootstrap` commands to ensure services are restored to these accounts sooner. (You might also need to delete `write.locks` left over from `IndexWriters`.)

Documentation Updates

These release notes and as well as the New Features page (known as What's New in prior releases) have been reorganized and reformatted for consistency with other Oracle Communications products' documentation.

Redistributable Files for Indexing and Search Service

None.

Instant Messaging Server Release Notes

Oracle Communications Instant Messaging Server Release Notes Version 9

These release notes contain important release information about Oracle Communications Instant Messaging Server.

Topics:

- About Instant Messaging Server
- New Features in This Release of Instant Messaging server
- Deprecated and Removed Features for Oracle Communications Instant Messaging Server
- Requirements for Oracle Communications Instant Messaging Server
- Instant Messaging Server Installation and Uninstallation Notes
- Instant Messaging Server Compatibility Problems
- Problems Fixed in Oracle Communications Instant Messaging Server 9 Patch 1
- Problems Fixed in Oracle Communications Instant Messaging Server 9 Patch 2
- Problems Fixed in Oracle Communications Instant Messaging Server 9 Patch 3
- Known Problems in Instant Messaging Server 9
- Known Problems in Instant Messaging Server 9 Patch 2
- Known Problems in Instant Messaging Server 9 Patch 3
- Documentation Updates
- Redistributable Files for Instant Messaging

About Instant Messaging Server

Instant Messaging Server software delivers secure presence and extended real-time messaging, enabling user communities to communicate and collaborate instantly and securely. Instant Messaging leverages an existing community that can be managed by using LDAP and Sun Java System Access Manager.

> **Note**
> Support for Access Manager is deprecated. For more information, see: Access Manager Support Deprecation.

New Features in This Release of Instant Messaging server

See the New Features in Instant Messaging Server 9 document.

Deprecated and Removed Features for Oracle Communications Instant Messaging Server

The following feature is deprecated in this release and may be removed in a future release:

- Instant Messaging calendar pop-up/reminder support with Calendar Server 6.3

The following feature was deprecated in a previous release and may be removed in a future release:

- Access Manager

The following features have been removed from Instant Messaging 9 (deprecation was announced in

Instant Messaging 8.2):

- **Instant Messenger Client** - The Java client that is used to access the Instant Messaging server has been removed. As a result, the following client features are removed:
  - **VOIP Support** - This feature enabled you to convert a user's chat session into a live voice call over the internet by using the Instant Messenger client.
  - **Poll** - This feature helped you in surveying a group rapidly by conducting online polls.
  - **News** - This feature enabled you to access published information such as company announcements, project updates, or event notices on a subscription basis.
  - **Moderated Conferences** - This feature enabled the moderator to moderate private messages that are sent to conferences.
  - **Alerts** - This feature enabled you to notify users of time-sensitive information, either in individual messages or as broadcasts to multiple users. You were also able to specify routing of alerts received when offline.
- **Redirect Server** - This feature enabled you to balance the load between different servers in a server pool.
- **Communications Channel in Portal Server** - This was the channel that was used to launch Instant Messaging in Portal Server.
- **Portal Server Archiving** - This feature enabled you to archive chat content in the portal server.

Requirements for Oracle Communications Instant Messaging Server

See Requirements for Communications Suite 7 Update 4 and Instant Messaging Client Operating System Requirements.

Instant Messaging Server Installation and Uninstallation Notes

This section contains important information about installing and uninstalling Oracle Communications Instant Messaging Server software. If you are using Sun Java System Access Manager with Instant Messaging, install the Legacy (version 6 style) Access Manager by using the Sun Java Enterprise System installer. This version of Instant Messaging is not compatible with the Realm (version 7 style) Access Manager.

If you use Access Manager to store policies when configuring Instant Messaging, the following policies are created:

- Ability to administer Instant Messaging and Presence Services
- Ability to change your own Instant Messaging settings
- Ability to watch changes on other Instant Messaging users
- Default Instant Messaging and presence access

Instant Messaging Server Compatibility Problems

Although the Instant Messenger 8 client might work with Instant Messaging Server 9, it is not supported.

Problems Fixed in Oracle Communications Instant Messaging Server 9 Patch 1

This section contains a list of problems fixed in the Oracle Communications Instant Messaging Server 9 Patch 1 release.

Problems Fixed in Instant Messaging Server 9 Patch 1

Service Request (SR) Number	BugDB Number	Description

NA	14488000	HTTPBIND: Features Reported in Incorrect Element
NA	14492963	HTTPBIND Should Handle Case when ID of a Packet Contains Colon
NA	14335835	Unrecognized Parameters with `imconfutil` Must Be Supported
NA	14304611	Deadlock Seen in Jstack Dump of Instant Messaging Server
NA	14304142	iChat Causes Very Large Log Files
NA	14303959	Thread Handing Issue During JSO's stream.send Call
NA	14281922	Not Able to Log In to Facebook Using Facebook Gateway
NA	13969925	Provide Avatar Support for IM in Server-to-server (Server Federation)
NA	13943600	Enable Support for Offline Messages in Instant Messaging
NA	13939676	Thread Hanging Issue During Group Chat Init Call
NA	13939664	Threads Handling Queues Are Not Named Properly
NA	13939647	Instant Messaging Install Instructions Must Be Updated in Patch README
NA	13939121 (SUNBT6973034)	Perform Group Expansion on the Server Side
NA	13644243	HTTPBIND Should Be Able to Support Stream Restarts
NA	13597852	Watchdog Should Take a Stack Trace Before Restarting Server, to Aid Debugging Forced Restarts
NA	13478345	HTTPBIND Should Not Be Restarted when a New Host Domain Is Added to Instant Messaging Server
NA	13428426	In s2s, Only One-Way Communication Occurs when the Remote Server Is Restarted
NA	13428417	Server Restarts when Remote Server Is Restarted in a Federation
NA	13428320	Thread Starvation Leading to Server Restart in Federations During High Loads
NA	13428291	Server Hangs on Restarting Remote Server in Federation
NA	13423327	Race Condition in HTTPBIND when a Request is Queued
NA	13394589	HTTPBIND: Packets in Queue Not Notified
NA	13394195	HTTPBIND: Time to Wait Calculation Is Wrong
NA	13389473	Session Closed when a Request Is Retransmitted
NA	13385823	Session Closed when an Unprocessed Request's Connection Is Closed
NA	13385373	Deadlock in Instant Messaging Server when Closing an s2s Connection over TLS
NA	13385356	Deadlock in Instant Messaging Server when Disconnecting an s2s Connection over TLS
NA	13385292	Too Many Threads Blocked on Single s2s Connection
NA	13242229	Instant Messaging Server Does Not Release Lock When it Receives a Malformed Block
NA	13070819 (SUNBT7015505)	Instant Messaging Server 8, Watchdog Process Not Closing Unused `S_IFIFO` Descriptors
NA	13038924	Multiplexor Process Should Set Java Max Heap Size
NA	13038031	Unable to Delete Two or More Buddies with Instant Messenger
NA	13037885	Instant Messaging Presence Error Not Being Sent Back to Client
NA	13001788 (SUNBT6986255)	Provide Configuration Option to Customize Server Classpath
NA	13001728 (SUNBT7015120)	Instant Messaging 8, Watchdog Process Should Set Java Max Heap Size
NA	13001654	RFE Implement Statistics from Server
NA	13001627	RFE to Allow Conference Server's Name to Be Configured to Rather than Be Hardcoded
NA	12620812	Incorrect JID/Password Set for `cal-agent` after Configuration
NA	12305842 (SUNBT7009061)	No Command to `GET-DEFAULT-MUX-THREADPOOL`, `GET-DEFAULT-SERVER-THREADPOOL` Is Listed Twice

NA	12291429 (SUNBT6940010)	Configurator Should Support Configuration of Calendar Agent with JMQ
NA	12222617 (SUNBT6646034)	`imadmin assign_services` Fails when Instant Messaging Talks to LDAP in SSL Mode
NA	13478456	`mailEquivalentAddress` Needs to Be Supported for `roster.extra.attributes.mail`
3-5996261051	14371084	Instant Messaging Server 9 Unable to Configure Message Conversion API Functionality
NA	13039035	Fails to Connect to Instant Messaging Server if the Resource Name Is Not ASCII 7-Bit
NA	13412514	API Keeps Sending Simultaneous Requests without Limit
NA	13363744	Responses Should Be Processed in Order of Their RID
NA	13363724	Retry in Case the Response Is Delayed to Handle Packet Loss
NA	13363687	RID in Collab API Should Be Positive

Problems Fixed in Oracle Communications Instant Messaging Server 9 Patch 2

This section contains a list of problems fixed in the Oracle Communications Instant Messaging Server 9 Patch 2 release.

Problems Fixed in Instant Messaging Server 9 Patch 2

BugDB Number	Description
16248393	TLS Buffer Usage Should Be Optimized
15896128	API Documentation Must Be Updated
15883281	IQ Packet of Type Result Is not Being Sent in Case of Roster Remove
14766341	Multiple Instances of Watchdog Started when Log Directory Does not Exist
15883332	Restartlogic Attribute not Being Advertised by The Connection Manager
12971303	Typos in Help Output for `imconfutil`
15858073	Conf File Is Read for SMPP Conf Every Time an Offline User Receives a Message
14827195	Presence Of Type 'SUBSCRIBED' not Being Sent in Case of Mutual Subscription
12290143 (SUNBT6934454)	Presence of User Is Seen when a Blocked Contact Logs out and Logs in
14827218	Wrong Error Being Returned by Bosh Connection Manager
15958175	File Not Transferred when Byte Stream Filters Are Enabled
15958098	Unable to Enable Byte Stream Filters Using `imconfutil`
12310267 (SUNBT7031963)	Pub-Sub : Subscribtion Result Does not Show Pubsub and Subscription
15900826	`$PKG65` Initialized to `sunwiim` for Machines with Linux OS
14797845	`getversion` Should Return Oracle's 5-Part Version Instead of The Marketing Version
15856731	Server Does Not Adhere to Session Setup Timeout Set in Configuration
14848444	Infoquery Packet of Type Get/Set Should Follow Delivery Rules
14736350	Deadlock in Instant Messaging Server Causing Server Re-Start
14591876	Digest-MD5 Mechanism Must Be Supported By Instant Messaging Server
14626701	GlassFish 3 Support For Instant Messaging Server
16011648	Issues With Patch Readme

Problems Fixed in Oracle Communications Instant Messaging Server 9 Patch 3

This section contains a list of problems fixed in the Oracle Communications Instant Messaging Server 9 Patch 3 release.

Problems Fixed in Instant Messaging Server 9 Patch 3

BugDB Number	Description
16572199	The Avatar for an Instant Messaging User Does not Load and cannot Be Viewed when Configured with Instant Messaging

Known Problems in Instant Messaging Server 9

This section contains a list of current known problems for Instant Messaging Server 9.

Server-to-server communication does not work because the iim_server.useport parameter is not set to true

SR number: NA
Bug number: 14402962

Server-to-server communication (static pool, shoal, federation) does not work because the `iim_server.useport` is not set to true.
Workaround:
Use the `imconfutil` command to set the `iim_server.useport` parameter to **`true`**.

Server-to-server listener properties must be set manually when configuring HTTPBIND

SR number: NA
Bug number: 14402678

If configuring `httpbind` manually (not through the Instant Messaging Server configurator), then you must run the following command for `httpbind` connections to function properly:

```
<im-svr-base>/sbin/imconfutil -u set-listener-prop -c
<im-svr-base>/config/iim.conf.xml s2s protocols=s2s,component,c2s
```

Manual Post Patch Installation Step for Instant Messaging Server 9 Patch 1 Release

SR number: NA
Bug number: NA

The following applies if you are using any of these items and continue to use the previous configuration file:

- Components: Calendar Agent, HTTPBIND, and so on
- S2S Federation
- Server Pool
- Server health monitoring using Watchdog

If you use any of these items, and if you continue to use the old configuration file, then, after installation is complete, you must set the `iim_server.useport` parameter to `true` by using the `imconfutil` command. For example:

```
imconfutil -c <xml config file> set-prop iim_server.useport=true
```

Upgrade tasks on Instant Messaging Server 9 Patch 1 fail on Oracle Enterprise Linux

SR number: NA

Bug number: 15964936

Upgrading to Instant Messaging Server 9 Patch 1 on Oracle Enterprise Linux fails because of an incorrect `ksh` path in the `preupgrade` and `postupgrade` scripts. The upgrade uses `/usr/bin/ksh` whereas the default `ksh` location is `/bin/ksh`.

Workaround:
Create a symbolic link before you run the upgrade. For example:

```
ln -s /bin/ksh /usr/bin/ksh
```

Issues with calendar reminders with invitee

SR number: NA
Bug number: 12255248 (SUNBT6778222)

After installing Instant Messaging and configuring with Messaging Server and Calendar Server, creating a new event in Calendar Server and inviting users does not always generate an alert message to invitees.

Event/Todo reminder comes without formatted information when event is created with attachment

SR number: NA
Bug number: 12300723 (SUNBT6982246)

If you configure Instant Messaging to send a reminder as content type "text/plain," then create a reminder event or todo with an attachment, the reminder arrives on time but the content is unformatted. Also, no attachment is sent.

TLS for server/multiplexor cannot be enabled when secconfigdir is specified and keystore is relative path

SR number: NA
Bug number: 12301733 (SUNBT6988580)

Trying to enable TLS with the following commands fails:

```
./imconfutil set-prop -c /opt/sun/comms/im/config/iim.conf.xml
iim_server.secconfigdir=/opt/sun/comms/im/config/certs/
./imconfutil set-prop -c /opt/sun/comms/im/config/iim.conf.xml
iim_server.usessl=true iim_server.sslkeystore=example_com.jks
iim_server.keystorepasswordfile=sslpassword.conf

Please set the iim_server.secconfigdirectory to the directory where the
Keystore file is found
Or provide the absolute path to the keystore file
example_com.jks is not a valid value for iim_server.sslkeystore
Please set the iim_server.secconfigdirectory to the directory where the
Keystore file is found
Or provide the absolute path to the keystore file
sslpassword.conf is not a valid value for
iim_server.keystorepasswordfile.
```

The command fails as well when specifying the `iim_server.secconfigdir` property to the Instant

Messaging instance directory.

Workaround:

1. Specify the full path to both the keystore and keystore password file.
2. Copy the keystore files to the instance directory and specify the relative path.
   The instance directory is recognized as the `secconfigdir` by default.

MSN gateway port needs to be changed in when performing an altroot or multi-installation scenario

SR number: NA
Bug number: 12303175 (SUNBT6995649)

When performing a multi-installation or altroot installation, set the MSN gateway port listed under File Transfer Settings (ftJabberPort) to a unique value per installation. The default port is 8010. For each installation, make sure that the port value is different. Failure to do so can cause the MSN gateway to not start correctly.

When users log in to the Facebook Gateway, their contacts' presence is not seen immediately

SR number: NA
Bug number: 12303239 (SUNBT6996044)

When a users log in to the Facebook gateway, their contacts' presence is not immediately seen. This is a limitation of the Facebook Server.

Shoal peer discovery does not work if iim_server.pool.peer.discovery_topic is set

SR number: NA
Bug number: 12306153 (SUNBT7010220)

If you configure Instant Messaging on two hosts and enable peer discovery on both (by setting the `iim_server.pool.peer.discovery_topic` property), the peers fail to join the server pool.

Document SMF service creation using imadmin or using the configurator

SR number: NA
Bug number: 12306417 (SUNBT7011495)

Use one of the following methods to enable SMF for Instant Messaging 9:

- Run the Instant Messaging `configure` script and choose the selection to start the SMF service.
- Run the `imadmin smf-register` command. (You must first stop services before running the command.)

When upgrading to Instant Messaging 9, the SMF service is not enabled by default, even if it was enabled in the previous installation. You need to manually run the `imadmin smf-register` command to enable the SMF service again.

SIP user cannot see XMPP user chat states

SR number: NA
Bug number: 12310076 (SUNBT7031535)

When an XMPP user and a SIP user, both of whom have subscribed to each other's presence, start chatting, the XMPP user can see the SIP user's chat states (for example, typing), but the SIP user

cannot see the XMPP user's chat states.

Pub-Sub implementation does not support instant node creation

SR number: NA
Bug number: 12310265 (SUNBT7031960)

The current Pub-Sub implementation does not support instant node creation.

Pub-Sub: owner could not set the affiliation of a user to "publish-only"

SR number: NA
Bug number: 12310276 (SUNBT7031977)

The current Pub-Sub implementation does not enable an owner to set a user's affiliation to "publish-only."

When a Yahoo user logs in to the Yahoo gateway, multiple subscription requests are received for each user in the roster instead of only one

SR number: NA
Bug number: 12621391

When a Yahoo user logs in to the Yahoo gateway, multiple subscription requests are received for each user in the roster. Only one subscription request per contact should be received.

Pub-Sub: Known Issues

SR number: NA
Bug number: 12690950

The current Pub-Sub implementation does not support the following items:

- Discover node metadata
- Receive the last published item
- Retrieve items for a node
- Publish an item to a node for access model "roster" and "whitelist"
- Delete an item
- Delete a node
- Purge all node items
- Delivery of last published item
- Automatic node creation
- Payment required options for subscription
- Anonymous subscriptions
- Subscription pending
- Too many subscriptions
- Configuration required
- Multiple subscriptions
- Configure subscription 0ptions
- Request default subscription configuration options
- Item publisher
- Publishing options
- Collection nodes
- Manage subscription requests
- Presence sharer
- Persistence of nodes and items (created nodes and items are lost after a server restart)
- Server-to-server communications and server pool

MSN user status "Appear offline" results in messages not being delivered

SR number:
Bug number: 12222853 (SUNBT6646707)

SIP federation does not work in server pool setup

SR number: NA
Bug number: 12713942

The current SIP federation implementation does not work in a server pool deployment.

Subscription requests are received from those users who are deleted after logging out of a gateway

SR number: NA
Bug number: 12715195

Subscription requests are received from those users who are deleted after logging out of a gateway. Subscription requests should not be received from the users deleted from the roster.

When a gateway user logs in from multiple resources, messages are not delivered to recent most active resource

SR number: NA
Bug number: 12722717

When a gateway user is logged in from multiple resources, messages are not delivered to the most recent active resource. The messages should be delivered to the resource that is most recent.

MSN Gateway inconsistencies

SR number: NA
Bug number: 12735723

The following issues are occasionally observed in MSN gateway:

- Deleting an MSN user from the roster causes the registered gateway user to get logged out.
- Presence changes are broadcast only to XMPP users and not gateway users.
- Addition of an MSN buddy fails with the message "Unhandled error in Deferred:" in the gateway log.
- After adding an MSN buddy to the roster, the subscription request is not received. It is received after logging out of the gateway and logging in again.

SIP presence subscription is not retained after user logout

SR number: NA
Bug number: 12759883

A user's SIP presence subscription is not retained after logout.

CAL-AGENT configuration validation is appears on console

SR number: NA
Bug number: 12849474

When you run the Instant Messaging `configure` command with the `--debug` and `--verbose` options, and provide information to the Calendar Agent configuration panel, validation of the input appears on the

console.

MySQL gateway tables are not updated correctly for roster addition/deletion

SR number: NA
Bug number: 12850773

When the external gateways are configured to use MySQL Server as the data store, the MySQL Server tables for the gateways are not updated when contacts are added to or deleted from the roster. This applies to MSN, Yahoo, and AIM gateways.

Error when SIP user subscribes to XMPP user's presence and SIP userID contains XMPP disallowed character

SR number: NA
Bug number: 12863412

The message "org.jabberstudio.jso.JIDFormatException: node is not valid" happens when a SIP user subscribes to an XMPP user's presence and the SIP user ID contains the XMPP disallowed character, `/`.

All day event reminder does not work

SR number: NA
Bug number: 12910383

The following situations occur when you create an all-day event with the reminder set from either Convergence or a CalDAV client, and also check for the reminder pop-up from Instant Messaging:

1. The pop-up reminder does not arrive if the reminder is set by using the "afterwards" or "beforehand" option with all-day event.
2. The pop-up reminder does arrive if the reminder is set by using the "On specific date and time" option, but it does not contain any event information.

Issues with Instant Messaging HA and configuration file

SR number: NA
Bug number: 12306573 (SUNBT7012164)

Some of the Instant Messaging HA agent files still refer to the `iim.conf` file instead of the new Instant Messaging 9 configuration file, `iim.conf.xml`.

Workaround:

For a new installation and configuration of Instant Messaging 9 for HA:

1. Copy the Instant Messaging 9 configuration file `iim.conf.xml` to the `iim.conf` file with the same permissions.
   Note: Also copy the `iim.conf.xml` file to `iim.conf` after any future configuration changes as cluster uses the `iim.conf` file.
2. To use the new 'GatewayConnector' service in HA, update this service configuration with the virtual host name or IP address and port number as follows:

   ```
   <im-base-dir>/imconfutil --config <config_dir>
   iim_gwc.hostport=<virtual host-name or ip:port>
   ```

   For example:

```
/opt/sun/comms/sbin/imconfutil --config /DATA1/default/config
iim_gwc.hostport=192.10.12.11:22222
```

For an upgrade to Instant Messaging 9 for HA:

1. Upgrade the Instant Messaging software, from Instant Messaging 8 Update 3 to Instant Messaging 9.
2. After completing the Instant Messaging upgrade, use the previous steps as described for a new Instant Messaging installation.
3. Make sure that non-active node does not have access to the `config` directory, as it will be overriding the old configuration.

Known Problems in Instant Messaging Server 9 Patch 2

This section contains a list of current known problems for Instant Messaging Server 9 Patch 2.

Server-to-server communication does not work because the iim_server.useport parameter is not set to true

SR number: NA
Bug number: 14402962

Server-to-server communication (static pool, shoal, federation) does not work because the `iim_server.useport` is not set to true.
Workaround:
Use the `imconfutil` command to set the `iim_server.useport` parameter to **`true`**.

Server-to-server listener properties must be set manually when configuring HTTPBIND

SR number: NA
Bug number: 14402678

If configuring `httpbind` manually (not through the Instant Messaging Server configurator), then you must run the following command for `httpbind` connections to function properly:

```
<im-svr-base>/sbin/imconfutil -u set-listener-prop -c
<im-svr-base>/config/iim.conf.xml s2s protocols=s2s,component,c2s
```

Manual Post Patch Installation Step for Instant Messaging Server 9 Patch 2 Release

SR number: NA
Bug number: NA

The following applies if you are using any of these items and continue to use the previous configuration file:

- Components: Calendar Agent, HTTPBIND, and so on
- S2S Federation
- Server Pool
- Server health monitoring using Watchdog

If you use any of these items, and if you continue to use the old configuration file, then, after installation is complete, you must set the `iim_server.useport` parameter to `true` by using the `imconfutil` command. For example:

```
imconfutil -c <xml config file> set-prop iim_server.useport=true
```

Known Problems in Instant Messaging Server 9 Patch 3

This section contains a list of current known problems for Instant Messaging Server 9 Patch 3.

Server-to-server Whitelisting Is Not Supported after Upgrade from Instant Messaging 8 to Instant Messaging 9

SR number: NA
Bug number: 17155860

The server-to-server coserver configuration is migrated from Instant Messaging 8 to Instant Messaging 9 during an upgrade, even though the coserver-based system of defining whitelists is no longer supported in Instant Messaging 9.

Workaround:

After upgrading from Instant Messaging 8 to Instant Messaging 9, manually remove the server-to-server coserver properties with the following command.

```
./imconfutil delete-coserver -c iim.conf.xml coserver1,coserver2
```

Also, for server-to-server federation to work as previously, set `iim_server.federation.policy=CLOSED` and `iim_server.federation.exceptions=domain1.com, domain2.com` where `domain1.com` and `domain2.com` were the whitelisted domains in Instant Messaging 8.

For information on configuring server-to-server federation, see Federating Instant Messaging Server 9 Deployments with External Servers on XMPP or non-XMPP Networks.

Documentation Updates

These release notes and as well as the New Features page (known as What's New in prior releases) have been reorganized and reformatted for consistency with other Oracle Communications products' documentation.

Redistributable Files for Instant Messaging

Instant Messaging software does not contain any files that you can redistribute.

Messaging Server Release Notes

Oracle Communications Messaging Server Release Notes Version 7 Update 5

These Release Notes contain important information available at the time of the general release of Oracle Communications Messaging Server 7 Update 5 and of Messaging Server 7 Update 5 Patch 28 and Messaging Server 7 Update 5 Patch 29 (Messaging Server 7.0.5.29.0).

Topics:

- About Messaging Server 7 Update 5
- New Features in This Release of Messaging Server
- Change in Behavior in This Release of Messaging Server
- Deprecated and Removed Features for Messaging Server
- Requirements for Messaging Server 7 Update 5
- Messaging Server Installation Notes
- Problems Fixed in This Release of Messaging Server
- Known Problems in Messaging Server
- Documentation Updates
- Redistributable Files for Messaging Server

About Messaging Server 7 Update 5

Messaging Server is a high-performance, highly secure messaging platform that can scale from thousands to millions of users. It provides extensive security features that help ensure the integrity of communications through user authentication, session encryption, and the appropriate content filtering to reduce spam and viruses. With Messaging Server, enterprises and service providers can provide secure, reliable messaging services for entire communities of employees, partners, and customers.

Messaging Server provides a powerful and flexible solution to the email needs of enterprises and messaging hosts of all sizes by using open Internet standards.

New Features in This Release of Messaging Server

See New Features in Messaging Server 7 Update 5.

Change in Behavior in This Release of Messaging Server

Topic in this section:

- NSS and String Text for SSL/TLS Errors

NSS and String Text for SSL/TLS Errors

If you are running NSS 3.13.x or a later version, you continue to see string error text for SSL/TLS errors in debug logs. If you are running a version of NSS prior to 3.13, starting with Messaging Server 7 Update 5, only numeric SSL/TLS error codes are displayed in debug logs. This represents a change from previous releases. The Communications Suite installer shipped with Communications Suite 7 Update 4 gives you the choice of updating NSS to a newer version.

To look up numeric error codes related to SSL/TLS, see https://developer.mozilla.org/en-US/docs/NSS/SSL_functions/sslerr.html.

Deprecated and Removed Features for Messaging Server

Support for the following features may be eliminated in a future release, may be already removed in this release, or removed in a previous release:

- Deprecation of MMP Legacy Log Format
- Deprecation of msgcert
- Deprecation of local.sslv3enable default
- Deprecation of MoveUser and msgssh Commands (formerly msgadm)
- Red Hat Linux 32-bit Version and Red Hat Linux 4
- Message Store Feature
- MTA BDB Databases
- SIMS 4.0 IMTA SDK
- Oracle GlassFish Message Queue
- Sparse Zones
- Deprecation of Enabling POP Before SMTP
- Deprecation of imexpire -s Feature
- Deprecation of readership Feature
- native, unix and file mailDeliveryOption Settings Deprecated
- Messaging Multiplexor's (MMP) default:SSLSecModFile Option Removed

Deprecation of MMP Legacy Log Format

The MMP legacy log format is deprecated and may be removed in a future release. It is enabled by the `use_nslog` option, which the MMP ignores in a future release.

Deprecation of msgcert

This command has been removed in Messaging Server 7 Update 5. The `msgcert` command's key generation and certificate request capabilities are obsolete due to recent weakness in MD5 and the NIST 2010 guidelines for SSL security strength. Use `certutil` with appropriate options (`-Z SHA1 -g 2048`) or other third-party certificate generation tools to create certificates and certificate requests with up-to-date security strength. See Certificate Based Authentication for Messaging Server for more information on using `certutil`.

Deprecation of local.sslv3enable default

The is `local.sslv3enable` parameter determines whether legacy support for the SSLv3 protocol (as opposed to the modern TLS protocol) is enabled. The security community considers SSLv3 deprecated and thus we recommend customers disable SSLv3 if possible. Because some older mail clients may only support SSLv3, we have presently left this enabled, but this default is now deprecated and may be changed in a future release.

Deprecation of MoveUser and msgssh Commands (formerly msgadm)

These two ancillary utilities are now considered deprecated. There are no plans to enhance these utilities and they may be removed in a future release.

The `MoveUser` command is inferior to the `rehostuser` command for moving users within a deployment, and is inferior to `imsbackup` and `imsrestore` for moving users from old to new product installations. Third-party `imapcopy` utilities are available for moving users between IMAP servers from different vendors.

A regular `ssh` session with appropriately configured `RBAC` (Solaris OS) or `sudo` (Red Hat Linux) provides enhanced security when compared to the `msgssh` command. In addition, an `ssh` session provides a more flexible framework for remote administration, because it supports administration of co-located products in addition to just Messaging Server.

Red Hat Linux 32-bit Version and Red Hat Linux 4

Support for the 32-bit Red Hat Linux version of Messaging Server and support for the Red Hat Linux 4 platform is deprecated and may be removed in a future release.

Message Store Feature

Support for the `readership` command is deprecated and may be removed in a future release.

MTA BDB Databases

MTA access to database files and the imsimta tools to manipulate MTA database files have been deprecated since the Messaging Server 6 release, and may be removed in a future release. MTA text databases continue to be supported.

SIMS 4.0 IMTA SDK

The SIMS 4.0 IMTA SDK has been deprecated since iPlanet Messaging Server 5 was released and may be removed in a future release. The current MTA SDK remains supported.

Oracle GlassFish Message Queue

Do not use the Oracle Glassfish MQ C SDK (also known as OpenMQ and JMQ), as it is deprecated. Oracle reserves the right to change the underlying protocol and the JMS provider used to provide Java JMS support for notifications in a future release. In the event this happens, the JMQ C SDK ceases to interoperate. Use of Java JMS (presently with the Oracle Glassfish MQ provider) and the ENS C API is supported.

Sparse Zones

Sparse zone support is deprecated and may be removed in a future release.

Deprecation of Enabling POP Before SMTP

SMTP Authentication, or SMTP Auth (RFC 2554) is the preferred method of providing SMTP relay server security. SMTP Auth allows only authenticated users to send mail through the MTA. The MMP has a legacy POP before SMTP feature. This feature is now deprecated and may be removed in a future release.

Deprecation of imexpire -s Feature

This feature is deprecated and may be removed in a future release.

Deprecation of readership Feature

This feature is deprecated and may be removed in a future release.

native, unix and file mailDeliveryOption Settings Deprecated

The `native`, `unix` and `file` `mailDeliveryOption` settings are deprecated and may be removed in a future release.

If you actively depend on these features please contact Oracle support.

Beginning with Messaging Server 7 Update 5, the initial unified configuration will no longer include a channel block and channel class for the native channel. The `native` and `file` delivery options will not work by default. There is no expected impact to customers using an existing configuration that is

upgraded at this time.

Messaging Multiplexor's (MMP) default:SSLSecModFile Option Removed

The Messaging Multiplexor's (MMP) `default:SSLSecModFile` option has been removed and is no longer honored.

The Messaging Multiplexor uses the NSS shared DB feature by default.

Requirements for Messaging Server 7 Update 5

See Requirements for Communications Suite 7 Update 4.

> **Note**
> For information about upgrading to Messaging Server 7 Update 5 from a previous version of Messaging Server, see Messaging Server Installation Notes.

Messaging Server Installation Notes

These installation notes pertain to the Messaging Server 7 Update 5 release. This section contains the following subsections:

- Installation Overview for Messaging Server
- Upgrade Instructions for Messaging Server

Installation Overview for Messaging Server

Use the Communications Suite installer to install Messaging Server.

For installation instructions, see the Communications Suite Installation Guide.

After installation is complete, you must configure Messaging Server by:

1. Running the Directory Server Preparation Tool, `comm_dssetup.pl`
2. Running the Messaging Server configuration program

For configuration instructions, see the Communications Suite Initial Configuration information.

Upgrade Instructions for Messaging Server

If you are upgrading to Messaging Server 7 Update 5 from an earlier release, follow the upgrade instructions in the Communications Suite Upgrade Guide.

Problems Fixed in This Release of Messaging Server

Problems Fixed in Messaging Server 7.0.5.29.0

The following table lists problems fixed in Messaging Server 7.0.5.29.0. For problems fixed in Patch 28, see Problems Fixed in Messaging Server 7 Update 5 Patch 28.

Problems Fixed

Service Request (SR) Number	BugDB Number	Description
3-7333744231	16996315	`mshttp` stops reading from socket
3-7370078951	16955503	MS not sending search to ISS when using nested search terms
3-7371868031	16955024	Assert in function `index_check()` due to `uidvalidity` change
3-7337552991	16947796	`imapd` core in `store` -> `storenotify` `msg_flags`
3-7354603231	16933768	`mshttpd` crashes while sanitizing HTML code
3-7276703530	16891443	Core of `mshttpd` in `decodeOutput`
3-7247431381	16886914	Heap corruption in `authserv_cleanup`
3-7260888261	16858312	Forward mapping for SMTP breaks `fileinto` sieve rules
3-7226298811	16828650	`aliasdetourhost` causing alias defined in aliases file to fail after Patch 28
NA	16823457	Old-style Spamfilter configurations don't work correctly in Unified Config
3-7108401571	16710994	`imapd` core dump on notify
3-7043606101	16625107	ER - log value of sieve conversion tag
3-6871631931	16430562	`mshttpd` aborts in `MEE_LocalToInternetMessageHeader()`
3-6708599261	16417838	`popd` cores during `rehostuser`
NA	16041798	Stored fail to try snapshot after invalid log record header
NA	15827190	Add heuristic header trimming facility
NA	15827179	Add means to access intermediate address information in forward mapping

Problems Fixed in Messaging Server 7 Update 5 Patch 28

The following table lists problems fixed in Messaging Server 7 Update 5 Patch 28. For problems fixed in Patch 29, see Problems Fixed in Messaging 7.0.5.29.0.

Problems Fixed

Service Request (SR) Number	BugDB Number	Description
3-6292934921, 3-5690858563	14067065	Poll in imapd/popd/mmp LWP#1 Shouldn't Use 0 Timeout
3-5602878681	14032336	IMAP Log Level Needs to Be Refreshable to Avoid Restart
3-5264753121	13714998	New Log Code For Milter and Spamfilter Rejections
3-5250878588, 3-5242503261	13641546	Aservice Core Dump on RBAC/SMF Setup Problem
NA	13619370	'[CANNOT] invalid mailbox name' Is not Localized
3-5298038691, 3-5099928642, 3-5099639468, 3-5084734508	13532709	IMAP Log Entries about 0 Duration Connections Should Be Throttled/Aggregated
3-4861807131	13340820	Enable Flag Changes and Make Available in ENS
3-3523434281	12530615	`mboxutil -R` to Check and not Create Duplicate Messages
3-4303270771, 3-3839932381	12309569 (SUNBT7028307)	Aservice Core Dumps while Releasing LDAP Connection
NA	12309345	Improved Authentication and Access Control
3-3027955091	12308560 (SUNBT7021988)	Add SIEVE MIME Header Test Functionality to `imexpire`
3-2981383133, 3-2972268701	12308483 (SUNBT7021386)	MMP Crashes Randomly on Connections With IPV6
3-4868067241, 3-4862979251, 3-2899784881	12307778 (SUNBT7017769)	Need to Get Disk Quota Used for Every Transaction through ENS

NA	12307062 (SUNBT7014378)	imapd Core Dumps with `assert()`.
3-2784973861	12306898 (SUNBT7013677)	Cannot Load `libclamav` on Linux
NA	12304773 (SUNBT7004169)	Need Logging from `ims_master` when Store Is Stressed
NA	12304687 (SUNBT7003795)	Missing Privilege in `exec_attr.example` to Start Dispatcher as `mailsvr`
NA	12304549 (SUNBT7003092)	`default.log` shows "initgroups for user 'mailsrv' returned: Not owner (1)"
NA	12304048 (SUNBT7000980)	`store.dbtmpdir` and `local.lockdir` Should Be under `/tmp` directory by Default
2-8188669	12303655 (SUNBT6998858)	`max_forwards` Option Comment not Documented
2-8183322	12302837 (SUNBT6993889)	Higher LDAP Load than Previous Release Due to lpool Closing Connect
NA	12300935 (SUNBT6983471)	AService Crash during Certificate-based Authentication when `UserGroupDN` not Set in Schema 1
2-8177170	12300405 (SUNBT6980060)	Add Support for `noop` Command to enpd
NA	12300076 (SUNBT6978334)	Improve Logging to Help Identify Client which Caused TLS Negotiation Failed Error
NA	12300060 (SUNBT6978232)	`tcp_submit_slave.log*` Files Are Generated when Debug Is not Enable
2-8006209	12299829 (SUNBT6977264)	VCS Clean Script Can Hang if `stop-msg` HA Command Does not Return
2-8007022	12299805 (SUNBT6976990)	`rehostuser` Does not Remove Original Folders if `local.store.ensureownerrights` Is 0
NA	12299766 (SUNBT6976643)	`rehostuser` Does not Check if FD Limit Increase failed
2-8008072	12299639 (SUNBT6976119)	RFC 2231 Heuristics Should Honor Parameter Length Limits
3-5928415521, 3-5710297661, 3-5046833471, 3-3268801551	12299159 (SUNBT6973520)	imapd `assert mailbox_write_index_fixed_header mailbox->index_lock_count = 0`
2-8003993	12297402 (SUNBT6965137)	`mshttpd` Crashes after Error Communicating with IMAP when Creating Folder
NA	12297351 (SUNBT6964911)	Provide Workaround for Net-SNMP Issue that Causes `madmand` to Hang on Red Hat Linux
NA	12296902 (SUNBT6962642)	Net-SNMP Library Should Be Dynamically Linked in Red Hat Linux 32-bit Build
NA	12295907 (SUNBT6957908)	Implement Support for Microsoft Exchange Journal Format 2007 Variant
NA	12294984 (SUNBT6954124)	Improve Documentation for `service.http.smtphost` Setting
3-2577822811, 2-8191884	12293281 (SUNBT6946893)	imapd Crashing on Sort with Non-existent UID
2-8179211	12292703 (SUNBT6944749)	`configure` Tool Does not Honor `InetDomainBaseDn` for Existing Domain
NA	12292447 (SUNBT6943607)	Add Logging when `maxmessagesize` Is Limited by the Size of SMTP
3-5889693581	12290099 (SUNBT6934253)	Need Server-side Configuration option to Unconditionally Prevent POP Collection Attempts
2-8215283	12286596 (SUNBT6917906)	"CIRCLED DIGIT ONE" Known as "0x2460" in Unicode Corrupt with ISO-2022-JP

2-8192960	12284569 (SUNBT6907767)	`listfolders.mjs` Does not Return Public Shared Folders
3-6437300791, 3-5114545191, 2-8185202, 2-8178487	12281025 (SUNBT6891454)	imapd Fails to Create Directory On `messagepath` File System
2-8046045	12279755 (SUNBT6885417)	imapd Cores on Shutdown under Load
NA	12275832 (SUNBT6866306)	Add Support for Per-Domain optin to `aliasdetourhost`
NA	12270637 (SUNBT6842708)	`imquotacheck -n` Should Ignore Users which Do not Have an 'Active' Status Attribute
NA	12270262 (SUNBT6840957)	Limit for the MIME Part Depth Should Be Removed
NA	12262281 (SUNBT6805629)	Need Way for Users to Create Folders but not Delete them (RFC 4314)
NA	12261718 (SUNBT6802964)	When `imdbverify` Fails to Lock the Snapshot Lock File, Need More Information
3-6968512541	12254855 (SUNBT6777518)	Messaging Server 6.3 Miscalculates free size
NA	12251282 (SUNBT6762603)	`mshttpd` core dumps in `mboxlist_maybeRecoverSubsFromFile` Due to Bad `store.sub` File
NA	12250654 (SUNBT6759931)	`reconstruct -e` Usage and Documentation Should Point to `mboxutil -R`
NA	12244693 (SUNBT6730999)	Need a Way to Block Access to All User's Mail Folders
3-4567069131	12236754 (SUNBT6696473)	Add the Ability to Combine Multiple `imexpire` Tests with AND instead of OR
NA	12220148	Mail Content not Properly Displayed with Internet Explorer 6 and 7 for Some Characters
NA	12198612 (SUNBT6546191)	`imsconnutil` May Resize Shared Memory Segment in Use by imapd Causing Crash
NA	12198510 (SUNBT6545793)	Immediate Sharing of Message Flags Between IMAP Sessions
NA	12181829 (SUNBT6483636)	IMAP Status to Include Count by Media Type and Old and New Status
3-5829228591	12172377 (SUNBT6450944)	`-C` *channel* Option to `imexpire` to Specify an MTA Channel that in Turn Is Used to Specify Spam Filters to Activate
3-4567069131	12142860 (SUNBT6352137)	Enhance `imexpire` to Allow Expire or Expire to Trash Folder Based on User Flag Information
NA	12108281 (SUNBT6222713)	URL Quoting Required for Generation of Language-specific DSNs
3-6896663951, 3-6228230851, 3-5942759331, 3-4096729211, 3-2638677951	12093863 (SUNBT4538996)	Password Aging Support
NA	12088069 (SUNBT5070888)	Support Third-party SASL mechanisms such as Kerberos
3-6747187922	12006913 (SUNBT4748562)	Ability to Trigger Logs Rotation with a Time Rather than with the Logs' Size

Red Hat Enterprise Linux 5 SNMP

Red Hat Enterprise Linux 5 only supports use of Simple Network Management Protocol (SNMP) by 64-bit products. If you want to use the 32-bit version of Messaging Server, SNMP support is only available on Red Hat Enterprise Linux 4. The 64-bit version of Messaging Server does include SNMP support on Red Hat Enterprise Linux 5.

Known Problems in Messaging Server

Known Problems in Messaging Server 7.0.5.29.0

This section describes known problems in Messaging Server 7.0.5.29.0. For known problems in Messaging Server 7 Update 5 Patch 28, see Known Problems in Messaging Server 7 Update 5 Patch 28

Old mqueue Extent Files Are Not Removed

SR number: NA
Bug number: 14588595

Usually, unused `extent` files are purged by BDB automatically. However, if the Store fails and restarts, BDB can lose track of the unused extent files and leave them unpurged.

qm sum -data Multiplies Active Messages by Number of Active Jobs

SR numbers: 3-7506529261, 3-7447734751
Bug number: 17068742

`qm sum -data` may show incorrect values that are the result of multiplying the correct values by the number of active hosts.

msuserpurge dumps core in lpool_find_attr()

SR number: 3-7443779639,
Bug number: 17161743

If `inetUserStatus=deleted` is set in order to delete user mailboxes and then `msuserpurge` is run, `msuserpurge` dumps core, which results in hung user sessions.

Known Problems in Messaging Server 7 Update 5 Patch 28

This section describes known problems in Messaging Server 7 Update 5 Patch 28. For known problems in Messaging Server 7.0.5.29.0, see Known Problems in Messaging Server 7 Update 5 Patch 29.

imapd core dump on notify

SR number: 3-7108401571
Bug number: 16710994

MIME conversion incorrectly decodes RFC 2231 headers

SR number: 3-7046476851
Bug number: 16681953

rehostuser -x fails with "unable to restore message links"

SR number: 3-7021211397
Bug number: 16680966

imapd core dump in ensclient_t::got_ack

SR number: 3-7069858601
Bug number: 16667415

Messaging Server services do not start after upgrading Messaging Server in a VCS high availability configuration (legacy configuration only)

SR number: NA
Bug number: 16596053

In legacy configuration, after a new Messaging Service VCS high availability configuration or Messaging Server upgrade in a VCS high availability environment, Messaging Server services fails to come up. To work properly, you must compile the configuration with the following command:

```
imsimta cnbuild
```

notify mailto: recipient is not a valid address

SR number: NA
Bug number: 16471872

transactionlimit channel options effect carries through to reprocessing

SR number: NA
Bug number: 16439770

Fixed 8192 limit on SIEVE strings should be controlled by max_sieve_string_size

SR number: NA
Bug number: 16427013

popd cores during rehostuser

SR number: 3-6709247781, 3-6708599261
Bug number: 16417838

imapd core dump: assert in function is ensconn_t::writable

SR number: 3-6821473231
Bug number: 16355633

$A metacharacter in FROM_ACCESS doesn't properly insert header

SR number: NA
Bug number: 16224439

Locally generated received: line not made available to SIEVE scripts

SR number: NA
Bug number: 16217721

stored fails to try snapshot after invalid log record header

SR number: 3-6592088491
Bug number: 16041798

MMP does not log CRAM MD5 authentications

SR number: 3-6006947687
Bug number: 14478575

Errors with notifyplugin after upgrading from Messaging Server 7 Update 4 to Messaging Server 7 Update 5

SR number: 3-7296083941
Bug number: 16909068

In Messaging Server 7 Update 4, the `notifyplugin` is configured as follows:

```
local.store.notifyplugin = /opt/sun/comms/messaging64/lib/libibiff.so
```

After upgrading to Messaging Server 7 Update 5, the following error appears when starting Messaging Server:

```
General Error: Unknown notify plugin 'libibiff.so'; not loaded 14304
```

This occurs because the `.so` suffix should be ignored but currently is not.

Workaround:
Manually remove the `.so` suffix.

Documentation Updates

These release notes and as well as the New Features page (known as What's New in prior releases) have been reorganized and reformatted for consistency with other Oracle Communications products' documentation.

Redistributable Files for Messaging Server

The following redistributable files are provided with Messaging Server:

- You can copy and use (but not modify) the following header files solely to create and distribute programs to interface with Messaging Server APIs, to compile customer written code using the documented API to interoperate or integrate with Messaging Server, and only as expressly provided in the Messaging Server documentation:
  - *msg-svr-base*`/examples/tpauthsdk/authserv.h`
  - All files in the *msg-svr-base*`/include` directory (default location)

- The following files are provided solely as reference for writing programs that use the documented API to integrate with Messaging Server:
  - *msg-svr-base*`/examples/tpauthsdk/`
  - *msg-svr-base*`/examples/mtasdk/`

Unified Communications Suite Release Notes

Common Release Information for Oracle Communications Unified Communications Suite
Version 7 Update 4

These release notes contain important release information that is common to all component products of Oracle Communications Unified Communications Suite 7 Update 4.

Topics:

- About Oracle Communications Unified Communications Suite 7 Update 4
- New Features in This Release of Communications Suite
- Deprecated and Removed Components and Features for Communications Suite
- Requirements for Communications Suite 7 Update 4
- Locating Patches for Communications Suite Products
- Communications Suite Installation and Upgrade Notes
- Problems Fixed in This Release of Communications Suite
- Known Problems in Communications Suite
- Documentation Updates

Third-party URLs are referenced in this document and provide additional, related information.

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About Oracle Communications Unified Communications Suite 7 Update 4

The Oracle Communications Unified Communications Suite integrates a number of server and client products to support distributed communication and collaboration applications.

The Oracle Communications Unified Communications Suite 7 Update 4 release includes the following components:

Oracle Communications Unified Communications Suite Products and Components Version 7 Update 4

Product	Version
Oracle Communications Messaging Server	7 Update 5 (Patch 28)
Oracle Communications Instant Messaging Server	9 (Patch 3)
Convergence	2 (Patch 6)
Oracle Communications Calendar Server	7 Update 3 (Patch 10)
Delegated Administrator for Oracle Communications Unified Communications Suite	7 (Patch 7)
Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite	8
Indexing and Search Service for Oracle Communications Unified Communications Suite	1 Update 4 (Patch 16)
Messaging Server HA Agent (MS_SCHA)	7
Instant Messaging HA Agent (IM_SCHA)	7.3
Dssetup for Oracle Communications Unified Communications Suite (`comm_dssetup`)	6.4 Patch 24

Check Communications Suite Component Patches for current patches that have shipped since the initial Communications Suite 7 Update 4 release.

See the following release notes on individual component products:

- Convergence Release Notes
- Calendar Server Release Notes
- Messaging Server Release Notes
- Indexing and Search Service Release Notes
- Instant Messaging Server Release Notes
- Delegated Administrator Release Notes
- Connector for Microsoft Outlook Release Notes

New Features in This Release of Communications Suite

See the New Features document.

Deprecated and Removed Components and Features for Communications Suite

Support for the following components and features may have been removed in this or a previous release, or may be eliminated in a future release:

- Calendar Server 6.3
- Communications Express 6.3
- Delegated Administrator 6.4
- Connector for Microsoft Outlook 7.1 , 7.2, and 7.2 Update 1
- Instant Messaging
- Communications Sync
- Support for Access Manager and Sun OpenSSO
- Communications Suite commpkg upgrade
- Communications Suite Installer and Unbundling of MySQL, Java, and Shared Products
- Oracle GlassFish Server Message Queue

Calendar Server 6.3

Starting with Communications Suite 7 Update 2, Calendar Server 6.3 has been removed from the installation bundle. Refer to the Oracle Lifetime Support Policy for information on product support dates.

For information on Calendar Server 6.3, refer to Calendar Server Release Notes Version 6.3 (in Communications Suite 7 Update 1).

Communications Express 6.3

Communications Express has been removed from the installation bundle. For an Ajax-based user interface with integrated email, calendar, address book, and instant messaging, use Convergence.

No patches will be issued for Communications Express versions prior to 6.3.

If you need to install Communications Express 6.3, use the Communications Suite 6 Update 2 media to get the software.

Delegated Administrator 6.4

Going forward, no new features will be added to Delegated Administrator 6.4. It has been deprecated in favor of Delegated Administrator 7.

Connector for Microsoft Outlook 7.1 , 7.2, and 7.2 Update 1

Going forward, no new features will be added to the Connector for Microsoft Outlook 7.1, 7.2, and 7.2 Update 1. They have been deprecated in favor of Connector for Microsoft Outlook 8. Connector for Microsoft Outlook 7.3 is in maintenance mode. Support for Microsoft Windows 2000 (Service Pack 3 or later) and Microsoft Windows XP has been deprecated. In addition, support for Outlook 2003 has also been deprecated.

Instant Messaging

The following features have been removed from Instant Messaging 9 (deprecation was announced in Instant Messaging 8.2):

- **Instant Messenger Client** - The Java client that is used to access the Instant Messaging server has been removed. As a result, the following client features are removed:
  - **VOIP Support** - This feature enabled you to convert a user's chat session into a live voice call over the internet by using the Instant Messenger client.
  - **Poll** - This feature helped you in surveying a group rapidly by conducting online polls.
  - **News** - This feature enabled you to access published information such as company announcements, project updates, or event notices on a subscription basis.
  - **Moderated Conferences** - This feature enabled the moderator to moderate private messages that are sent to conferences.
  - **Alerts** - This feature enabled you to notify users of time-sensitive information, either in individual messages or as broadcasts to multiple users. You were also able to specify routing of alerts received when offline.
- **Redirect Server** - This feature enabled you to balance the load between different servers in a server pool.
- **Communications Channel in Portal Server** - This was the channel that was used to launch Instant Messaging in Portal Server.
- **Portal Server Archiving** - This feature enabled you to archive chat content in the portal server.

Communications Sync

Going forward, no new features will be added to Communications Sync. All versions of Communications Sync have been deprecated. If you are using Communications Sync, consider moving to Oracle Communications Mobile Synchronization Server (formerly known as Sun Java Mobile Communications).

Support for Access Manager and Sun OpenSSO

Support for Access Manager 7.x and Sun OpenSSO 8.x has been deprecated. Convergence, Instant Messaging, and Delegated Administrator optionally utilize Access Manager and/or Sun OpenSSO for single sign-on, authentication, and policy options.

The following table describes available options for impacted products.

Deprecated Support for Access Manager 7.x and Sun OpenSSO 8.x

Communications Suite Product	Access Manager and OpenSSO Features Used by Communications Suite Product	Impact of Access Manager and OpenSSO Deprecation of Support	Current Alternatives and Solutions to Mitigate Impact
Convergence	Authentication, SSO (legacy and realm modes)	For new customers: no supported identity product for authentication and SSO	See: Create a Custom Convergence SSO Authentication Plug-in and Create a Custom Authentication Convergence Module
Instant Messaging	Authentication, SSO (legacy mode), Policy (legacy mode)	No out-of-the-box OpenSSO solution	• Authentication: use LDAP or Create an Instant Messaging Custom SSO Module • SSO: Create an Instant Messaging Custom SSO module • Policy: use file-based policy
Delegated Administrator	Authentication, LDAP Access (legacy mode)	Access Manager Mode of LDAP access is no longer available	Switch to Direct LDAP mode

Support for OpenSSO will continue for existing customers while they migrate to other SSO and authentication solutions.

> **Note**
> OpenSSO Single Sign-on only works with Sun Enterprise GlassFish Server 2.1.1 Patch 7 and earlier patches. It does not work with Sun GlassFish Enterprise Server 2.1.1 Patch 20, the GlassFish Server version that is supported in this release.

Communications Suite commpkg upgrade

The `auditDistro` option has been removed from the `commpkg upgrade` command in this release.

Communications Suite Installer and Unbundling of MySQL, Java, and Shared Products

Starting with the Communications Suite 7 Update 3 release, MySQL is no longer bundled with Communications Suite. You must download and install it separately if you choose to use it as the Calendar Server database. See Get the Software for details on how to obtain the software. See Installation Scenario - Calendar Server for installation details.

Starting with the Communications Suite 7 Update 3 release, Java is no longer bundled with Communications Suite. You must download and install it separately. See Get the Software for details on how to obtain the software. See Installing Java For Communications Suite for installation details.

In future versions of the Communications Suite Installer, shared components, OS patches, and OS components may no longer be bundled. To see a list of the potentially affected components, run the following command:

```
commpkg info --listPackages
```

Products listed in a "Product Group" other than "Comms" are subject to removal in a future version of the Communications Suite Installer.

Oracle GlassFish Server Message Queue

Oracle GlassFish Server Message Queue C SDK (also known as OpenMQ and JMQ) is deprecated. Oracle reserves the right to change the underlying protocol and the JMS provider to provide Java JMS support for notifications in a future release. In the event this happens, the JMQ C SDK will cease to interoperate. Communications Suite supports the use of Java JMS (presently with the Oracle GlassFish Message Queue provider) and the ENS C API.

Requirements for Communications Suite 7 Update 4

This section describes the operating system, patch, client software, and any additional software requirements for this release of Communications Suite. This section contains the following topics:

- Product Version Compatibility Requirements
- Convergence 2: Product Version Compatibility Requirements (for Patch 6)
- Memory and Disk Space Requirements
- Operating System Requirements
- System Virtualization Support
- High Availability Support
- Browser Requirements for Communications Suite Clients
- Additional Software Requirements for Individual Communications Suite Components

Product Version Compatibility Requirements

This section answers the following questions:

- Which products are required to support the Communications Suite products? The Product Version Compatibility Requirements for Communications Suite 7 Update 4 table lists the products and versions that are compatible with the Communications Suite 7 Update 4 products.

- To install a particular Communications Suite product, which other components do I need? The Communications Suite 7 Update 4 Component Dependencies table lists the individual Communications Suite products and shows the components on which they depend, including other Communications Suite components.

The following table shows the other products required by Communications Suite 7 Update 4. For information about requirements for these products, refer to the individual product's release notes.

Version Compatibility Requirements for Communications Suite 7 Update 4

Product	Version	Required or Optional?
Oracle Directory Server Enterprise Edition (formerly Sun Java System Directory Server)	5.x, 6.x, 7, 11gR1	Required. Use 6.3 or later. If doing a fresh installation, 11gR1 is recommended.
Oracle GlassFish Message Queue	4.4 Update 1	Optional. Communications Suite installer automatically installs Message Queue as a shared component for Messaging Server as well as for Indexing and Search Service.
Sun GlassFish Enterprise Server	2.1.1 Patch 20, patch IDs 128643-34 (Solaris SPARC), 128644-34 (Solaris x86), and 128645-34 (Linux)	Required as the web container for Communications Suite 7 Update 4 components.
Oracle Communications Converged Application Server	5.0	Optional. For use with Instant Messaging 9 and SIP/SIMPLE deployments.

The following table shows the web container support by component product in this release.

Web Containers Supported in Oracle Communications Unified Communications Suite Version 7 Update 4

Component Product	GlassFish Server 3	GlassFish Server 2.1.1	Application Server 9.1 Update 2	Application Server 8	Application Server 7	Oracle iPlanet Web Server 7.0 Update 2	Web Server 6.1
Calendar Server 7 Update 3	Not Supported	Supported	Not supported	Not supported	Not supported	Not supported	Not supporte
Convergence 2	Not Supported	Supported	Not supported	Not supported	Not supported	Not supported	Not supporte
Delegated Administrator 7	Not Supported	Supported	Supported	Supported	Supported	Supported	Supporte
Indexing and Search Service 1 Update 4	Not Supported	Supported	Not supported	Not supported	Not supported	Not supported	Not supporte
Instant Messaging Server 9	Supported (as of Instant Messaging Server 9 Patch 2)	Supported	Not supported	Not supported	Not supported	Not supported	Not supporte

Notes:
The default installation paths for GlassFish Server 2.1.1. and Application Server 9 are the following:

Base installation directory: `/opt/SUNWappserver`
Domain directory: `/opt/SUNWappserver/domains/domain1`
Document root directory: `/opt/SUNWappserver/domains/domain1/docroot`

The default installation paths for Application Server 8 are the following:

Base installation directory: `/opt/SUNWappserver/appserver`
Domain directory: `/var/opt/SUNWappserver/domains/domain1`
Document root directory: `/var/opt/SUNWappserver/domains/domain1/docroot`

The following table lists the individual Communications Suite products and shows the components on which they depend.

Communications Suite 7 Update 4 Component Dependencies

Product Component	Dependencies	Required or Optional?	Required to Be on Local Host?
Calendar Server 7 Update 3	Directory Server 5.*x*, 6.*x*, 7, 11gR1 Recommended: 11gR1	Required. To store user/group and domain information for authentication, authorization, and email delivery.	No.
	Directory Server Setup Script (`comm_dssetup.pl`) You must use the version that is bundled with the Communications Suite 7 Update 4 installer.	Required. To prepare the LDAP directory for Messaging Server.	No. Must be on the same host as Directory Server.
	Oracle Database 11g Release 2 or MySQL Server, at least 5.5.8. For new installations, download the most recent 5.5.x version. MySQL 5.5.30 was the latest as of this writing. Also, do not use version 5.5.29.	Required. To store Calendar Server database information.	No.
	GlassFish Enterprise Server 2.1.1	Required. To act as the web container.	Same host on which you install Calendar Server 7 Update 3 front end. You can use GlassFish Enterprise Server for Message Queue functions.
	Messaging Server	Optional but an SMTP server is required. Required if you want to use optional features such as virus scanning and automatic iMIP handling.	No.
	Delegated Administrator 7	Optional. To provision users of calendar services; to manage the directory schema.	No.
Indexing and Search Service 1 Update 4	Directory Server 5.*x*, 6.*x*, 7, 11gR1 Recommended: 11gR1	Required. To store user/group and domain information for authentication, authorization, and email delivery.	No.
	Messaging 7 Update 3, 7 Update 4, 7 Update 5 Recommended: 7 Update 5	Required.	No.

	GlassFish Enterprise Server 2.1.1	To act as the web container.	Same host on which you install front-end ISS components.
	GlassFish Message Queue 4.4 Update 1	To generate notifications.	No.
Messaging Server 7 Update 5	Directory Server 5.*x*, 6.*x*, 7, 11gR1 Recommended: 11gR1	Required. To store user/group and domain information for authentication, authorization, and email delivery.	No.
	Directory Server Setup Script (`comm_dssetup.pl`) You must use the version that is bundled with the Communications Suite 7 Update 4 installer.	Required. To prepare the LDAP directory for Messaging Server.	No. Must be on the same host as Directory Server.
	Delegated Administrator 7	Optional. To manage user and group data; to manage the directory schema.	No.
Instant Messaging 9	Directory Server 5.*x*, 6.*x*, 7, 11gR1 Recommended: 11gR1	Required. To store user, conference room, and news channel data.	No.
	Directory Server Setup Script (`comm_dssetup.pl`) You must use the version that is bundled with the Communications Suite 7 Update 4 installer.	Required. To prepare the LDAP directory for Instant Messaging.	No. Must be on the same host as Directory Server.
	Messaging Server 6 through 6.3, 7.0, 7 Update 1, 7 Update 2, 7 Update 3, 7 Update 4 , Update 5 Recommended: 7 Update 55	Optional. To support offline delivery of instant messaging alerts and chat archives as email messages.	No.
	Calendar Server 7 Update 2, 7 Update 3 Recommended: Calendar Server 7 Update 3	Optional. To support Calendar Server event reminder notifications. See: CommSuite: Configuring Instant Messaging 9 Calendar Agent with Calendar Server 7.	No.
	GlassFish Enterprise Server 2.1.1 web container	Optional. To provide IMPS Gateway and HTTP Gateway functionality.	Yes, must be on local host.
Directory Server Setup Script (`comm_dssetup.pl`) (Version bundled with Communications Suite 7 Update 4 installer)	Directory Server 5.*x*, 6.*x*, 7, 11gR1 Recommended: 11gR1	Required. To set up the LDAP directory, which the `comm_dssetup.pl` script updates with Communications Suite components' schema.	Yes, must be on local host.

Delegated Administrator 7	Directory Server 5.*x*, 6.*x*, 7, 11gR1 Recommended: 11gR1 To enforce unique values for mail attributes, you must install one of these releases: Oracle Directory Server Enterprise Edition 11gR1 Oracle Directory Server Enterprise Edition 7 Directory Server 6.*x* Directory Server 5.2.5 or later Directory Server 5.2.4, and you must apply patch 5.2_Patch_4_6313027	Required. To store user, group, and domain data that Delegated Administrator provisions for the Communications Suite components.	No.
	Directory Server Setup Script (`comm_dssetup.pl`) You must use the version that is bundled with the Communications Suite 7 Update 4 installer.	Required. To prepare the LDAP directory for Delegated Administrator.	No. Must be on the same host as Directory Server.
	Web container, one of: Oracle iPlanet Web Server (at least Versions 6.1 or 7) Application Server (at least Versions 7, 8, or 9) Sun GlassFish Enterprise Server 2.1.1	Required. Delegated Administrator must be deployed to one of these web containers.	Yes, must be on local host.
	Messaging Server 6 through 6.3, 7.0, 7 Update 1, 7 Update 2, 7 Update 3, 7 Update 4, Update 5 Recommended: 7 Update 55	Required to provide mail service for users and groups provisioned by Delegated Administrator. Not required if you do not provision mail users.	No.
	Calendar Server 7 Update 3 (If you are deciding between Calendar Server 7 Update 3 and Calendar Server 6, Calendar Server 7 Update 3 is recommended.)	Required to provide calendar service for users and groups provisioned by Delegated Administrator 7. Not required if you do not provision calendar users.	No.
	Calendar Server 6.*x*	Required to provide calendar service for users and groups provisioned by Delegated Administrator 6.4 or greater. Not required if you do not provision calendar users.	No.
Convergence 2 Patch 6		For details about Convergence dependencies, see Convergence 2: Product Version Compatibility Requirements.	No Comment
Connector for Microsoft Outlook 8	Messaging Server 6.3, 7	Required to provide mail service.	No Comment
	Calendar Server 7 Update 3, Calendar Server 6.3, 6.3.1	Required to provide calendar service.	No Comment

	Convergence 2 Patch 5, Convergence 2 Patch 6 Recommended: Convergence 2 Patch 6	Optional (recommended). Convergence can be used to provide address book service, mail filters, and out-of-office message features.	No Comment
	Directory Server 5.2, 6.0 or higher	Required for Global Address List (GAL), a corporate address book service.	No Comment

Java Requirements

The following products require that you have Java 6 (at least Java SE 6 U45) installed:

- Calendar Server 7 Update 3
- Convergence 2
- GlassFish Enterprise Server 2.1.1

The following products require that you have either Java 6 (at least Java SE 6 U45) or Java 7 (at least Java SE 7 U21) installed (these are the latest versions at the time of this writing):

- Indexing and Search Service 1 Update 4
- Instant Messaging 9

To install Java to support Communications Suite, see Installing Java For Communications Suite.

Indexing and Support Service supports both Java 6 or Java 7. If you use Java 7 and are upgrading Indexing and Search Service from indexes built with Java 6, you might need to reindex to work around issues related to the Unicode fixes in Java 7. For more information on upgrading, see Upgrading Indexing and Search Service.

If you switch to another Java version, download and install the latest JDK (not JRE) onto your system.

> **Note**
> If you are enabling S/MIME, be sure to install the most recent Java plug-in patch, beginning with 1.6.0_29. For more details, see: http://www.oracle.com/technetwork/java/javase/6u29-relnotes-507960.html.

Network Security Services Requirements

Communications Suite 7 Update 4 requires the use of the Network Security Services (NSS) shared security component. While the minimum version of NSS is 3.12.3 (patch rev -08), you should install the latest NSS patch 3.12.6 (patch rev -11), which improves security.

If you are using Directory Server 5, and you upgrade to NSS 3.11.7 on the Directory Server host, you need at least Directory Server 5.2 patch 6 due to an NSS incompatibility. See the IMPORTANT NOTE in the NSS patch.

For more details about product version dependencies, see Shared Components Bundled With the Communications Suite Installer.

Time Synchronization Requirements

Configure Network Time Protocol (NTP) to ensure that time is synchronized across your deployment.

Convergence 2: Product Version Compatibility Requirements (for Patch 6)

The information in this section provides you with all the product requirements and minimum product versions to install Convergence in these deployments:

- A new Communications Suite 7 Update 4 deployment (fresh installations)
- An existing Communications Suite deployment (a combination of upgrades and fresh installations)

In general, the requirements for operating system, memory and disk space, browsers, and most other software products are the same for Convergence as for other Communications Suite products.

However, Convergence has a few specific product and version dependencies. The Convergence client also depends on other Communications Suite products to provide services such as mail and calendar.

The following tables list the product requirements, dependencies, and compatibilities specific to Convergence:

- Additional Product Requirements for Convergence 2
- Communications Suite Component Requirements
- Convergence 2 Compatibility with Connector for Microsoft Outlook, Address Book Store, and LDAP Schema
- S/MIME Software and Hardware Requirements

Note that some of this information repeats the information shown in the Product Version Compatibility Requirements for Communications Suite 7 Update 4 table.

Additional Product Requirements for Convergence 2 (Patch 6)

Product	Version	Required or Optional?	Must Be on Local Host?
Oracle Directory Server Enterprise Edition	Release 5.x, Release 6.x, Release 7.0, 11g Release 1 (11.1.1) or later **Note** VLV indexing causes crashes in Oracle Directory Server Enterprise Edition 7.0. This issue does not occur in Oracle Directory Server Enterprise Edition 11g Release 1 (11.1.1) or Oracle Directory Server Enterprise Edition 5.x or 6.x.	Required. For fresh installations, use Directory Server 11g Release 1 (11.1.1). For the recommended version to download, see Get the Software.	Not required
Web Container	Sun GlassFish Enterprise Server 2.1.1	Required. For the recommended version to download, see Get the Software.	Required
Sun OpenSSO Enterprise See: Deprecated Support for Access Manager and Sun OpenSSO	8.0	Optional. Required only if you want to use Sun OpenSSO Enterprise for authentication, SSO, or both.	Not required
Indexing and Search Service	1 Update 4	Required to provide Attachment search in Convergence.	Not required

For information about requirements for Directory Server, GlassFish Server, and Access Manager, see the current release notes for these products.

Communications Suite Component Requirements for Convergence 2 (Patch 6)

Product	Version	Communications Suite Release	Required or Optional?	Must Be on Local Host?
Messaging Server – Webmail Server	7 Update 5	7 Update 4	Required to provide mail service in Convergence.	Not required, but you should deploy Webmail Server on the same host as Convergence for scalability and performance.

Messaging Server – all other messaging components	6.3, 7, 7 Update 1, 7 Update 2, 7 Update 3, 7 Update 4, 7 Update 5 **Note** If you enable flagged message sort in Convergence, ensure that `wmap_version` is equal to or greater than 9. This is available after the Messaging Server 7 Update 3 release in patch 137203-11 (Red Hat Enterprise Linux), 137204-11 (SPARC 64-bit), and 137205-11 (Solaris x86 64-bit) or greater. In addition, the `imapd` version (Messaging Server back-end host) must have the same patch or greater. Otherwise, flag sorting does not work.	5 (for MS 6.3) 6 (for MS 7.0) 6 Update 1 (for MS 7 Update 1) 6 Update 2 (for MS 7 Update 2) 7 (for MS 7 Update 3) 7 Update 2 (for MS 7 Update 4) 7 Update 3 (for MS 7 Update 3) 7 Update 4 (for MS 7 Update 5, latest patch)	Required to provide mail service in Convergence.	Not required.
Calendar Server 6 (formerly Oracle Communications Calendar Server) See: Calendar Server 6.3 Deprecation	6.3, patch level -44 or higher	5 + apply patch level -35 6 + apply patch level -35 6 Update 1 + apply patch level -35 6 Update 2 7 7 Update 1	Required to provide calendar service in Convergence if Calendar Server 7 is not installed.	Not required.

Oracle Communications Calendar Server (also known as Calendar Server 7, formerly Oracle Communications Calendar Server for CALDAV Clients)	7 Update 3 **Note** (Beginning with Convergence 2 Patch 3)	7 Update 4	Required to provide calendar service beginning with Convergence 2 Patch 3.	Not required.
Instant Messaging	8, 9	7 Update 4 (for Instant Messaging 9)	Required to provide Instant Messaging service in Convergence.	No.
Directory Server Setup script, `comm_dssetup.pl`	You must use the version that is bundled with the Communications Suite 7 Update 4 installer.	7 Update 4	Required. You must run `comm_dssetup.pl` on the hosts where Directory Server is installed.	No.
Delegated Administrator	6.4, 7 You must use Delegated Administrator 7 with Calendar Server 7.	5, 6, or 6 Update 1, or 6 Update 2, 7, 7 Update 1, 7 Update 2, 7 Update 3, 7 Update 4	Optional.	Not required.

Convergence 2 (Patch 6) Compatibility with Connector for Microsoft Outlook, Address Book Store, and LDAP Schema

Product	Version	Communications Suite Release	Required or Optional?
Connector for Microsoft Outlook	7.3, 7.3 Update 1, 8	6 (for 7.3) 7 Update 1 (for 7.3 Update 1) 7 Update 2 7 Update 3 (for 8) 7 Update 4 (for 8)	Optional. You can deploy Connector for Microsoft Outlook with the same Communications Suite products and Directory Server as Convergence 2 (Patch 5). End users of Outlook (configured using the Connector for Microsoft Outlook) can access the same Communications Suite services as those accessed through Convergence.
Personal Address Book store	Can be configured by Convergence 2 Patch 2, Convergence 2 Patch 3, Convergence 2 Patch 4, Convergence 2 Patch 5, or Convergence 2 Patch 6	Not applicable. The Address Book store resides in an LDAP directory.	You can configure Convergence 2 (Patch 2, Patch 3, Patch 4, and Patch 5) and Connector for Microsoft Outlook 8 to use the same Address Book store. Updates to the Address Book made in one client are visible and accessible on the other client. New Address Book features provided by Convergence do not invalidate Address Book LDAP entries originally configured by using the now deprecated Communications Express. **Corporate Address Books:** Convergence can be configured to support one Corporate Address Book for each hosted domain. Communications Express users who access multiple Corporate Address Books (in their domain) can only use the first Corporate Address Book through Convergence. The others are not accessible through Convergence.
LDAP Schema	Schema 1 or 2 Schema 2 only if Access Manager is deployed with Convergence.	Not applicable.	If you use Access Manager (Realm Mode or Legacy Mode) to provide SSO for Convergence, you must use Schema 2. If you use Delegated Administrator (DA) to provisions users, you must use Schema 2, because DA depends on Access Manager (Legacy Mode), which requires Schema 2. See: Deprecated Support for Access Manager and Sun OpenSSO.

Note
Messaging Server, Calendar Server, and Instant Messaging are required for Convergence *only* if you want to configure Convergence with the services they provide. For example, if you do not want Instant Messaging service, you do not need Instant Messaging.

Memory and Disk Space Requirements

The following table shows the memory and disk space requirements for Communications Suite 7 Update 4 component products.

Memory and Disk Space Requirements for Communications Suite 7 Update 4

Product	Disk Space	RAM
Indexing and Search Service 1 Update 4	Approximately 20 Mbytes must be free in `/opt` for `/opt/sun/comms/jiss`. Roughly 20 percent of the Messaging Server store size is required for the `/var/opt/sun/comms/jiss` directory. [1]	4 Gbytes
Calendar Server 7 Update 3	Approximately 20 Mbytes.	
Convergence 2	Approximately 100 Mbytes of disk space for initial installation.	1 Gbyte minimum
Messaging Server 7 Update 5	1 Gbyte for production deployment or 500 Mbytes for evaluation installation. You also need adequate space for message store, database configuration directory, and log files, depending upon your site size.	1 Gbyte minimum
Instant Messaging 9	Approximately 300 Mbytes of free disk space for the software.	At least 256 Mbytes of RAM. The amount of RAM needed depends on the number of concurrent client connections, and whether the server and multiplexor are deployed on the same host.
Delegated Administrator 7	The disk requirements for Delegated Administrator are the same as those of the web container to which Delegated Administrator is deployed. For information about the web container's hardware requirements, see the current release notes for this Java Enterprise System component.	The memory requirements for Delegated Administrator are the same as those of the web container to which Delegated Administrator is deployed. For information about the web container's hardware requirements, see the current release notes for this Java Enterprise System component.
MySQL Server, at least 5.5.8	Approximately 650 Mbytes	
JDK	Approximately 450 Mbytes	

[1] In Indexing and Search Service, the `/var/opt/sun/comms/jiss` directory is divided into three subdirectories:

- `/var/opt/sun/comms/jiss/attach` - Stores generated thumbnail images from attachments, which tends to consume 2 to 3 percent of the size of the mail store. Turning off the attachment store is a configurable option. Compared to the index store, this directory could probably reside on a slower disk.
- `/var/opt/sun/comms/jiss/logs` - Stores log files.
- `/var/opt/sun/comms/jiss/index` - Stores index files. This tends to take up about 15 percent of the size of the mail store and needs to be on a fast disk because it is frequently accessed.

Operating System Requirements

The following table shows the recommended platforms for Communications Suite 7 Update 4:

Operating System and Platform Support (Recommended for Communications Suite 7 Update 4)

Operating System	CPU	Recommendations
Solaris OS 10	SPARC, x64	We recommend that you run the latest Solaris 10 update with the latest recommended patch set. See the Solaris 10 Release and Installation documentation for more information.
Oracle Linux 6 and Red Hat Enterprise Linux 6, Messaging Server 7 Update 5 only	x64	We recommend that you run the latest Oracle Linux 6 or Red Hat Enterprise Linux 6 update. See Oracle Linux Documentation and Red Hat Enterprise Linux documentation for more information.
Oracle Linux 5	x64	We recommend that you run the latest Oracle Linux 5 update. See Oracle Linux Documentation for more information.
Red Hat Enterprise Linux 5 64-bit	x64	We recommend that you run the latest Red Hat Enterprise Linux 5 update. See the Red Hat Enterprise Linux documentation for more information.

The following table shows all the supported platforms for Communications Suite products.

Operating System and Platform Support (by Communications Suite Component)

Component	Solaris OS 10 SPARC	Solaris OS 10 x86 32-bit	Solaris OS 10 x86 64-bit	Red Hat Enterprise Linux 4 32-bit	Red Hat Enterprise Linux 4 64-bit	Red Hat Enterprise Linux 5 Server (Update 3) 32-bit	Oracle Linux 5 64-bit and Red Hat Enterprise Linux 5 Server 64-bit	Oracle Linux 6 and Red Hat Enterprise Linux 6	Wi XP or hig 20 Te Se
Messaging Server 7 Update 5 32-bit	Not supported	Not supported	Not supported	Supported	Not supported	Not supported	Supported	Not supported	No app
Messaging Server 7 Update 5 64-bit	Supported	Not supported	Supported	Not supported	Supported	Not supported	Supported	Supported	No app
Calendar Server 7 Update 3	Supported	Not supported	Supported	Not supported	Not supported	Not supported	Supported	Not supported	No app
Instant Messaging 9	Supported	Not supported	Supported	Not supported	Not supported	Not supported	Supported	Not supported	No app
Convergence 2 (Patch 6)	Supported	Not supported	Supported	Not supported	Not supported	Not supported	Supported	Not supported	No app
Delegated Administrator 7	Supported	Supported	Supported	Supported	Supported	Not supported	Supported	Not supported	No app
Connector for Outlook 8	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	No sup
Indexing and Search Service 1 Update 4	Supported	Not supported	Supported	Not supported	Not supported	Not supported	Supported	Not supported	No app
Dssetup 6.4	Supported	Supported	Supported	Supported	Supported	Not supported	Supported	Not supported	No app

Note

- Recommended platforms are Solaris OS 10, Red Hat Enteprise Linux 5 64-bit, and Oracle Linux 5.7/5.8 64-bit.
- Messaging Server Unified Configuration is only supported on 64-bit platforms.
- No upgrade from previous major version forces a simultaneous upgrade of both the operating system and component.
- An upgrade of a component does not force an upgrade of the operating system. In general, an upgrade of the operating system forces an upgrade of the component.
- Instant Messaging is not supported on Solaris OS 32-bit and Red Hat Enterprise Linux 32-bit OS platforms.
- The Communications Suite installer checks for required platform patches.
- The performance of your Communications Suite deployment depends on many factors, including CPU power, available memory, disk space, file system performance, usage patterns, network bandwidth, and so on. For example, throughput is directly related to file system performance. If you have questions about sizing and performance, contact your Communications Suite representative.

Minimal Solaris OS Install Requirements for Indexing and Search Service

The following Solaris OS packages are required for Indexing and Search Service:

- `SUNWgcmn`
- `SUNWgtar`
- `SUNWxcu4`
- `SUNWj5rt`If remote installs are needed, `SUNWwgetr` and `SUNWwgetu` are also required. Confirm that they are installed by using `pkginfo`. Multi-machine deployments require `SUNWapch2d`, `SUNWapch2r`, and `SUNWapch2u` to be installed on Indexing and Search Service indexing nodes. If they are not installed, install them from Solaris OS media before installing Indexing and Search Service.

The following Solaris JumpStart profile represents the minimal set of packages required for Indexing and Search Service.

```
##
## Minimum Required Software for Reduced Networking Support
## http://blogs.sun.com/gbrunett/entry/foundation_for_minimal_solaris_10
##
cluster SUNWCrnet

##
## Additional basic system services
##
# SSH Daemon, Tools and Dependencies
package SUNWgss add
package SUNWgssc add
package SUNWsshcu add
package SUNWsshdr add
package SUNWsshdu add
package SUNWsshr add
package SUNWsshu add
# NTP
package SUNWntpr add
package SUNWntpu add
# System Admin Tools (showrev)
package SUNWadmfw add
package SUNWadmfr add

##
## Indexing and Search Service Requirements
##
# GNU tar and Dependencies
package SUNWgcmn add
package SUNWgtar add
# XCU4 Utilities - ISS requires for awk and id
package SUNWxcu4 add
# Java 5 Run Time
package SUNWj5rt add
# wget - required only for remote ISS installs
package SUNWwgetr add
package SUNWwgetu add
```

Minimal Linux (Red Hat Enterprise Linux and Oracle Linux) Installation Requirements for Indexing and

Search Service

The Red Hat Enterprise Linux and Oracle Linux installations can run on top of the install group `@Base` in your `kickstart.cfg` file. The following RPMs must be installed on Red Hat Enterprise Linux 5:

- `rpm-build`
- `elfutils`
- `elfutils-libs`
- `compat-libstdc++-33`
- `ntp`
- `sharutils`
- `compat-libstdc++-296`
- `libxml2`
- `xinetd`

Multi-machine deployments require that the `httpd` RPM be installed on indexing nodes.

System Virtualization Support

System virtualization is a technology that enables multiple operating system (OS) instances to execute independently on shared hardware. Functionally, software deployed to an OS hosted in a virtualized environment is generally unaware that the underlying platform has been virtualized. As long as your virtual system supports an operating system on which Communications Suite runs, you can deploy Communications Suite in that virtual system.

High Availability Support

This section contains information on high-availability product support.

The following table shows the high-availability products supported by Communications Suite.

Supported High-Availability Products

Product	Supported Versions

Instant Messaging 9	• Sun Cluster
	  • SPARC: 3.1 Update 4, 3.2, 3.3
	  • x86: 3.1 Update 4, 3.2, 3.3
	  • Red Hat Enterprise Linux: Not supported
	  • Oracle Linux: Not supported
	• Veritas
	  • SPARC: Not supported
	  • x86: Not supported
	  • Red Hat Enterprise Linux: Not supported
	  • Oracle Linux: Not supported

Messaging Server 7 Update 5	• Sun Cluster
	  • SPARC: 3.0, 3.1 Update 4, 3.2, 3.3
	  • x86: 3.1 Update 4, 3.2 U1, 3.3
	  • Red Hat Enterprise Linux: Not supported
	  • Oracle Linux: Not supported
	• Veritas
	  • SPARC: 3.5, 4.0, 4.1, 5.0, VCS 6.0.1
	  • x86: 3.5, 4.0. 4.1, 5.0, VCS 6.0.1
	  • Red Hat Enterprise Linux: 4.1, 5.0
	  • Oracle Linux: 4.1, 5.5, 6.0 (VCS 6.0.1)

The following table shows the compatibility of the Messaging Server high-availability agent across different Messaging Server versions.

Compatibility Between Messaging Server and the MS High-Availability Agent Versions

Messaging Server and MS High-Availability Agent Versions Compatibility

MS High-Availability Agent Version	Compatible Messaging Server Versions
MS_SCHA 7.0	Messaging Server 64-bit version 6.3 or later. Messaging Server 64-bit does not work with MS_SCHA 6.*x*.
MS_SCHA 7.0	Messaging Server 32-bit version 6.3-1.02 or later.
MS_SCHA 6.*x*	Messaging Server 32-bit version 6.3.

Browser Requirements for Communications Suite Clients

This section shows which browsers are supported for Communications Suite clients:

- Supported Browser Versions for Convergence 2 Clients
- Supported Browser Versions for Delegated Administrator Clients

Supported Browser Versions for Convergence 2 Clients

The following table shows the supported browsers for Convergence 2 clients.

Supported Browsers for Convergence 2 (Patch 7)

Browser	Windows XP	Windows Vista	Windows 7	Mac OS 10.x	Android (Samsung tablet)	iOS (iPad)
Chrome	31	31	31	Not applicable	31	Not applicable
Microsoft Internet Explorer	9.x	9.x	9.x	Not applicable	Not applicable	Not applicable
Firefox	25	25	25	Not applicable	Not applicable	Not applicable
Safari	Not applicable	Not applicable	Not applicable	5.x, 6.x	Not applicable	7

Supported Browser Versions for Delegated Administrator Clients

The following table shows the supported browsers for Delegated Administrator clients.

Supported Browsers for Delegated Administrator 7

Browser	Windows 7	Windows Vista	Windows XP	Windows 2000	Solaris
Microsoft Internet Explorer	9.x	9.x	6.0 SP1 and 7.x	6.0 SP1 and 7.x	Not applicable
Firefox	13	13	2.0	2.0	2.0

Additional Software Requirements for Individual Communications Suite Components

Topics in this section:

- Calendar Server 7 Update 3
- Messaging Server
- Delegated Administrator

- Instant Messaging Client Operating System Requirements
- Connector for Outlook

Calendar Server 7 Update 3

The following tables show a sample of supported clients for Calendar Server 7 Update 3. Any client that implements WCAP 7.0 or CalDAV works with Calendar Server 7 Update 3.

Sample WCAP Clients for Calendar Server 7 Update 3

Client	Minimum Version
Convergence	2 (Patch 6)
Connector for Microsoft Outlook	8

Sample CalDAV Clients for Calendar Server 7 Update 3

Client	Minimum Version	Notes
Apple iCal	3	iCal 3 comes bundled with Mac OS 10.5.
Apple iPhone OS calendar client	3.x	Support for scheduling in iOS 4.x on iPhone, iPod touch, and iPad.
Lightning	1.9	Lightning 1.9.1 is the latest version.
eM	NA	Desktop client for Windows (.NET) that supports CalDAV access.[1]
Enterprise Tasks	NA	eTask is a business application for the iPhone and iPod touch that uses the CalDAV protocol to view, edit, create, delete, and sync your tasks on the CalDAV server.[1]
Android CalDAV-Sync	NA	CalDAV-Sync is a CalDAV client for Android to synchronize events.[1]
NotifyLink	4.7	Depending on the device, might require version 4.7 or 4.8.

[1] These clients have not officially been tested by Oracle. In general, any CalDAV compliant client should work.
Note: Communications Express is not a supported client in the Calendar Server 7 Update 3 release.

Messaging Server

This section provides additional information about Messaging Server requirements.

- Recommended File Systems for Message Stores
- DNS Server and Messaging Server

Recommended File Systems for Message Stores

The following file systems are recommended for message stores:

- LUFS (Logging UFS).
- VxFS (Veritas File System). Veritas File System provides good system performance if configured properly. If you use VxVM, the Veritas Volume Manager, you need to watch carefully that the volumes and the log file for the volumes are set to be regularly striped.

- HAStoragePlus File System for Sun Cluster installations. The HAStoragePlus File System provides better performance than the default Sun Cluster Global File System.
- NFS (Network File System). You can use NFS on MTA relay machines, for LMTP, for autoreply histories, and for message defragmentation. See the Messaging Server Administration Guide for more information. In addition, NFS can be supported on BSD-style mailboxes (`/var/mail/`) as well as for message stores. 5
- ZFS. Starting with Messaging Server 6.3, Messaging Server supports the ZFS file system. See Messaging Server ZFS Support for more information.

DNS Server and Messaging Server

A high-quality caching DNS server on the local network is a requirement for a production deployment of Messaging Server. Messaging Server depends heavily on the responsiveness and scalability of the DNS server.

Additionally, your DNS configuration needs to be clearly specified as to how to route to hosts that are not on the local subnet by ensuring the following:

- The `/etc/defaultrouter` file should contain the IP address of the gateway system. This address must be on a local subnet.
- The `/etc/resolv.conf` file exists and contains the proper entries for reachable DNS servers and domain suffixes.
- In the `/etc/nsswitch.conf` file, the `hosts:` line has the `files`, `dns`, and `nis` keywords added. The keyword `files` must precede `dns` and `nis`. For example, the lines should not look like this:

```
hosts: nis dns files
ipnodes: nis dns files
```

Instead, the lines should be changed to this:

```
hosts: files nis dns
ipnodes: files nis dns
```

- In the `/etc/hosts file`, the FQDN is the first host name.

For example, if your Internet host table in your `/etc/hosts` file should not look like this:

```
123.45.67.89 budgie.west.sesta.com
123.45.67.89 budgie loghost mailhost
```

Change the host table so that only one line is shown for the IP address of the host. Be sure that the first host name is a fully qualified domain name. For example:

```
123.45.67.89 budgie.west.sesta.com budgie loghost mailhost
```

> **Note**
> For releases up to Solaris OS 10 U3, you must add the fully qualified domain name (FQDN) not only to the `/etc/hosts` file, but also to the `/etc/inet/ipnodes` file. Otherwise, you receive an error indicating that your host name is not a fully qualified domain name. For Solaris OS 10 U4 and later releases, the contents of the `/etc/inet/ipnodes` and `/etc/hosts` files have been merged together into the `/etc/hosts` file. Applying kernel patch 120011-14 on any Solaris 10 system also performs this merge and removes the `/etc/inet/ipnodes` file.

Delegated Administrator

The following components, tools, and LDAP schema version are required for this release of Delegated Administrator:

- Directory Server 5.x, 6.x, 7, or 11gR1. To enforce unique values for mail attributes, you must install one of these releases:
  - Oracle Directory Server Enterprise Edition 11gR1
  - Oracle Directory Server Enterprise Edition 7
  - Directory Server 6.x
  - Directory Server 5.2.5 or later
  - Directory Server 5.2.4, and you must apply patch 5.2_Patch_4_6313027
- Either Messaging Server 6 or Calendar Server 6, or both
- Java Enterprise System web container. You must deploy Delegated Administrator to one of the following web containers:
  - Oracle iPlanet Web Server (at least Versions 6.1 or 7)
  - Application Server (at least Versions 7, 8, or 9)
  - Sun GlassFish Enterprise Server 2.1.1
- Directory Server Setup script, `comm_dssetup.pl`. Use the version that is bundled with the current version of the Communications Suite installer.
- LDAP Schema 2. This release of Communications Suite Delegated Administrator is designed for provisioning users in an LDAP Schema 2 directory.

Instant Messaging Client Operating System Requirements

As of Instant Messaging Server 9, the product no longer ships with the Instant Messaging client. Pidgin is the tested and supported XMPP client. Ideally any XMPP-compliant client should work with Instant Messaging Server.

The following table lists the supported server platforms:

Instant Messaging Support Server Platforms

Operating System	Supported Platforms
Solaris	Solaris OS 10 64-bit
Red Hat Enterprise Linux	Red Hat Enterprise Linux 5, 64-bit
Oracle Linux	Oracle Linux 5.5, 64-bit

> **Note:**
> Instant Messaging 9 requires Java version 1.6 or later.

Connector for Outlook

This section describes the requirements and recommendations for Connector for Microsoft Outlook.

The following operating systems are supported:

- Microsoft Windows 7
- Microsoft Vista

The following operating systems are deprecated:

- Microsoft Windows XP
- Microsoft Windows 2003 Terminal Server

The following versions of Microsoft Outlook are supported:

	Windows 7	Windows Vista	Windows XP	Windows 2003 Terminal Sever
Outlook 2010	Supported	Supported	Not Supported	Not Supported
Outlook 2007	Supported	Supported	Deprecated	Deprecated

Notes:

- Support for Outlook 2003 is deprecated.
- Connector for Microsoft Outlook 8 supports only 32-bit Outlook 2010 and Outlook 2007.

> **Note**
> Calendar Server customers who have deployed previous versions of Sun Java System Calendar Server need to engage with Oracle Consulting. A migration offering is available that enables data to be converted and migrated to the new format. This migration is required for Outlook because of changes in the storage and management of recurring events. No migration service is required for new customers of Calendar Server 6 2004Q2 and later.

Locating Patches for Communications Suite Products

For the most current list of required patches for Oracle Communications Unified Communications Suite, refer to Communications Suite Component Patches. When operating system patch requirements change and patches to Communications Suite and other Oracle components become available, you can find updates in the My Oracle Support (MOS) database, initially as recommended patch clusters.

Communications Suite Installation and Upgrade Notes

Topics in this section:

- Some perl Scripts Fail to Run Due to Read-protected Directory
- Default Installation Directories and Ports
- Default Port Numbers

Some perl Scripts Fail to Run Due to Read-protected Directory

The Messaging Server `start-msg` command, which invokes `updateCfgVersion`, and the `commpkg` command, can fail to run and give an abort error. This failure occurs when the current directory from which you execute the command is unreadable by `root`. For more information, see updateCfgVersion and commpkg commands fail to run due to read-protected directory (bug DB number 15929954).

Default Installation Directories and Ports

The Communications Suite installer installs product components under a single umbrella installation directory, referred to as `INSTALLROOT`. The default value for `INSTALLROOT` is `/opt/sun/comms`. Individual product components are installed in subdirectories under `INSTALLROOT`. For example, Calendar Server 7 is installed in a subdirectory called `davserver`. There is no option to change the subdirectory. You can only change the `INSTALLROOT`. The subdirectory for each product can be found by running the following command:

```
commpkg info --listPackages
```

A sample session for this command by platform can be found in Shared Components.

The following table lists the default installation directories for other product components not installed by the Communications Suite installer.

Default Installation Directories

Product	Default Directory	Comment
Access Manager	Solaris OS: `/opt/SUNWam` Red Hat Enterprise Linux and Oracle Linux: `/opt/sun/identity`	No Comment
Application Server	Solaris OS and Red Hat Enterprise Linux: `/opt/SUNWappserver`	Contains Application Server utilities, executables, and libraries.
Application Server Domains	Solaris OS and Red Hat Enterprise Linux: `/opt/SUNWappserver/domains`	Default area under which administrative domains are created.
Directory Server Core	Solaris OS: `/opt/SUNWdsee/ds6` Red Hat Enterprise Linux and Oracle Linux: `/opt/sun/ds6`	Separately located subcomponents of Directory Server EE include Directory Server Core, Directory Service Control Center, and Directory Proxy Server.
Directory Service Control Center	Solaris OS: `/opt/SUNWdsee/dscc` Red Hat Enterprise Linux and Oracle Linux: `/opt/sun/dscc`	No Comment
Directory Proxy Server	Solaris OS: `/opt/SUNWdsee/dps` Red Hat Enterprise Linux and Oracle Linux: `/opt/sun/dps`	No Comment
Directory Server Instance Directory	Solaris OS: `/var/opt/SUNWdsee/dsins1` Red Hat Enterprise Linux and Oracle Linux: `/var/opt/sun/dsins1`	No Comment
HADB	Solaris OS: `/opt/SUNWhadb` Red Hat Enterprise Linux and Oracle Linux: `/opt/SUNWhadb`	HADB install locations are not relocatable in Communications Suite installation.
	Solaris OS: `/var/opt/SUNWhadb` Red Hat Enterprise Linux and Oracle Linux: `/var/opt/SUNWhadb`	HADB Repository Data and Log location.

	Solaris OS: `/etc/opt/SUNWhadb` Red Hat Enterprise Linux and Oracle Linux: `/etc/opt/SUNWhadb`	HADB Management Agent config file.
	Solaris OS: `/etc/init.d/ma-initd` Red Hat Enterprise Linux and Oracle Linux: `/etc/init.d/ma-initd`	HADB Management Agent startup script.
Message Queue You cannot change the installation directories, so no field is in the installer or parameter in the state file.	Not applicable	Solaris OS: `/usr/bin` `/usr/share/lib` `/usr/share/lib/imq` `/etc/imq` `/var/imq` `/usr/share/javadoc/imq` `/usr/demo/imq` `/opt/SUNWimq` Red Hat Enterprise Linux and Oracle Linux: `/opt/sun/mq` `/etc/opt/sun/mq` `/var/opt/sun/mq`
Monitoring Console	Solaris OS: `/opt/SUNWjesmc` Red Hat Enterprise Linux and Oracle Linux: `/opt/sun/jesmc`	No Comment
Sun Cluster You cannot change the installation directories, so no is field in the installer or parameter in the state file.	Not applicable	Sun Cluster software is installed in the following locations on Solaris OS: `/usr/opt` `/usr/cluster`
Web Server	Solaris OS: `/opt/SUNWwbsvr7` Red Hat Enterprise Linux and Oracle Linux: `/opt/sun/webserver7`	No Comment
Web Server Instance Directory	Solaris OS: `/var/opt/SUNWwbsvr7` Red Hat Enterprise Linux and Oracle Linux: `/var/opt/sun/webserver7`	No Comment

Default Port Numbers

When the Communications Suite installer requests that you enter a port number, the installer performs a runtime check on the ports in use and displays an appropriate default value. If the default port number is being used by another component or by another instance of the same product component, the installer presents an alternative value.

The following table lists the default Communications Suite product component port numbers and the purpose of each port.

> **Note**
> Convergence, Access Manager, and Delegated Administrator are not listed in this table because they use the port numbers of the web container into which they are deployed.

Product Component Default Port Numbers

Product Component	Port	Purpose
Access Manager	58946	UNIX authentication helper

	58943	Secure ID authentication helper (Solaris SPARC only)
Application Server	8080	Standard HTTP port
	3700	Standard IIOP port
	4848	Administration Server port
	7676	Standard Message Queue port
	8686	JMX port
	8181	HTTPS port
Calendar Server 7	NA	Uses the GlassFish Server ports
Oracle Database	1521	Calendar Server 7 port
MySQL Database, at least 5.5.8	3306	Calendar Server 7 port
Common agent container	11162	JMX port (TCP)
	11161	SNMP Adaptor port (UDP)
	11162	SNMP Adaptor port for traps (UDP)
	11163	Commandstream Adaptor port (TCP)
	11164	RMI Connector port (TCP)
Common agent container for Sun Cluster and Sun Geographic Edition	10162	JMX port (TCP)
	10161	SNMP Adaptor port (UDP)
	10162	SNMP Adaptor port for traps (UDP)
	10163	Commandstream Adaptor port (TCP)
	10164	RMI Connector port (TCP)
Directory Server	389	Standard LDAP listener
	636	LDAPS over SSL
GlassFish Server	80	HTTP
	443	HTTPS
HADB	1862	Management Agent Port (JMX)
	15200	Default Portbase
Indexing and Search Service	5558	Util Service port (used over localhost only) for product internal communication
Instant Messaging	5222	Multiplexer port
	5269	Instant Messaging server-to-server port
	45222	Server port used for multiplexer communication
	55222	Gateway Connector Service For Facebook
Message Queue	80	Standard HTTP port
	7676	Port Mapper
	7674	HTTPS Tunneling Servlet Port
	7675	HTTP Tunneling Servlet Port
Messaging Server	25	Standard SMTP port or MMP SMTP Proxy Note 1
	110	Standard POP3 port or MMP POP3 Proxy Note 1
	143	Standard IMAP4 port or MMP IMAP Proxy Note 1
	225	Default port for communications to back-end store through LMTP
	465	SMTP/SUBMIT over SSL or MMP SMTP Proxy over SSL Note 1
	587	Standard Message Submission (SMTP SUBMIT) port
	993	IMAP over SSL or MMP IMAP Proxy over SSL Note 1
	995	POP3 over SSL or MMP POP Proxy over SSL Note 1
	7997	Event Notification Service port
	8990	`mshttpd` daemon port
	8991	`mshttpd` over SSL daemon port

	27442	Used by Job Controller for product internal communication
	49994	Used by the Watcher for internal product communication
Monitoring Console	6789	Accessed through Sun Java Web Console
	8765	Job Factories port for Master Agent Web Services Adaptor
	11161	SNMP port for Monitoring Framework
	11164	RMI port for Monitoring Framework
	63837	Used by MeterMaid for internal product communication
	54320	Multicast port for Monitoring Framework discovery protocol
Web Server	8800	Admin HTTP port
	8989	Admin SSL port (for Admin Server, SSL port is required and HTTP port is optional)
	80	Instance HTTP port

Note: If these servers (such as the IMAP4 server and MMP IMAP Proxy) are installed on the same machine, you encounter port number conflicts. If possible, install products with conflicting port numbers on separate hosts.

If you have installed two servers that are attempting to access the same port number, you need to change the port number of one of the conflicting products. To change port numbers for Messaging Server components, use the `configutil` utility. See the Messaging Server Administration Reference for instructions.

The following configuration example uses the `service.http.port` parameter to change the standard HTTP port number to `8080`:

```
configutil -o service.http.port -v 8080
```

Problems Fixed in This Release of Communications Suite

The following table lists problems fixed in this release of Communications Suite. For component product issues fixed, refer to each component's individual release notes.

Problems Fixed in This Release of Communications Suite

Service Request (SR) Number	BugDB Number	Description
NA	12303781	`comm_dssetup.pl` can now find Directory Server installation directory.
NA	12303307	Included newly defined `icsDomainAcl` attribute for calendar ACLs at the domain level.
1-399204604 1-446146008 1-529916007	12240710	`comm_dssetup.pl` no longer creates duplicate or bad configuration in Directory Server 5.2x.
NA	12235005	Deleted attributes were not indexed.
NA	12235123	`comm_dssetup.pl` correctly modifies `comms-config` for configuration only setup.

Known Problems in Communications Suite

This section describes the known problems that exist in this release of Communications Suite. Specifically, this section describes installation and upgrade issues.

Installing MySQL

SR number: NA
Bug DB number: NA

MySQL does not install on sparse zones.

LDAP Schema and comms_dssetup

SR number: NA
Bug DB number: NA

The `comm_dssetup.pl` script now prints a message that it is possible to remove the `71sun-am.ldif` file if it is found. The file is no longer automatically removed and the choice for removal is left up to the administrator. Other LDIF files may have dependencies on `71sun-am.ldif`, so make sure that your site does not need to use `71sun-am.ldif` before removing it.

updateCfgVersion and commpkg commands fail to run due to read-protected directory

SR number: NA
Bug DB number: 15929954

The Messaging Server `start-msg` command, which invokes `updateCfgVersion`, and the `commpkg` command, can fail to run and give an abort error. This failure occurs when the current directory from which you execute the command is unreadable by `root`. For example, if the current directory is an NFS-mounted directory that has protection 0711 and is owned by a non-root user, the commands fail.

Workaround:
Start the command from a directory that is readable by `root`. For example, to run `start-msg`:

```
# cd /opt/sun/comms/messaging64
# bin/start-msg
```

Access Manager 7.1 install fails if `sun-ldapcsdk-libs` 6.0.8 rpm is already installed on Red Hat 5

SR number: NA
Bug DB number: 12290017

Access Manager 7.1 requires LDAPCSDK version 6.0.6, but the Comms 7 Update 3 installer installs version 6.0.8, causing the Access Manager installation to fail. First, manually remove LDAPCSDK 6.0.8 rpm, then install Access Manager 7.1.

JDK Upgrade Can Affect Other Products' Upgrade

SR number: NA
Bug DB number: NA

The JDK upgrade can affect the upgrade of other products.

Access Manager 7.1 fails to start if it is deployed to a non-enterprise (EE) version of Application Server 9.1.

SR number: NA
Bug DB number: NA
Sun Bugster ID: 6653773

Access Manager 7.1 fails to start if it is deployed to a non-enterprise (EE) version of Application Server 9.1.

If you installed Directory Server Java ES (for example, Java ES 5 U1), the `comm_dssetup` utility is also installed. The Communications Installer comes with a newer version of `comm_dssetup` that you need to use.

SR number: NA
Bug DB number: NA

Workaround: To upgrade to the current version of `comm_dssetup`, run `commpkg upgrade` and enter 3.

You must upgrade and run `comm_dssetup.pl` before upgrading the other component products that require it. Otherwise the `commpkg upgrade` of component products might fail (for example, Delegated Administrator and Messaging Server).

Directory Server 5.2 Issues with NSS 3.12

SR number: NA
Bug DB number: NA

With the NSS 3.12 patch, you must run Directory Server 5.2 Patch 6 or later. For more information, see: http://download.oracle.com/docs/cd/E19199-01/820-3003/.

Documentation Updates

These release notes and as well as the New Features page have been reorganized and reformatted for consistency with other Oracle Communications products' documentation.

Communications Suite Supported Web Containers

Web Containers Supported in Oracle Communications Unified Communications Suite Version 7 Update 4

Component Product	GlassFish Server 3	GlassFish Server 2.1.1	Application Server 9.1 Update 2	Application Server 8	Application Server 7	Oracle iPlanet Web Server 7.0 Update 2	Web Server 6.1
Calendar Server 7 Update 3	Not Supported	Supported	Not supported	Not supported	Not supported	Not supported	Not supporte
Convergence 2	Not Supported	Supported	Not supported	Not supported	Not supported	Not supported	Not supporte
Delegated Administrator 7	Not Supported	Supported	Supported	Supported	Supported	Supported	Supporte
Indexing and Search Service 1 Update 4	Not Supported	Supported	Not supported	Not supported	Not supported	Not supported	Not supporte
Instant Messaging Server 9	Supported (as of Instant Messaging Server 9 Patch 2)	Supported	Not supported	Not supported	Not supported	Not supported	Not supporte

Notes:
The default installation paths for GlassFish Server 2.1.1. and Application Server 9 are the following:

Base installation directory: `/opt/SUNWappserver`
Domain directory: `/opt/SUNWappserver/domains/domain1`
Document root directory: `/opt/SUNWappserver/domains/domain1/docroot`

The default installation paths for Application Server 8 are the following:

Base installation directory: `/opt/SUNWappserver/appserver`
Domain directory: `/var/opt/SUNWappserver/domains/domain1`
Document root directory: `/var/opt/SUNWappserver/domains/domain1/docroot`

Verifying the Correct JDK Version to Support Access Manager

Verifying the Correct JDK Version to Support Access Manager

The information on this page concerns you only if the following software is installed or will be installed on this machine:

- Red Hat Linux operating system
- Access Manager 7.1, to be installed with the Java Enterprise System (Java ES) 5 Update 1 installer
- Java 6 (Java Development Kit 1.6) or later has been installed previously on this machine

This issue does not apply on Solaris OS.

> **Note**
> Support for Access Manager is deprecated. For more information, see: Access Manager Support Deprecation.

For more information about the compatibility between Access Manager, the Java version, and a Communications Suite installation, see Communications Suite Compatibility Issues.

To Verify the Correct Java Development Kit (JDK) Version to Support Access Manager 7.1

The Java ES 5 Update 1 (JES5u1) installer cannot successfully deploy Access Manager 7.1 if Java Development Kit (JDK) 1.6 or later is installed. You can use the following command to verify the currently installed release.

In a terminal window, as `root` run the following command.

```
rpm -qa jdk
```

> **Note**
> A default installation of Red Hat Enterprise Linux 3 or 4 returns no output to this command.

If the output of the command is **`jdk-1.6.`*`version`***, you need to downgrade the JDK version prior to deploying Access Manager 7.1.

This can be achieved by downloading and installing **JDK 5.0 Update 16** from the following URL:

http://java.sun.com/products/archive/j2se/5.0_16/index.html

Chapter 16. Installation Scenarios - Messaging Server

Oracle Communications Messaging Server Installation Scenarios
Version 7 Update 5

The following Messaging Server 7 Update 5 installation information is automatically generated from this wiki:

Page: Installation Scenario - Message Store
Page: Installation Scenario - Message Transfer Agent
Page: Installation Scenario - Messaging Multiplexor
Page: Installation Scenario - Messaging Server Webmail Server
Page: Installation Scenarios - Messaging Server

Chapter 17. Convergence Initial Configuration

Convergence Initial Configuration Version 2

After installing Convergence, you must configure it. Use `init-config` to perform the initial configuration.

After the initial Convergence configuration has been done, you can change configuration settings and property values with the Convergence command-line interface, `iwcadmin`. For more information about ongoing Convergence administration, see Convergence Administration Guide.

Topics:

- Gather Your Convergence Configuration Information
- Configuring Components to Enable Communication with the Instant Messaging Server
- Run the Convergence Configuration Program
- Enabling Indexing and Search Service
- Performing a Silent Installation
- Configuring Certificate Based Authentication

Gather Your Convergence Configuration Information

Convergence Components

You can configure Convergence to communicate with the following back-end Communication Suite servers:

- Messaging Server
- Calendar Server (CALDAV)
- Sun Calendar Server
- Instant Messaging Server

You can choose to configure any or all of these components. Only configured components appear in the Convergence user interface and are available to Convergence users.

> **Configure Messaging Server and Calendar Server First**
> If you plan to use Messaging Server or Calendar Server, these must be installed and configured before you run the Convergence configuration program. If you add a component to your deployment after running the Convergence configuration program, rerun the Convergence configuration program so that Convergence will be able to communicate with the new component.
> Alternatively, you can set up any additional installed components with Convergence by using the `iwcadmin` command-line interface. For example, to enable the CalDAV service with Convergence, see: Enabling CalDAV Service.
> You do not have to configure Instant Messaging before you configure Convergence. However, to enable the Instant Messaging service, you must take the steps described in Configuring Components to Enable Communication with Instant Messaging Server.

Web Containers

The Convergence server must be deployed to a web container. See Product Requirements for Convergence 2 for the list of supported web containers.

Configuration Worksheets

Before you run the configuration program, gather configuration information and fill out the Convergence Configuration Worksheets.

Configuring Components to Enable Communication with the Instant Messaging Server

To enable Convergence to communicate with Instant Messaging Server, you must configure values for the following Instant Messaging Server features before you run the Convergence configuration program:

- Httpbind Component JID
- Httpbind Component Password
- Avatar Component JID
- Avatar Component Password

You must configure these components manually, after you install and configure Instant Messaging.

> **A Note About Configuring Instant Messaging Server**
> When you are configuring the Instant Messaging Server (with the `configure` utility), ensure that the XMPP/HTTP Gateway Deployment parameter is set to `false`. The XMPP/HTTP Gateway is deployed through the Convergence server but its value is set when you configure Convergence.

About the Httpbind Component JID and Avatar Component JID

The Httpbind JID and Avatar JID can be any string. These values do not have to identify a particular Instant Messaging host and domain name. However, it is a good practice to make these values meaningful. For example, include the host and domain name in these JIDs to make the identifiers easy to recognize.

The passwords for Httpbind JID and Avatar JID can be unique. They do not have to match any other password used for IM or other back-end services.

The JIDs and passwords configured in the `iim.conf.xml` file must match the Httpbind and Avatar JIDs that you specify when you configure Convergence with the `init-config` program.

Configuring Multiple Instances of Convergence with One Instant Messaging Server

If you are configuring multiple instances of Convergence to use one Instant Messaging server, you must add a unique `httpbind` and `avatar.jid` value for each instance of Convergence. For example, if you configure three instances of Convergence, the Instant Messaging server configuration (`iim.conf.xml`) file must have three instances of `httpbind` component configuration:

Use `imconfigutil add-component` to add the unique `httpbind` and `avatar.jid` values for each instance of Convergence.

```
<component id="httpbind1">
<jid>convergence1-jid.httpbind.example.com</jid>
<password>secret</password>
</component>

<component id="httpbind2">
<jid>convergence2-jid.httpbind.example.com</jid>
<password>secret</password>
</component>

<component id="httpbind3">
<jid>convergence3-jid.httpbind.example.com</jid>
<password>secret</password>
</component>
```

Similarly, in this example, the Instant Messaging server configuration file (`iim.conf.xml`) must have three instances of the avatar component configuration - one for each Convergence instance:

```
<component id="avatar1">
<jid>convergence1-jid.avatar.example.com</jid>
<password>secret</password>
</component>

<component id="avatar2">
<jid>convergence2-jid.avatar.example.com</jid>
<password>secret</password>
</component>

<component id="avatar3">
<jid>convergence3-jid.avatar.example.com</jid>
<password>secret</password>
</component>
```

You must run the Convergence `init-config` script for each instance of Convergence. When you specify the values for the Httpbind Component JID and Avatar Component JID, be sure that the values correspond to those for the corresponding instance of Convergence in the `iim.conf.xml` file. For details, see Run the Convergence Configuration Program.

To Configure the Instant Messaging Server Components

1. Perform the initial configuration of Instant Messaging with the Instant Messaging `configure` program.
   For details, see Instant Messaging Initial Configuration.
2. Add **`c2s`** to `iim.conf.xml`:

   ```
   /opt/sun/comms/im/sbin/imconfutil -u set-listener-prop  s2s
   protocols="s2s,component,c2s" -c
   /opt/sun/comms/im/config/iim.conf.xml
   ```

3. Using the `imsconfutil` command, set the `iim_agent.enable` property to `true`.
4. Set the Httpbind JID and password by using the `imconfutil add-component` command. For example:

```
/opt/sun/comms/im/sbin/imconfutil add-component id=httpbind1
jid=convergence1-jid.httpbind.example.com
password=secret -c /opt/sun/comms/im/config/iim.conf.xml
```

5. Set the avatar JID and password with the `imconfutil add-component` command. For example:

```
/opt/sun/comms/im/sbin/imconfutil add-component id=avatar1
jid=avatar1-jid.avatar.example.com
password=secret -c /opt/sun/comms/im/config/iim.conf.xml
```

   If you are configuring more than one Convergence client to use the Instant Messaging Server host, add a unique `httpbind` and `avatar.jid` value for each instance of Convergence. For details, see Configuring Multiple Instances of Convergence with One Instant Messaging Server.

6. Restart Instant Messaging Server.

Configuring Instant Messaging Server to Show Presence Information in Email

To enable Convergence to show presence information in email, you must configure Instant Messaging server. See How do I Configure Convergence so that Presence Information is Shown in my Email?

Run the Convergence Configuration Program

This section describes how to configure Convergence with the `init-config` configuration program.

Before Running the Configuration Program

Be sure that the back-end servers and the web container are up and running:

- Directory Server

> **A Note About Directory Server**
> The Convergence configuration program does not change any information in Directory Server. It connects to Directory Server only to verify the Directory Manager user and password and collects `dcroot` and domain values.

- Messaging Server
- Calendar Server

> **A Note About GlassFish Server**
> If you configured the web container with a CA or self-signed certificate, you must accept the certificate by running any of the GlassFish Server commands. See Convergence Installation Notes.

Verify that users are able to log in to the back-end servers:

- Messaging Server
- Calendar Server

To Launch the Configuration Program

1. Log in as (or become) `root`.
2. Change to the *iwc-base*`/sbin` directory.
   For example, on Solaris OS and Red Hat Linux, change directories.

   ```
   cd /opt/sun/comms/iwc/sbin
   ```

3. To launch the configuration program, enter one the one of the following commands:
   - GUI:

     ```
     ./init-config
     ```

   - CLI:

     ```
     ./init-config -nodisplay
     ```

     The configuration program starts, displaying the first panel. The sections that follow lead you through the configuration panels.

The remainder of this section describes how to run the configuration program in GUI mode.

To Enter Information in the Configuration Program Panels

The following steps lead you sequentially through the panels displayed by the `init-config` program.

If you'd rather read a list than a task-based procedure, you can refer instead to the configuration values shown in Worksheet 1-1 and Worksheet 1-2 as you run the program.

1. **Welcome**

   The first panel in the configuration program is a welcome page. Click **`Next`**.

2. **Select the directory to store configuration and data files**

   Select the directory where you want to store the Convergence configuration and data files. The default configuration and data directory is located here:
   - Solaris OS and Red Hat Linux: `/var/opt/sun/comms/iwc`
     This directory should be separate from the *iwc-base* directory. (On both Solaris OS and Red Hat Linux, this is `/opt/sun/comms/iwc` by default.)

     Enter the name of the directory, or keep the default, and click **`Next`**.

     If the directory does not exist, a dialog appears asking if you want to create the directory or choose a new directory. Click **`Create Directory`** to create the directory or **`Choose New`** to enter a new directory.

     A dialog appears indicating that the components are being loaded. This may take a few minutes.

3. **Select Services to configure**

   Select the services you want to configure:
   - **Mail Service**---the Convergence servlets that communicate with Messaging Server and GUI components that provide end-user access to mail service.
   - **Calendar Service**---the Convergence servlets that communicate with Calendar Server and GUI components that provide end-user access to calendar service.

- **Instant Messaging Service**---the Convergence servlets that communicate with Instant Messaging Server and GUI components that provide end-user access to Instant Messaging service.
  Note: To configure the Instant Messaging Service, you must also select either Mail Service or Calendar Service (or both). You cannot select Instant Messaging Service only.
  Click **`Next`**.

4. **Convergence server host name and DNS domain name**

   Enter the host name of the machine on which Convergence is being configured.

   For example: `mymachine`

   Enter the DNS domain name of the Convergence host machine.

   For example: `siroe.com`

   Click **`Next`**.

5. **GlassFish Server 2.1.1 Configuration Details**

   Installation directory. Enter the GlassFish Server installation directory. By default, on Solaris OS, this directory is `/opt/SUNWappserver`.

   Domain directory. Enter the GlassFish Server domain directory. By default, on Solaris OS, this directory is `/opt/SUNWappserver/domains/domain1`.

   Document root directory. Enter the GlassFish Server document root directory. By default, on Solaris OS, this directory is `/opt/SUNWappserver/domains/domain1/docroot`.

   You can browse to select any of these directories.

   Server Target Name. Enter the GlassFish Server target name. For example: `server`.

   Virtual Server Identifier. Enter the GlassFish Server virtual server identifier. For example: `server`.

   Server Instance HTTP port. Enter the GlassFish Server target HTTP port number. Default port is `8080`.

   Click **`Next`**.

   The configuration program checks if the directories you specified are valid. If a directory is invalid or does not exist, a dialog box tells you to choose a new directory.

   Next, the configuration program checks if an GlassFish Server target connection is alive. If not, a dialog box warns you that the configuration program could not connect to the specified target and your configuration may not be completed. You can accept the specified values or choose new GlassFish Server configuration values.

6. **GlassFish Server 2.1.1: Administration Instance Details**

   Administration Server Port. Enter the Administration Server port number. For example: `4848`

   Administrator User ID. Enter the Administration Server administrator user ID. For example: `admin`

   Administrator Password. Enter the administrator user password.

Specify whether the HTTP access to the Administration Server instance is secure (HTTPS) or not (HTTP).
By default, the *Secure Administration Server Instance* box shown in this panel is checked. If your HTTP access is not secure, uncheck the box.

Click **`Next`**.

The configuration program checks if a GlassFish Server Administration Instance is alive. If not, a dialog box warns you that the configuration program could not connect to the specified target and your configuration may not be completed. You can accept the specified values or choose new GlassFish Server configuration values.

Next, the configuration program checks if the credentials are valid. An Information dialog box is displayed with GlassFish Server's Administration Instance running in normal or secure mode.

7. **Enter the URI path where Convergence will be deployed.**

   For example, enter **`/iwc`**.

   Click **`Next`**.
8. **Specify whether or not you want hosted domain support**

   Select this option if you want to support for hosted domains in the current Convergence deployment.
   If you enable or disable this option, ensure that the same settings are applied at the following back-end servers:
   - Calendar Server - For more information on setting up hosted domains for Calendar Server, see Chapter 10 Setting Up a Multiple Domain Calendar Server 6.3 Environment in Sun Java System Calendar Server Administration Guide.
   - Messaging Server - For more information on setting up hosted domains for Messaging Server, see Configuring and Administering Multiplexor Services.
   - Instant Messaging Server - For more information on setting up hosted domains for Instant Messaging Server, see Configuring Hosted Domain Support in Instant Messaging Administration Guide.

9. **Specify the LDAP User/Group configuration details.**

   The Communications Suite servers (Messaging Server, Calendar Server, Instant Messaging) store user and group data in an LDAP directory. This screen asks you to supply configuration information that enables the Convergence server to connect to the Directory Server managing this data.

   User/Group LDAP URL. Enter the LDAP host and port where the User/Group is located. The URL should be in the format: `ldap://LDAP host name:LDAP port number.`

   For example: `ldap://siroe.com:389`

   Bind DN. Enter the LDAP distinguished name (DN) of the administrator used to bind to the Directory Server. This administrator should have appropriate privileges to manage the User/Group data.

   For example `cn=Directory Manager`.

   Bind Password. Enter the password for the Bind DN.

   Click **`Next`**.

   The configuration program checks if the LDAP connection is alive and the credentials are valid. If

not, an error box tells you that the configuration program could not connect to the specified target. You need to provide valid User/Group LDAP details.

10. **Confirm the base distinguished name (DN) of the DC Tree suffix.**
    For example: `o=isp`

    The Convergence configuration program retrieves this base DN from the Directory Server and displays it. Use the displayed value, or change it if your configuration uses another base DN.

    This base DN is used to perform domain lookups. If the Communications Suite servers are using Schema 1, this configuration setting specifies the DN of the DC Tree suffix. If the Communications Suite servers are using Schema 2, this setting specifies the DN of the root suffix under which the User/Group tree is located. You must enter (confirm) a value for this item whether you are using Schema 1 or Schema 2.

    In a Schema 1 directory layout, Convergence uses the DC Tree suffix to search for domain information. In a Schema 2 directory layout, there is only one root suffix; both domain and user/group data are located under this one suffix.

    Click **`Next`**.

11. **Enter the default domain name.**

    When a user logs into Convergence without including a mail domain component in the user name, this domain is used by default to supply the fully qualified domain name. The default domain name is used when a domain name is required but not provided explicitly during login/authentication.

    For example: `sesta.com`

    In this example, if a user logs in as `fred`, the user name is qualified as `fred@sesta.com`.

12. **Specify the Mail Service configuration details.**

    This screen appears only if you selected Messaging Service in the Select Components to Be Configured screen.

    Webmail Host Name. Enter the name of the machine where Messaging Server is installed. For example: `ms.sesta.com`

    Webmail Server Port Number. Enter the Messaging Server HTTP (`mshttpd`) port number. For example, the default is: `8990`

    Access in SSL mode. Select this option if you want a connection between Convergence and Messaging Server in secure mode. If you select this option, make sure that the Messaging Server Port Number provided above is an SSL port.

    Webmail Server Admin UserID. Enter the Messaging Server administrator user ID. For example: `admin`

    By default, the Messaging Server administrator user ID is `admin`. This value is chosen during Messaging Server configuration.

    Webmail Server Admin Password. Enter the Messaging Server administrator user password.

    Click **`Next`**.

    The configuration program checks if Messaging Server connection is alive and Credentials are valid. If not, a warning box displayed that the configuration program could not connect to the

specified target.

13. **Select Calendar Server Version.**

    This screen appears only if you selected Calendar Server in the Select Components to Be Configured screen.

    > **Note**
    > Only choose CS 6.3 if you must configure Convergence with an existing version of Calendar Server 6.3. See: Removed Features for Communications Suite: Calendar Server 6.3.

    Choose "CS7 and up" for Calendar Server 7.x or "CS6.3" for Calendar Server 6.3.

    If you plan to enable Calendar Server 7 at a later time, follow the instructions in Enabling CalDAV Service.

    Click **`Next`**.

14. **Specify the Calendar Service configuration details.**

    This screen appears only if you selected Calendar Server in the Select Components to Be Configured screen.

    Calendar Server Host Name. Enter the name of the machine where Calendar Server is installed. For example: `cs.siroe.com`

    Calendar Server Port Number. Enter the Calendar Server HTTP port number. For example: `80` (Default Calendar Server port is `80`.)

    Access in SSL mode. Select this option if you want connection between Communication Center and Calendar Server in secure mode. Make sure that Calendar Server Port Number provided above is SSL port if you select this option.

    Service URI. Enter the URI path where the WCAP servlet is deployed for Calendar Server 7. (Default Service URI is `/davserver/wcap`). If you selected CS 6.3 in the previous screen, you will not see the Service URI field.

    Calendar Server Admin User ID. Enter the Calendar Server administrator user ID. For example: `calmaster`

    > **Note**
    > Add the `davcore.scheduling.localuserattr` value (usually `davStore`) to the administrative user's entry in LDAP to prevent a calmaster DavException.

    Calendar Server Admin Password. Enter the Calendar Server administrator user password.

    Click **`Next`**.

    The configuration program checks if the Calendar Server connection is alive and Credentials are valid. If not, a warning box is displayed, stating that the configuration program could not connect to

the specified target.

15. **Specify the Instant Messaging Service configuration details.**

    This screen appears only if you selected Instant Messaging Service in the Select Components to Be Configured screen.

    Note: You must configure the Httpbind Component JID, Httpbind Component Password, Avatar Component JID, and Avatar Component Password in the IM Server before you enter these values in the Convergence configuration program. For details, see Configure IM Components to Enable Communication with the Instant Messaging Server.

    Server Domain Name. Enter the domain name of the Instant Messaging server. For example: `varrius.com`. If multiple domains need to be supported, enter the domain names separated by spaces.
    Server Host Name. Enter the name of the machine where Instant Messaging is installed. For example: `im.varrius.com`

    Server Port Number. Enter the Instant Messaging Server HTTP port number. For example: `5269` (Default Instant Messaging Server port is `5269`.)

    Note: The following items, Httpbind Component JID, Httpbind Component Password, Avatar Component JID, and Avatar Component Password, must match the JID values and passwords that you configured in the `iim.conf.xml` file for the IM Server. If multiple instances of Convergence use one IM server, these items must match the JID values in the `iim.conf.xml` file configured for this particular instance of Convergence. For details, see Configuring Multiple Instances of Convergence with One IM Server.

    Httpbind Component JID. Enter Instant Messaging Server httpbind component JID. This value must match the JID you configured in the `iim.conf.xml` file. For example: `httpbind.varrius.com`
    Httpbind Component Password. Enter the Instant Messaging Server httpbind component password
    Avatar Component JID. Enter Instant Messaging Server avatar component jid. For example: `avatar.varrius.com`
    Avatar Component Password. Enter Instant Messaging Server avatar component password.

    Click **`Next`**.

16. **Specify the Convergence Administrator details**

    The Administrator username and password are needed for ongoing administration of Convergence, implemented by using the Administration Utility `iwcadmin`. The user details for the Convergence Administrator are stored in the Convergence configuration files, not in the Directory Server. This administrator user is not tied to any back-end server administrator accounts.

    Username. Enter the administrator username. For example `admin`

    Password. Enter the password, make sure that password is more than 6 charactors
    Password Again. Enter the password again to confirm

17. **Ready to Configure**

    The verification panel displays the items that will be configured.

    Click **`Configure Now`** to begin the configuration.

To change information on a previous panel, click **Back**.

18. **Task Sequence**

    The Task Sequence Panel displays a sequence of tasks being performed. The actual configuration takes place as these tasks are displayed.

    When the panel displays "All Tasks Passed," you can click **Next** to continue or **Cancel** stop the tasks from being performed and exit.

19. **Installation Summary**

    The Installation Summary panel displays the product installed and a **Details...** button that displays more information about this configuration.

    A log file for the `init-config` program is created in the *iwc-base*`/install` directory. (On Solaris OS and Red Hat Linux, the default path is `/opt/sun/comms/iwc/install`.) The name of the log file is `Iwc-config-`*YYYYMMDDHHMMSS*`.log`, where *YYYYMMDDHHMMSS* identifies the 4-digit year, month, date, hour, minute, and second of the configuration.

    Click **Close** to complete the configuration.

Enabling Indexing and Search Service

If you also installed Indexing and Search Service, you must configure Indexing and Search Service related parameters to enable it in Convergence. See Enabling Indexing and Search Service (This page also covers how to enable ISS Proxy Authentication with Convergence).

Performing a Silent Installation

The Convergence initial runtime configuration program automatically creates a silent installation state file called `saveState`. This file can be used to supply your configuration choices when used in a silent installations.

The silent installation `saveState` file is stored in the `/opt/sun/comms/iwc/data/setup/Iwc-config-`*YYYYMMDDHHMMSS*`/` directory, where *YYYYMMDDHHMMSS* identifies the 4-digit year, month, date, hour, minute, and second of the `saveState` file.

The silent installation `saveState` file is stored in the *da-base*`/data/setup/commda-config_`*YYYYMMDDHHMMSS*`/` directory, where *YYYYMMDDHHMMSS* identifies the 4-digit year, month, date, hour, minute, and second of the `saveState` file.

For example, to run the `init-config` program in silent install mode using the `saveState` file :

```
iwc-base-dir/sbin/init-config -nodisplay -noconsole -state fullpath
/saveState
```

The *fullpath* variable is the full directory path of where the `saveState` file is located.

Configuring Certificate Based Authentication

For information on how to configure certificate based authentication for Convergence see:

Certificate Based Authentication for Oracle Communications Unified Communications Suite.

Chapter 18. Delegated Administrator Initial Configuration

View Source

Delegated Administrator for Oracle Communications Unified Communications Suite Initial Configuration Version 7

The Delegated Administrator configuration program (`config-commda`) creates a new configuration with your specific requirements. This initial runtime configuration program performs minimal configuration.

After you run the program, complete the initial configuration by following the steps described in Post-Configuration Tasks.

You can further customize your Delegated Administrator configuration by performing the tasks described in Customizing Delegated Administrator.

You might need to perform additional configuration, as described in the Messaging Server Administration Guide.

> **Note**
> Support for Access Manager is deprecated. For more information, see: Access Manager Support Deprecation.

Topics:

- If You Are Upgrading from a Previous Release of Delegated Administrator
- Choose Which Components to Configure
- Run the Configuration Program
- Perform Silent Installation
- Run Delegated Administrator Console and Utility
- Post-Configuration Tasks
- Configuring GlassFish Server to Run Delegated Administrator in SSL Mode
- Configuring Web Server to Run Delegated Administrator in SSL Mode

If You Are Upgrading from a Previous Release of Delegated Administrator

If you are configuring Delegated Administrator for the first time, you can skip this section and go directly to the section, Choose Which Components to Configure.

If you are upgrading to this release of Delegated Administrator from an earlier release, and you have customized your configuration, you might have to take steps to preserve your customizations.

For instructions on how to upgrade Delegated Administrator from a previous version, see Delegated Administrator Upgrade.

To learn how to preserve your customized configuration, see Preserving Customized Data When You

Upgrade Delegated Administrator.

Choose Which Components to Configure

The third panel in the configuration program asks which Delegated Administrator components you want to configure:

- **Delegated Administrator Utility (client)**---the command-line interface invoked with `commadmin`.
- **Delegated Administrator Console**---the Delegated Administrator graphical user interface (GUI).
- **Delegated Administrator Server**---the Delegated Administrator server components required to run the Delegated Administrator utility and console.

The configuration program displays different panels depending on which components you select.

The following steps summarize the configuration choices. Each summary step (below) links you to a section (later in this article) that walks you through the actual configuration panels.

Summary of Configuration Choices

1. Starting the Configuration
   Enter the information requested in these panels to begin the configuration.
2. Configuring the Delegated Administrator Utility
   These panels follow directly after the *Select Components to Configure* panel. They ask for information used to configure the Delegated Administrator utility. You can either use the command line utility or the GUI console to configure Delegated Administrator.
   - The standard approach is to configure the Delegated Administrator utility with the other two components, the server and console, on the same machine.
     You must configure the Delegated Administrator utility on all machines on which you install a Delegated Administrator server.
   - You can also configure the Delegated Administrator utility and console on a separate machine. On the machine on which you configure the utility and console, you would select only those components on the *Select Components to Configure* panel.
     In this case, you must run the configuration program again on the machine where you configure the server.
3. Configuring the Delegated Administrator Console
   These panels follow the panels that configure the utility.
   You can choose whether or not to configure the Delegated Administrator console.
   - If you configure the Delegated Administrator console and server on the same machine, you would select both the console and the server in *Select Components to Configure* panel.
   - You also can configure the Delegated Administrator console and server on different machines.
     On the machine on which you configure the console, you would select only the console on the *Select Components to Configure* panel. The utility is selected by default; be sure it remains selected.
     In this case, you must run the configuration program again on the machine on which you configure the server.
   - If you have not configured the server when using the command line utility, then a dialog box cautions you that you must configure the Delegated Administrator Server on another machine. The server must be configured to enable the Delegated Administrator utility and console to work. If you are using the GUI to configure, then no warning will be displayed. If you configure the console and server on different machines, the utility is configured on *both* machines.
     To select a component, enter the number (1,2, or 3) or `0` to deselect it.
     The configuration program displays different panels depending on which Web container you select for the console. You can deploy to one of the following Web containers:
   - Oracle iPlanet Web Server 6.*x* [WEB]
   - Oracle iPlanet Web Server 7.*x* [WEB7]
   - Sun Java System Application Server 7.*x* [APP7]

- Sun Java System Application Server 8.*x* or higher[APP8]
  If you are configuring the Delegated Administrator server and console on one machine, you will go through these instructions *twice* (once for the server, once for the console).

4. Configuring the Delegated Administrator Server
   These panels follow the panels that configure the console.
   You can choose whether or not to configure the Delegated Administrator server on a given machine.
   If you do not choose to configure the server on a given machine, the configuration program warns you that you must configure it on another machine. The server component is required for running the utility and console.
   All other considerations for deploying the server are the same as those for the console, as (described in Configuring the Delegated Administrator Console).
   You can select Access Mode of either Direct LDAP or Access Manager.

   > **Note**
   > **The Delegated Administrator server uses the same Web container as Access Manager.** The configuration program asks for Web container information after it asks for the Access Manager base directory. This is applicable only if you have chosen Access Manager Access Mode.

5. Completing the Configuration
   Enter the information requested in these panels to complete the configuration.

Run the Configuration Program

The steps described in this section walk you through configuring Delegated Administrator.

NOTE: *da-base* is `/opt/sun/comms/da` by default on all platforms; use this value unless you chose a different path during installation. In Communications Suite 5, the Solaris value is: `/opt/SUNWcomm/`.

Launching the Configuration Program

To run the configuration program, log in as (or become) root and go to the *da-base*`/sbin` directory. Then enter the command:

```
# ./config-commda
```

Once you run the `config-commda` command, the configuration program starts.

For example, in Communication Suite 5 in Solaris, the command is: `/opt/SUNWcomm/sbin/config-commda`.

The sections that follow lead you through the configuration panels.

Starting the Configuration

You must enter the information requested in the first configuration-program panels.

To start the configuration

1. **Welcome**
   The first panel in the configuration program is a welcome page. Click **`Next`** to continue or **`Cancel`** to exit.
2. **Select directory to store configuration and data files**

Select the directory where you want to store the Delegated Administrator configuration and data files. The default configuration directory is `/var/da-base`. This directory should be separate from the *da-base* directory, (which is `/opt/sun/comms/da` by default).
Enter the name of the directory, or keep the default and click **`Next`** to continue.
If the directory does not exist, a dialog appears asking if you want to create the directory or choose a new directory. Click **`Create Directory`** to create the directory or **`Choose New`** to enter a new directory.
A dialog appears indicating that the components are being loaded. This may take a few minutes.

3. **Select components to configure**
   Select the component or components you want to configure on the Components Panel.
   - **Delegated Administrator Utility (client)**---the command-line interface invoked with `commadmin`. This component is required and is selected by default. It cannot be deselected.
   - **Delegated Administrator Console**---the Delegated Administrator graphical user interface (GUI).
   - **Delegated Administrator Server**---the Delegated Administrator server components required to run commadmin or the Delegated Administrator console.
     Click **`Next`** to continue, **`Back`** to return to the previous panel, or **`Cancel`** to exit.

For more information about how to choose components, see Choose Which Components to Configure

If you choose not to configure the Delegated Administrator server, a dialog box cautions you that you must configure the Delegated Administrator Server on another machine. The server must be configured to enable the Delegated Administrator utility and console to work.

Configuring the Delegated Administrator Utility

You must configure the Delegated Administrator utility on all machines on which you install a Delegated Administrator component (server or console).

To configure the Delegated Administrator Utility

1. **DA Server host name and port number**
   Enter the DA Server host name and port number. If you are installing the Delegated Administrator server component, you must install it on the same host as Access Manager.
   Click **`Next`** to continue, **`Back`** to return to the previous panel, or **`Cancel`** to exit.
2. **Default domain**
   Enter the default domain for the Top-Level Administrator. This is the domain used when a domain is not explicitly specified by the `-n` option when executing the `commadmin` command-line utility. This is also known as the default organization. If the domain specified does not exist in the directory, it will be created.
   Click **`Next`** to continue, **`Back`** to return to the previous panel, or **`Cancel`** to exit.
3. **Default SSL port for client**
   Enter the default SSL port that the Delegated Administrator utility uses.
   Click **`Next`** to continue, **`Back`** to return to the previous panel, or **`Cancel`** to exit.

- If you chose to configure only the Delegated Administrator utility, go on to
  Completing the Configuration
- If you chose to configure both the Delegated Administrator console and the server, or if you chose to configure the console only, go on to
  Configuring the Delegated Administrator Console
- If you chose to configure the Delegated Administrator server only (together with the required Delegated Administrator utility), go on to
  Configuring the Delegated Administrator Server

Configuring the Delegated Administrator Console

The configuration program now displays the following panel:

Select a Web Container for Delegated Administrator

Select the Web container on which you will deploy the Delegated Administrator console. You can configure Delegated Administrator on

- Oracle iPlanet Web Server 6.*x* [WEB]
- Oracle iPlanet Web Server 7.*x* [WEB7]
- Sun Java System Application Server 7.*x* [APP7]
- Sun Java System Application Server 8.*x* or higher[APP8]

Click **`Next`** to continue, **`Back`** to return to the previous panel, or **`Cancel`** to exit.

This panel and the panels that follow gather information about the Web container for the Delegated Administrator console. Follow the instructions in the appropriate section:

- Web Server 6.x Configuration
- Web Server 7.x Configuration
- Application Server 7.x Configuration
- Application Server 8.x or higher Configuration

You can deploy the Delegated Administrator console and server on two different Web containers, on two different instances of the Web container, or on the same Web container.

If you chose to configure both the Delegated Administrator console and Delegated Administrator server in Panel 3, a second series of panels will ask for Web container information for the server.

Thus, you will see the Web container configuration panels twice. Follow the appropriate instructions for deploying each of the Delegated Administrator components.

When you complete the Web container configuration panels, take one of the following actions:

- If you chose to configure both the Delegated Administrator console and the server, go on to

Configuring the Delegated Administrator Server

- If you chose to configure the Delegated Administrator console only (together with the required Delegated Administrator utility), go on to

Completing the Configuration

Web Server 6.*x* Configuration

If you are deploying the Delegated Administrator server or console on Web Server 6.*x*, follow the steps described in this section.

To Configure Web Server 6.x

1. **Web Server 6.x Configuration Details**
   The panel text tells you if you are providing Web Server 6.*x* configuration information for the Delegated Administrator server or console.
   - Enter the Web Server 6.*x* root directory. You can browse to select the directory.
   - Enter the Web Server 6.*x* instance identifier. This can be specified by a *host.domain* name such as `west.sesta.com`.
   - Enter the virtual server identifier. This can be specified by a `https-`*host.domain* name such as `https-west.sesta.com`.
     For more information about the Web Server 6.*x* instance identifier and virtual server identifier, see the Web Server documentation.
     Files for the Web Server 6.*x* instance are stored in the `https-`*host*`.`*domain* directory under

the Web Server 6.*x* installation directory, for example `/opt/SUNWwbsvr/https-west.sesta.com`.
- Enter the HTTP port number that the specified virtual server listens to.
  Click **`Next`** to continue, **`Back`** to return to the previous panel, or **`Cancel`** to exit.
  The configuration program checks if the values you specified are valid. If a directory or identifier is invalid or does not exist, a dialog box tells you to choose a new value.
  Next, the configuration program checks if a Web Server 6.*x* instance connection is alive. If not, a dialog box warns you that the configuration program could not connect to the specified instance and your configuration may not be completed. You can accept the specified values or choose new Web Server 6.*x* configuration values.

2. **Default Domain Separator**
   This panel appears only if you are configuring the Delegated Administrator console. The domain separator is needed to configure the console; this information is not related to the Web container. Enter the default domain separator to be used for authentication when the user logs on. For example: `@`.
   - If you are configuring the Delegated Administrator console, take one of the following actions:*
   - If you chose to configure both the Delegated Administrator console and the server, go on to Configuring the Delegated Administrator Server
   - If you chose to configure the Delegated Administrator console only (together with the required Delegated Administrator utility), go on to Completing the Configuration
   - If you are configuring the Delegated Administrator server, go on to Step 3 in Configuring the Delegated Administrator Server.

Web Server 7.*x* Configuration

If you are deploying the Delegated Administrator server or console on Web Server 7.*x*, follow the steps described in this section.

To Configure Web Server 7.x

1. **Web Server 7.x Configuration Details**
   The panel text tells you if you are providing Web Server 7.*x* configuration information for the Delegated Administrator server or console.
   - Enter the Web Server 7.*x* server root directory. The Web Server software files are installed in this directory. You can browse to select the directory. The default value is `/opt/SUNWwbsvr7`.
   - Enter the Web Server 7.*x* configuration root directory. The Web Server configuration files are installed in this directory. You can browse to select the directory. The default value is `/var/opt/SUNWwbsvr7`.
   - Enter the Web Server 7.*x* instance identifier. This can be specified by a *host.domain* name such as `west.sesta.com`.
   - Enter the virtual server identifier. This can be specified by a *host.domain* name such as `west.sesta.com`.
     For more information about the Web Server 7.*x* instance identifier and virtual server identifier, see the Web Server documentation.
     Files for the Web Server 7.*x* instance are stored in the `https-`*host*`.`*domain* directory under the Web Server 7.*x* configuration directory, for example `/var/opt/SUNWwbsvr7/https-west.sesta.com`.
   - Enter the HTTP port number that the specified virtual server listens to. For example: `80`.
     Click **`Next`** to continue, **`Back`** to return to the previous panel, or **`Cancel`** to exit.
     The configuration program checks if the values you specified are valid. If a directory or identifier is invalid or does not exist, a dialog box tells you to choose a new value.
     Next, the configuration program checks if a Web Server 7.*x* instance connection is alive. If not, a dialog box warns you that the configuration program could not connect to the specified instance and your configuration may not be completed. You can accept the specified values or choose new Web Server 7.*x* configuration values.
2. **Web Server 7.x: Administration Instance Details**

- Enter the Administration Server port number. For example: `8800`
- Enter the Administration Server administrator user ID. For example: `admin`
- Enter the administrator user password.
  If you are using a secure Administration Server instance, check the **Secure Administration Server Instance** box. If you are not, leave the box unchecked.
  Click **`Next`** to continue, **`Back`** to return to the previous panel, or **`Cancel`** to exit.

3. **Default Domain Separator**
   This panel appears only if you are configuring the Delegated Administrator console. The domain separator is needed to configure the console; this information is not related to the Web container. Enter the default domain separator to be used for authentication when the user logs on. For example: `@`.
   If you are configuring the Delegated Administrator console, take one of the following actions:
   - If you chose to configure both the Delegated Administrator console and the server, go on to Configuring the Delegated Administrator Server
   - If you chose to configure the Delegated Administrator console only (together with the required Delegated Administrator utility), go on to Completing the Configuration
     *If you are configuring the Delegated Administrator server: Go on to Configuring the Delegated Administrator Server.

Application Server 7.*x* Configuration

If you are deploying the Delegated Administrator server or console on Application Server 7.*x*, follow the steps described in this section.

To configure Application Server 7.x

1. **Application Server 7.x Configuration Details**
   The panel text tells you if you are providing Application Server 7.*x* configuration information for the Delegated Administrator server or console.
   Enter the Application Server installation directory. By default, this directory is `/opt/SUNWappserver7`.
   Enter the Application Server domain directory. By default, this directory is `/var/opt/SUNWappserver7/domains/domain1`.
   Enter the Application Server document root directory. By default, this directory is `/var/opt/SUNWappserver7/domains/domain1/server1/docroot`.
   You can browse to select any of these directories.
   Enter the Application Server instance name. For example: `server1`.
   Enter the Application Server virtual server identifier. For example: `server1`.
   Enter the Application Server instance HTTP port number.
   Click **`Next`** to continue, **`Back`** to return to the previous panel, or **`Cancel`** to exit.
   The configuration program checks if the directories you specified are valid. If a directory is invalid or does not exist, a dialog box tells you to choose a new directory.
   Next, the configuration program checks if an Application Server instance connection is alive. If not, a dialog box warns you that the configuration program could not connect to the specified instance and your configuration may not be completed. You can accept the specified values or choose new Application Server configuration values.
2. **Application Server 7.x: Administration Instance Details**
   Enter the Administration Server port number. For example: `4848`
   Enter the Administration Server administrator user ID. For example: `admin`
   Enter the administrator user password.
   If you are using a secure Administration Server instance, check the **Secure Administration Server Instance** box. If you are not, leave the box unchecked.
   Click **`Next`** to continue, **`Back`** to return to the previous panel, or **`Cancel`** to exit.
3. **Default Domain Separator**
   This panel appears only if you are configuring the Delegated Administrator console. The domain

separator is needed to configure the console; this information is not related to the Web container. Enter the default domain separator to be used for authentication when the user logs on. For example: `@`.

4. **If you are configuring the Delegated Administrator console, take one of the following actions:**
   - If you chose to configure both the Delegated Administrator console and the server, go on to Configuring the Delegated Administrator Server
   - If you chose to configure the Delegated Administrator console only (together with the required Delegated Administrator utility), go on to Completing the Configuration
5. **If you are configuring the Delegated Administrator server:**
   Go on to
   Configuring the Delegated Administrator Server.

Application Server 8.*x* or higher Configuration

If you are deploying the Delegated Administrator server or console on Application Server 8.*x* or higher, follow the steps described in this section.

To configure Application Server 8.x or higher

1. **Application Server 8.x or higher Configuration Details**
   The panel text tells you if you are providing Application Server 8.*x* or higher configuration information for the Delegated Administrator server or console.
   Enter the Application Server installation directory. By default, this directory is `/opt/SUNWappserver/appserver`.
   Enter the Application Server domain directory. By default, this directory is `/var/opt/SUNWappserver/domains/domain1`.
   Enter the Application Server document root directory. By default, this directory is `/var/opt/SUNWappserver/domains/domain1/docroot`.
   You can browse to select any of these directories.
   Enter the Application Server target name. For example: `server`.
   Enter the Application Server virtual server identifier. For example: `server`.

   > **Note**
   > If you are running the `config-commda` program to upgrade Delegated Administrator, and you also have upgraded Application Server from version 7 to version 8.*x*, specify the following values for the Application Server target name and virtual server identifier:
   > - Target name: `server1`
   > - Virtual server identifier: `server{`
   > You must specify these values because the `asupgrade` utility migrates the Application Server 7 `server1` instance into the Application Server 8.*x* or higher `server1` target running under a nodeagent. However, `asupgrade` changes the value of the virtual server from `server1` in Application Server 7 to `server` in Application Server 8.*x* or higher.

   Enter the Application Server target HTTP port number.
   Click **`Next`** to continue, **`Back`** to return to the previous panel, or **`Cancel`** to exit.
   The configuration program checks if the directories you specified are valid. If a directory is invalid or does not exist, a dialog box tells you to choose a new directory.
   Next, the configuration program checks if an Application Server target connection is alive. If not, a dialog box warns you that the configuration program could not connect to the specified target and your configuration may not be completed. You can accept the specified values or choose new Application Server configuration values.

> **Note**
> If you are deploying the Delegated Adminstrator server or console on Application Server 9.x, please note that the default installation directories are different from those for Application Server 8.x as follow:
> Enter the Application Server installation directory. By default, this directory is `/opt/SUNWappserver`.
> Enter the Application Server domain directory. By default, this directory is `/opt/SUNWappserver/domains/domain1`.
> Enter the Application Server document root directory. By default, this directory is `/opt/SUNWappserver/domains/domain1/docroot`.

2. **Application Server 8.x or higher: Administration Instance Details**
   Enter the Administration Server port number. For example: `4849`
   Enter the Administration Server administrator user ID. For example: `admin`
   Enter the administrator user password.
   If you are using a secure Administration Server instance, check the **Secure Administration Server Instance** box. If you are not, leave the box unchecked.
   Click **`Next`** to continue, **`Back`** to return to the previous panel, or **`Cancel`** to exit.
3. **Default Domain Separator**
   This panel appears only if you are configuring the Delegated Administrator console. The domain separator is needed to configure the console; this information is not related to the Web container. Enter the default domain separator to be used for authentication when the user logs on. For example: `@`.
4. **If you are configuring the Delegated Administrator console, take one of the following actions:**
   - If you chose to configure both the Delegated Administrator console and the server, go on to Configuring the Delegated Administrator Server.
   - If you chose to configure the Delegated Administrator console only (together with the required Delegated Administrator utility), go on to Completing the Configuration.
   - If you are configuring the Delegated Administrator server:*
     Go on to
     Configuring the Delegated Administrator Server.

Configuring the Delegated Administrator Server

If you chose to configure the Delegated Administrator server, the configuration program displays the following panels.

To configure Delegated Administrator Server

1. Select the Access Mode from the following options:
   - **Direct LDAP**
     If you select Direct LDAP, you must choose the web container for the server.
   - **Access Manager base directory**
     Enter the Access Manager Base Directory. The default directory is `/opt/SUNWam`.
     Click **`Next`** to continue, **`Back`** to return to the previous panel, or **`Cancel`** to exit.
     The configuration program checks if a valid Access Manager base directory is specified. If not, a dialog box is displayed indicating that an existing Access Manager base directory must be selected.
2. Next, a Web container **Configuration Details** panel is displayed.
   If you chose to configure the console and server, this is the second time a Web container **Configuration Details** panel appears.

The Delegated Administrator server is deployed to the same Web container as Access Manager. (You cannot choose a Web container for the Delegated Administrator server.)
Follow the instructions in the appropriate section:
- Web Server 6.x Configuration
- Application Server 7.x Configuration
- Application Server 8.x or higher Configuration

3. **Directory (LDAP) Server**
   This panel asks for information about connecting to the LDAP Directory Server for the user/group suffix.
   Enter the User and Group Directory Server LDAP URL (**LdapURL**), Directory Manager (**Bind As**), and password in the text boxes.
   The Directory Manager has overall administrator privileges on the Directory Server and all Sun Java System servers that make use of the Directory Server (for example, Delegated Administrator) and has full administration access to all entries in the Directory Server. The default and recommended Distinguished Name (DN) is `cn=Directory Manager`.
   Click **`Next`** to continue, **`Back`** to return to the previous panel, or **`Cancel`** to exit.
4. **DA Server Internal LDAP**
   Enter the username and the password for DA Server Internal LDAP. The username is hardcoded and cannot be changed. The default username is `daAdmin`.
5. **Access Manager Top-Level Administrator**
   Enter the user ID and password for the Access Manager Top-Level Administrator. The user ID and password are created when Access Manager is installed. The value, `amadmin`, is hard-coded in AM.
   Click **`Next`** to continue, **`Back`** to return to the previous panel, or **`Cancel`** to exit.
6. **Access Manager internal LDAP authentication password**
   Enter the password for the Access Manager Internal LDAP authentication user.
   The authentication user name is hard-coded as `amldapuser`. It is created by the Access Manager installer and is the Bind DN user for the LDAP service.
   Click **`Next`** to continue, **`Back`** to return to the previous panel, or **`Cancel`** to exit.
7. **Organization Distinguished Name (DN)**
   Enter the Organization DN for the default domain. For example, if your organization DN is `o=siroe.com`, all the users in that organization will be placed under the LDAP DN `o=siroe.com, o=usergroup`, where `o=usergroup` is your root suffix.
   By default, the configuration program adds the default domain under the root suffix in the LDAP directory.
   If you want to create the default domain at the root suffix (not underneath it), delete the organization name from the DN that appears in the **Organization Distinguished Name (DN)** text box.
   For example, if your organization DN is `o=siroe.com` and your root suffix is `o=usergroup`, delete `"o=siroe.com"` from the DN in the text box; leave only `o=usergroup`.
   If you choose to create the default domain at the root suffix, and if you later decide to use hosted domains, it can be difficult to migrate to the hosted-domain configuration. The `config-commda` program displays the following warning:
   "The Organization DN you chose is the User/Group Suffix. Although this is a valid choice, if you ever decide to use hosted domains, there will be difficult migration issues. If you do wish to use hosted domains, then specify a DN one level below the User/Group suffix."
   For more information, see Directory Structure Supporting a One-Tiered Hierarchy.
   Click **`Next`** to continue, **`Back`** to return to the previous panel, or **`Cancel`** to exit.
8. **Top-Level Administrator for the default organization**
   Enter the user ID and password for the Top-Level Administrator that is to be created in the default domain (organization).
   A **Confirm Password** field asks you to enter the password a second time.
   Click **`Next`** to continue, **`Back`** to return to the previous panel, or **`Cancel`** to exit.
9. **Service Package and Organization Samples**
   You can choose to add sample service packages and sample organizations to your LDAP directory.
   Load sample service packages. Select this option if you want to use or modify sample service package templates to create your own Class-of-Service packages.

Load sample organizations. Select this option if you want your LDAP directory tree to contain sample provider organization nodes and subordinate organization nodes.

10. You can select:
    - Both the sample service packages and the sample organizations
    - Only one of these options
    - Neither option

    Preferred Mailhost for Sample. Enter the name of the machine on which Messaging Server is installed.
    For example: `mymachine.siroe.com`
    If you chose to load the sample organizations into your LDAP directory, you must enter a preferred mail host name for these samples.
    For information about service packages and organizations, see "Delegated Administrator Overview," in the *Sun Java System Delegated Administrator Administration Guide*.
    After you run the configuration program, you must modify the service package templates to create your own Class-of-Service packages. For information about this post-configuration task, see Create Service Packages.

Completing the Configuration

Take the steps described in this section to finish running the configuration program.

To complete the configuration

1. **Ready to Configure**
   The verification panel displays the items that will be configured.
   Click **`Configure Now`** to begin the configuration, **`Back`** to return to any previous panel to change information, or **`Cancel`** to exit.
2. **Task Sequence**
   A sequence of tasks being performed is displayed on the Task Sequence Panel. This is when the actual configuration takes place.
   When the panel displays "All Tasks Passed" you can click **`Next`** to continue or **`Cancel`** stop the tasks from being performed and exit.
   A dialog box appears reminding you to restart the Web container in order for configuration changes to take effect.
3. **Installation Summary**
   The Installation Summary panel displays the product installed and a **`Details...`** button that displays more information about this configuration.
   A log file for the `config-commda` program is created in the *`da-base`*`/install` directory. The name of the log file is `commda-config_`*`YYYYMMDDHHMMSS`*`.log`, where *YYYYMMDDHHMMSS* identifies the 4-digit year, month, date, hour, minute, and second of the configuration.

Click **`Close`** to complete the configuration.

Restarting the Web Container

After you complete the Delegated Administrator configuration, you must restart the Web container to which Delegated Administrator is deployed.

Configuration and Log Files Deployed by the `config-commda` Program

Configuration Files

Using the information you provided in the panels, the `config-commda` program deploys the following configuration files for the three Delegated Administrator components:

- Delegated Administrator utility:

- `cli-usrprefs.properties`

Location: *da-base*`/data/config`

- Delegated Administrator server:
  - `resource.properties`
- Delegated Administrator console:
  - `daconfig.properties`
  - `Resources.properties`
  - `Security.properties`
  - `logger.properties`

(The `logger.properties` file specifies the location of log files and whether or not logging is enabled. It is a configuration file, not a log file.)

The `config-commda` program deploys the configuration files to the application repository of the Web container where you deployed Delegated Administrator. For a list of the deployed locations of the files, see Deployed Locations of the Configuration Files.

For information about the properties contained in the configuration files and how to edit these properties to customize your configuration, see Chapter 4, "Customizing Delegated Administrator," in the *Sun Java System Delegated Administrator Administration Guide*.

Log Files

The Delegated Administrator console creates a runtime log [file:]
Default log file name: `da.log`

Default location: *da-base*`/log`

For more information about this and other Delegated Administrator log files, see Debugging Delegated Administrator in the *Sun Java System Delegated Administrator Administration Guide*.

Perform Silent Installation

The Delegated Administrator utility initial runtime configuration program automatically creates a silent installation state file (called `saveState`). This file contains internal information about the configuration program, and is used for running silent installs.

The silent installation `saveState` file is stored in the *da-base*`/data/setup/commda-config_`*YYYYMMDDHHMMSS*`/` directory, where *YYYYMMDDHHMMSS* identifies the 4-digit year, month, date, hour, minute, and second of the `saveState` file.

For example, once you have run the `config-commda` program once, you can run it in silent install mode:

```
da-base/sbin/config-commda -nodisplay -noconsole -state
 fullpath/saveState
```

The *fullpath* variable is the full directory path of where the `saveState` file is located.

Run Delegated Administrator Console and Utility

Launching the Console

The Delegated Administrator console is launched by accessing the Web container to which it is deployed.

To launch the Delegated Administrator console

1. Go to the following url:
   `http://`*host*`:`*port*`/dawhere`
   host is the Web container host machine
   port is the Web container port
   For example:

   ```
   http://siroe.com:8080/da
   ```

   The Delegated Administrator console log-in window appears.

   > **Note**
   > In previous releases of Delegated Administrator, the console was launched from the following url:
   > `http://`*host*`:`*port*`/da/DA/Login`You can continue to use this url in the current release.

2. Log in to the Delegated Administrator console.

You could use the Top-Level Administrator (TLA) user ID and password specified in the Delegated Administrator configuration program. This information was requested in the following panel:

Top-Level Administrator for the default organization

> **Note**
> Values set in Access Manager can determine session time-outs when you are running the Delegated Administrator console. For information on the session time-out values, see "Session Service Attributes," in the *Sun Java System Access Manager Administration Guide*. For information on viewing these values in the Access Manager console, see "Current Sessions" in the *Sun Java System Access Manager Administration Guide*.

Running the Command-Line Utility

You can run the Delegated Administrator utility by entering the command name, `commadmin`, from a terminal window.

To run the command-line utility

1. Go to the *da-base*`/bin/` directory.
2. Enter the `commadmin` command.
   For example, in Comm Suite 5 in Solaris: `/opt/SUNWcomm/bin/commadmin`

Example: Using `commadmin` to search for users

The following command searches for users in the `varrius.com` domain:

```
commadmin user search -D chris -w bolton -d varrius.com -n sesta.com
```

For details about this `commadmin` command, see commadmin user search.

`commadmin` Return Codes

When a `commadmin` operation success, an OK message is displayed on the command line.

If a failure occurs, the following message appears:

`FAIL`

<message>

Where *<message>* displays the error text.

Post-Configuration Tasks

After you run the Delegated Administrator configuration program, you should perform the following tasks:

- Add Mail and Calendar Services to the Default Domain
- Enforce Unique Values for Mail Attributes
- Create Service Packages

Perform the following task only if you are using an LDAP directory in Schema 2 compatibility mode:

- Add ACIs for Schema 2 Compatibility Mode

Add Mail and Calendar Services to the Default Domain

The `config-commda` program creates a default domain.

If you want to create users with mail service or calendar service in the default domain, you first must add mail service and calendar service to the domain.

To perform this task, use the `commadmin domain modify` command with the `-S mail` and `-S cal` options.

The following example shows how you can use `commadmin domain modify` to add mail and calendar services to the default domain:

```
commadmin domain modify -D chris -w bolton -n sesta.com -d siroe.com
 -S mail,cal -H test.siroe.com
```

For `commadmin` command syntax and details, see "Chapter 5, "Command Line Utilities," in the *Sun Java System Delegated Administrator Administration Guide*.

Enforce Unique Values for Mail Attributes

Messaging Server uses the following mail attributes to identify a user's email address and alternate email addresses:

- `mail`
- `mailAlternateAddress`
- `mailEquivalentAddress`

Each user's mail attributes should be unique across the directory.

The following procedure shows how to modify a Directory Server ldif file to enforce the uniqueness of these attributes. Whenever Delegated Administrator (or any LDAP tool) adds an entry or modifies a mail attribute, the ldif plug-in checks that the mail attribute values are unique. If an operation would cause two entries to have the same mail-attribute values, it is terminated.

For definitions of the mail attributes, see Messaging Server and Calendar Server Attributes in the Communications Suite Schema Reference.

To enforce the uniqueness of mail attributes

Before You Begin

> **Note**
> If you are running Directory Server 5.2 Patch 6 (Java ES Release 4) or later, follow the procedures described below.
>
> If you are running Directory Server 5.2.4 (Java ES Release 4), you need to apply patch 5.2_Patch_4_6313027 before you begin the following procedure.
>
> If you are running an earlier version of Directory Server, you need to upgrade to Directory Server 5.2 Patch 6 or later before you begin.
>
> To access Directory Server patches, go to https://support.oracle.com/.

1. Create a text file with the following lines. Replace the parameters shown in the file with values specific to your installation:
   For DSEE 7/ODSEE 11gR2:

```
dn: cn=Uniqueness in Messaging Attribute Set,cn=plugins,cn=config
objectClass: top
objectClass: nsSlapdPlugin
objectClass: ds-signedPlugin
objectClass: extensibleObject
cn: Uniqueness in Messaging Attribute Set
nsslapd-pluginPath: /opt/SUNWdsee7/lib/amd64/uid-plugin.so
nsslapd-pluginInitfunc: NSUniqueAttrSet_Init
nsslapd-pluginType: preoperation
nsslapd-pluginEnabled: on
nsslapd-pluginarg0:
attributeset=mail,mailalternateaddress,mailequivalentaddress
nsslapd-pluginarg1: dc=siroe,dc=com
nsslapd-plugin-depends-on-type: database
nsslapd-pluginId: NSUniqueAttrSet
nsslapd-pluginVersion: 11.1.1.5.0
nsslapd-pluginVendor: Oracle Corporation
nsslapd-pluginDescription: Enforce unique values among an attribute
set
```

   For DSEE 6.3.1 (64-bit Solaris x86):

```
dn: cn=Uniqueness in Messaging Attribute Set,cn=plugins,cn=config
objectClass: top
objectClass: nsSlapdPlugin
objectClass: ds-signedPlugin
objectClass: extensibleObject
cn: Uniqueness in Messaging Attribute Set
nsslapd-pluginPath: /opt/SUNWdsee/ds6/lib/amd64/uid-plugin.so
nsslapd-pluginInitfunc: NSUniqueAttrSet_Init
nsslapd-pluginType: preoperation
nsslapd-pluginEnabled: on
nsslapd-pluginarg0:
attributeset=mail,mailalternateaddress,mailequivalentaddress
nsslapd-pluginarg1: dc=siroe,dc=com
nsslapd-plugin-depends-on-type: database
nsslapd-pluginId: NSUniqueAttrSet
nsslapd-pluginVersion: 6.3.1
nsslapd-pluginVendor: Sun Microsystems, Inc.
nsslapd-pluginDescription: Enforce unique values among an attribute
set
```

Change the following parameters:

- These examples show specific paths for `nsslapd-pluginPath`. If necessary, replace with the directory underneath which your Directory Server is installed. For example: `/var/opt/mps/serverroot`
- These examples show a specific `ugldapbasedn` for `nsslapd-pluginarg1`. If necessary, replace with your root suffix. Uniqueness checking is performed on all entries underneath this suffix.

2. Stop Directory Server.
3. Add your modified text file to the Directory Server `dse.ldif` file.
   Location of the dse.ldif File:
   The `dse.ldif` file is located in the following directory:

   ```
   server_root/slapd-machine_name/config
   ```

   where
   _ server_root_ is the directory underneath which Directory Server is installed. For example: `/var/opt/mps/serverroot`
   machine_name is the name of the host machine where Directory Server is installed.
   Where to Add Your Text File:
   Add your text file after the `uid uniqueness` section of the `dse.ldif` file. The first line of this section (the dn) is as follows:

   ```
   dn: cn=uid uniquenss,cn=plugins,cn=config
   ```

4. Restart Directory Server.
   When Directory Server starts, it installs the modified `dse.ldif` file in the directory.

Troubleshooting

If Directory Server does not start because the `dse.ldif` file has generated an error, check the values you used to replace the parameters in the sample text file. Your LDAP root suffix and the Directory

Server installation path and host machine must be correct for your installation.

If Directory Server still does not start, you can, as a last resort, remove the text file from the `dse.ldif` file and restart Directory Server.

Create Service Packages

Each user and group provisioned in the LDAP directory with Delegated Administrator should have a service package. A user or group can have more than one service package. For more information, see Creating Service Packages.

Add ACIs for Schema 2 Compatibility Mode

If you are using an LDAP directory in Schema 2 compatibility mode, you must manually add ACIs to the directory to enable Delegated Administrator to provision in your directory. Take the following steps:

To add ACIs for Schema 2 compatibility mode

1. Add the following two ACIs to the OSI root. You can find the following two ACIs in the `usergroup.ldif` file, located in the *`da-base`*`/config` directory.
   Be sure to replace `ugldapbasedn` with your usergroup suffix. Add the edited `usergroup.ldif` into the LDAP directory.

```
#
# acis to limit Org Admin Role
#
########################################
# dn: <local.ugldapbasedn>
########################################
dn: <ugldapbasedn>
changetype: modify
add: aci
aci: (target="ldap:///($dn),<ugldapbasedn>")(targetattr="*")
(version 3.0; acl "Organization Admin Role access deny to org
node";
deny (write,add,delete) roledn = "ldap:///cn=Organization Admin
Role,($dn),<ugldapbasedn>";)
```

```
dn: <ugldapbasedn>
changetype: modify
add: aci
aci: (target="ldap:///($dn),<ugldapbasedn>")(targetattr="*")
(version 3.0; acl "Organization Admin Role access allow read
to org node";
allow (read,search) roledn = "ldap:///cn=Organization Admin
Role,($dn),<ugldapbasedn>";)
```

2. Add the following two ACIs to the DC Tree root suffix. You can find the following two ACIs in the `dctree.ldif` file, located in the *`da-base`*`/lib/config-templates` directory.
   Be sure to replace *dctreebasedn* with your DC Tree root suffix and *ugldapbasedn* with your usergroup suffix. Add the edited `dctree.ldif` into the LDAP directory.

```
#
# acis to limit Org Admin Role
#
########################################
# dn: <dctreebasedn>
########################################
dn: <dctreebasedn>
changetype: modify
add: aci
aci: (target="ldap:///($dn),<dctreebasedn>")(targetattr="*")
(version 3.0; acl "Organization Admin Role access deny to dc node";
deny (write,add,delete) roledn = "ldap:///cn=Organization Admin
Role,($dn),<ugldapbasedn>";)
```

```
dn: <dctreebasedn>
changetype: modify
add: aci
aci: (target="ldap:///($dn),<dctreebasedn>")(targetattr="*")
(version 3.0; acl "Organization Admin Role access allow read to dc
node"; allow (read,search) roledn = "ldap:///cn=Organization Admin
Role,($dn),<ugldapbasedn>";)
```

3. Add the following additional ACIs to the DC Tree root suffix. (These ACIs are not in the `dctree.ldif` file.)

```
dn:<dctreebasedn>
changetype:modify
add:aci
aci: (target="ldap:///<dctreebasedn>")(targetattr="*")
(version 3.0; acl "S1IS Proxy user rights"; allow (proxy)
userdn = "ldap:///cn=puser,ou=DSAME Users,<ugldapbasedn>";)
```

```
dn:<dctreebasedn>
changetype:modify
add:aci
aci: (target="ldap:///<dctreebasedn>")(targetattr="*")
(version 3.0; acl "S1IS special dsame user rights for all under the
root suffix"; allow (all) userdn ="ldap:///cn=dsameuser,ou=DSAME
Users,<ugldapbasedn>";)
```

```
dn:<dctreebasedn>
changetype:modify
add:aci
aci: (target="ldap:///<dctreebasedn>")(targetattr="*")
(version 3.0; acl "S1IS Top-level admin rights";
allow (all) roledn = "ldap:///cn=Top-level Admin
Role,<ugldapbasedn>";)
```

4. Set the `com.iplanet.am.domaincomponent` property in the `AMConfig.properties` file to your DC Tree root suffix.
   For example, modify the following lines in the *<AM_base_directory*

`>/lib/AMConfig.properties` [file:]
from
`com.iplanet.am.domaincomponent=o=isp`
to
`com.iplanet.am.domaincomponent=o=internet`

5. Enable Access Manager to use compatibility mode.
   In the Access Manager Console, in the Administration Console Service page, check (enable) the **Domain Component Tree Enabled** check box.
6. Add the `inetdomain` object class to all the DC Tree nodes (such as `dc=com,o=internet`), as in following example:

```
/var/mps/serverroot/shared/bin 298% ./ldapmodify
-D "cn=Directory Manager" -w password
dn: dc=com,o=internet
changetype: modify
add: objectclass
objectclass: inetdomain
```

7. Restart the Web container.

Configuring GlassFish Server to Run Delegated Administrator in SSL Mode

If you have deployed the Delegated Administrator console to GlassFish Server 2.1.1, you can run the Delegated Administrator console in SSL mode, over a secure port.

To enable the Delegated Administrator console and utility to use SSL access:

1. Edit the `daconfig.properties` file, located in the *da-base* `/data/da/WEB-INF/classes/com/sun/comm/da/resources` directory.
2. Change the property values as follows:

```
commadminserver.port=<port>
commadminserver.usessl=true
```

   where *port* is the HTTPS port, for example 8181.

3. Deploy the Delegated Administration Console web application to GlassFish by running the `deploy` script.
   For example:

```
<da-base>/sbin/config-appsvr8x-da deploy
```

Configuring Web Server to Run Delegated Administrator in SSL Mode

If you have deployed the Delegated Administrator console to Web Server 6 or Web Server 7.*x*, you can run the Delegated Administrator console in SSL mode, over a secure port.

If the Delegated Administrator server is deployed to Web Server 6 or Web Server 7.*x*, you can run the Delegated Administrator utility (`commadmin`) in SSL mode.

To enable the Delegated Administrator console and utility to use SSL access:

- For the console, complete all the steps in the SSL-configuration procedure.

- For the utility, you only have to complete Step 1 in the SSL-configuration procedure. Use the `-s` option with the `commadmin` commands to run in SSL mode.

For Web Server 6, follow this procedure:

- To Configure Web Server 6 to Enable Delegated Administrator to Run in SSL Mode

For Web Server 7.*x*, follow this procedure:

- To Configure Web Server 7.x to Enable Delegated Administrator to Run in SSL Mode

To Configure Web Server 6 to Enable Delegated Administrator to Run in SSL Mode

In this procedure, the certificate truststore is created in the Delegated Administrator configuration directory. For example: `/var/da-base/config`

1. Request and install a certificate.
   In a production environment, you must request a certificate from a Certificate Authority (CA), which issues the certificate to you. Next, you install the certificate.
   In a test environment, you can create and install a self-signed certificate.
   For information about requesting and installing certificates for Web Server 6, see "Using Certificates and Keys" in the *Oracle iPlanet Web Server 6.1 SP6 Administrator's Guide*.
   After you complete this step, you can run the Delegated Administrator utility in SSL mode.
2. Export the specific certificate in ASCII encoding.
   For example:

   ```
   /opt/SUNWwbsvr/bin/https/admin/bin/certutil -L -n Server-Cert -d \
   -P https-<host>.<domain-host>-
   /opt/SUNWwbsvr/alias -a > /tmp/host.cert
   ```

   where

   - `Server-Cert` is the default name created by the Administration interface
   - *host* is the host name of the machine where Web Server 6 is running. For example: `myhost`.
   - *host.domain* is the host and domain name of the machine where Web Server 6 is running. For example: `myhost.siroe.com`.
3. Use the Java {keytool}} utility to import the certificate into a truststore.
   This step assumes that you are creating a new truststore in the Delegated Administrator configuration directory.
   Import the certificate.
   For example:

   ```
   cd /var/da-base/config
   keytool -import -alias Server-Cert -file /tmp/host.cert
   -keystore truststore
   ```

   Enter a password when the `keytool` prompts you for one.

4. Define the `ssl.truststore` property in the JVM Setting for the Web Server 6 instance configuration.
   For example:

   ```
   -Djavax.net.ssl.trustStore=/var/da-base/config/truststore
   Djavax.net.ssl.trustStorePassword=password
   ```

where *password* is the password you entered at the `keytool` prompt.

5. Modify the following property in the JVM Setting for the Web Server 6 instance configuration.
   Change

   ```
   -Djava.protocol.handler.pkgs=com.iplanet.services.comm
   ```

   to the following value:

   ```
   -Djava.protocol.handler.pkgs=com.sun.identity.protocol
   ```

6. Change the following properties in the `daconfig.properties` file:
   Open the `daconfig.properties` file in a text editor.
   The `daconfig.properties` file is located by default in the Delegated Administrator configuration directory:

   ```
   da-base/data/da/WEB-INF/classes/com/sun/comm/da/resources
   ```

   (In a later step, you will deploy the `daconfig.properties` file to the Web Server 6 configuration directory.)
   Change the property values as follows:

   ```
   commadminserver.host=host.domaincommadminserver.port=port
   commadminserver.usessl=true
   ```

   where *host.domain* is the host and domain name of the machine where Web Server 6 is running. For example: `myhost.siroe.com`.
   And where *port* is the SSL port. For example: 443.

7. Deploy the Web Server 6 configuration and restart the instance:
   Run the Web Server 6 deploy script:

   ```
   da-base/sbin/config-wbsvr-da
   ```

   Restart the Web Server 6 instance.

To Configure Web Server 7.x to Enable Delegated Administrator to Run in SSL Mode

In this procedure, the certificate truststore is created in the Delegated Administrator configuration directory. For example: `/var/da-base/config`

1. Request and install a certificate.
   In a production environment, you must request a certificate from a Certificate Authority (CA), which issues the certificate to you. Next, you install the certificate.
   In a test environment, you can create and install a self-signed certificate.
   For information about requesting and installing certificates for Web Server 7.*x*, see Managing Certificates in Sun Java System Web Server Administrator's Guide.
   After you complete this step, you can run the Delegated Administrator utility in SSL mode.
2. Run the `certutil` utility to list all certificates in the certificate database.

For example:

```
cd /var/da-base/config/usr/sfw/bin/certutil -L -d
/var/opt/SUNWwbsvr7/https-host.domain/config
```

where *host.domain* is the host and domain name of the machine where Web Server 7.*x* is running. For example: `myhost.siroe.com`

3. Export the specific certificate in ASCII encoding.
   For example:

```
/usr/sfw/bin/certutil -L -n cert-host.domain -d
/var/opt/SUNWwbsvr7/https-host.domain/config-a > host.cert
```

   where *host* and *host.domain* are the host name or host and domain name of the machine where Web Server 7.*x* is running.

4. Use the java `keytool` utility to import the certificate into a truststore.
   This step assumes that you are creating a new truststore in the Delegated Administrator configuration directory.
   Import the certificate.
   For example:

```
keytool -import -alias cert-host.domain -file host.cert
-keystore truststore
```

   Enter a password when the `keytool` prompts you for one.

5. Define the `ssl.truststore` property in the JVM Setting for the Web Server 7.*x* instance configuration.
   For example:

```
-Djavax.net.ssl.trustStore=/var/da-base/config/truststore
-Djavax.net.ssl.trustStorePassword=password
```

   where *password* is the password you entered at the `keytool` prompt.

6. Modify the following property in the JVM Setting for the Web Server 7.*x* instance configuration.
   Change

```
-Djava.protocol.handler.pkgs=com.iplanet.services.comm
```

   to the following value:

```
-Djava.protocol.handler.pkgs=com.sun.identity.protocol
```

7. Change the following properties in the `daconfig.properties` file:
   Open the `daconfig.properties` file in a text editor.
   The `daconfig.properties` file is located by default in the Delegated Administrator

configuration directory:

```
da-base/data/da/WEB-INF/classes/com/sun/comm/da/resources
```

(In a later step, you will deploy the `daconfig.properties` file to the Web Server 7.*x* configuration directory.)
Change the property values as follows:

```
commadminserver.port=portcommadminserver.usessl=true
```

where *port* is the SSL port. For example: 443.

8. Deploy the Web Server 7.*x* configuration and restart the instance:
   Run the Web Server 7.*x* deploy script:

   ```
   da-base/sbin/config-wbsvr7x-da
   ```

   Restart the Web Server 7.*x* instance.

Chapter 19. Installing the Desktop Deployment Toolkit

Installing the Desktop Deployment Toolkit for Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite Version 8

This information describes installing and upgrading the administrator's Desktop Deployment Toolkit for Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite. The InstallShield Wizard installs all of the components of the Deployment Toolkit:

- **Deployment Configuration Program**: Lets system administrators create bundled, customized installation packages for end users.
- **Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite Setup Wizard**: Lets end users install the Connector for Microsoft Outlook software, configure its operations and features, and convert existing Outlook data files (`.pst` files) associated with Exchange into a form that Oracle Communications Unified Communications Suite can use.
- **Installation kit (MSI) for Connector for Microsoft Outlook**: Installation utility for the per-desktop software that facilitates ongoing, permanent communications between Microsoft Outlook and Oracle Communications Unified Communications Suite.
- **Special Kits for using Microsoft System Management Services (SMS) to install Connector for Microsoft Outlook**: utilities that support the "push" functionality of Microsoft's SMS to let a system administrator distribute and install the Connector for Microsoft Outlook desktop components to user desktops with minimal or no user involvement.

These components are described in more detail in Deploying Outlook Connector and the Connector for Microsoft Outlook Administration Guide. This Installation Guide describes only the installation of this Deployment Toolkit, and is organized into the following sections:

- Installation Overview
- Installing the Administrator's Software
- What's Next?

Prerequisites to installing Connector for Microsoft Outlook for Oracle Communications Unified Communications Suite is that you have a general understanding of the following:

- The Internet and the World Wide Web
- Messaging Server and Calendar Server protocols
- System Administration and Networking on the following platforms:
    - Microsoft Windows Vista
    - Microsoft Windows 7
- Microsoft Outlook
    - Microsoft Outlook 2007
    - Microsoft Outlook 2010
- General Deployment Architectures

Installation Overview

If the most recent version of the administrator's Deployment Toolkit for the Connector for Microsoft

Outlook for Oracle Communications Unified Communications Suite is not already installed on your computer, you must install it before you can create end-user installation packages.

Before you install, you should verify that the systems on which you plan to install the software meet the minimum product requirements. It is also a good idea to plan how you want to deploy and configure the software components before you begin the installation process. See Deploying Outlook Connector for information about deploying Connector for Microsoft Outlook to user desktops. And see the Connector for Microsoft Outlook Release Notes for hardware and software requirements and supported versions.

> **Note**
> If you are upgrading from an earlier version of the Desktop Deployment Toolkit: This InstallShield Wizard will simply overwrite the earlier version with this new version, and leave only a single program entry in the Add/Remove Programs applet in Windows' Control Panel. There is no separate procedure or special accommodation for a version upgrade versus a first-time installation.

Installing the Administrator's Software

Follow the steps below to install the administrator's Desktop Deployment Toolkit.

To Install the Desktop Deployment Toolkit

1. Locate the Connector for Microsoft Outlook setup file, `Setup.exe` , that you have downloaded or otherwise copied to your computer.
   Double-click the filename to start the program. You are prompted to select your preferred language.
   The InstallShield Wizard then welcomes you to the process and prompts you to click **Next** to continue.
2. Enter your customer information.
   Enter your user name and organization and choose whether you want the Deployment Configuration Program software to be available to all users of this computer, or only to your user name.
   Click **Next** to continue.
3. Select or confirm the destination folder where the Deployment Configuration Program is installed.
   The Destination Folder window prompts you to confirm or change the location where the Deployment Configuration Program is installed.
   To change the location, click **Change**. In the Change Current Destination Folder window, set the desired folder. Once the destination folder is set, click **Next** in the Destination Folder window.
4. Install the software.
   The InstallShield Wizard then announces that it is ready to begin the actual installation, and prompts you to click **Next** to begin.
5. Wait for the installation to proceed and conclude.
   A progress meter appears in the window while you are waiting. The Installation Complete window notifies you that the process is complete, and prompts you to click **Finish**.
6. Click the **Launch the Connector for Microsoft Outlook Deployment Configuration Program** checkbox.
7. Click **Finish**.
   The Connector for Microsoft Outlook Deployment Configuration Program icon "Oracle Communications Unified Communications Suite Connector Deployment" appears on the desktop. As the InstallShield Wizard exits, it opens a browser window with links to the Oracle website where you can access Outlook Connector documentation.

The Desktop Deployment Toolkit has now been installed to the location you specified in the Destination Folder window. The default folder is:

```
C:\Program Files\Sun\Deployment Configuration Program\
```

A new shortcut icon for the administrator's Deployment Configuration program (`Admin.exe`) appears on your desktop.

What's Next?

Planning and foresight are critical to a smooth deployment, so you should have already prepared a comprehensive Deployment Plan before installing the administrator software as described in this information. If you have not yet prepared a Deployment Plan, do it now, before you attempt to create your first desktop deployment kit. The process of developing a comprehensive Deployment Plan is a valuable exercise that leads you to consider and accommodate all of the factors likely to influence your organization's migration. Consult the Communications Suite Deployment Planning Guide for migration concepts, prerequisites, and strategic choices to develop a Deployment Plan that will guide you through your migration.

After you have prepared your Deployment Plan and installed the administrator software, you can:

- **Configure an end-user package.** The Administration Guide explains how to use the Deployment Configuration Program to create customized packages for Outlook end users. These packages can be configured to install the necessary software on user desktops, or to convert users' existing Outlook and Exchange data files for use with the new software, or both, depending on your circumstances. See CommSuite:Configuring End-User Packages.
- **Deploy each end-user package.** Once you have created an installation package for your users, you must tell them where to find it and how to use it. Many administrators simply copy the package and the Connector for Microsoft Outlook User's Guide to a shared folder, and then provide links to the installation package and documentation in an announcement email to users.

If your migration strategy calls for two or more different installation packages for different users or user groups, repeat these two steps for each package until all users have been migrated.

Chapter 20. Preserving Delegated Administrator Customizations During Upgrades

Preserving Delegated Administrator for Oracle Communications Unified Communications Suite Customizations During Upgrades

If you are configuring Delegated Administrator for the first time, you can skip this topic.

If you have not yet performed initial configuration of Delegated Administrator, see Delegated Administrator Initial Configuration.

If you are upgrading to this release of Delegated Administrator from an earlier release, you might have to perform the following tasks:

- Preserving an Existing Customized Configuration
- Upgrading Customized Service Packages in Delegated Administrator

For instructions on how to upgrade Delegated Administrator from a previous Sun Java version, see Delegated Administrator Upgrade.

Preserving an Existing Customized Configuration

This section concerns you only if you previously have installed and configured Delegated Administrator and have customized the Delegated Administrator configuration.

When you upgrade Delegated Administrator, the Delegated Administrator configuration program, `config-commda` runs automatically. The properties in the configuration files are reset to the default values for the new release. However, you can replace the default values with your earlier, customized configuration by following the instructions in this section.

This section contains the following topics:

- How It Works: Merging Your Customized Configuration With the New Release describes the concepts and operations for preserving your customization.
- To Preserve an Existing Configuration tells you how to preserve your customization.
- Delegated Administrator Properties Files lists the Delegated Administrator configuration files

For information about how you can customize Delegated Administrator, see Customizing Delegated Administrator.

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How It Works: Merging Your Customized Configuration With the New Release

You can run a merge utility to preserve your customized configuration after you upgrade Delegated Administrator and run the Delegated Administrator configuration program. The merge process works as follows:

When you upgrade Delegated Administrator to the latest release, the upgrade patch process takes a snapshot of the existing configuration *before* the software is upgraded. Two versions of the existing

configuration (the configuration of the earlier release) are saved:

- A snapshot of the default configuration of the earlier release ~~without user customization~~ is saved in the *da-base*`/data/staging/base` directory. (For example: `/var/opt/sun/comms/da/staging/base.`)
- A snapshot of the customized configuration of the earlier release is saved in the *da-base* `/data/staging/current` directory.

Next, the upgrade process installs the new release, including the new configuration files.

When you run `config-commda` after the upgrade, the configuration files are installed in the *da-base* `/data` directory. These files contain the default values for the new release, not your customized values.

Next, you can run the `damerge` utility, which merges your customized files with the new configuration. Specifically, the utility copies the *da-base*`/data` directory into a staging area: *da-base* `/data/staging/new`. The utility then performs a three-way `diff` on the following file sets:

- *da-base*`/data/staging/current`. Your customized configuration.
- *da-base*`/data/staging/base`. The default configuration of the earlier release.
- *da-base*`/data/staging/new`. The copy of the default configuration of the current release.

The `damerge` utility saves the merged files in *da-base*`/data/staging/new`.

The utility preserves your customization in the merged files. In rare instances, a conflict might occur between a particular customization and the default functioning of Delegated Administrator. The utility reports on these conflicts so that you can resolve them.

For details about how to run the merge utility, check for conflicts, and complete the preservation of your customized configuration, see To Preserve an Existing Configuration.

To Preserve an Existing Configuration

Before You Begin

It is assumed that you have upgraded Delegated Administrator to the latest release and run `config-commda`.

1. Run the `damerge` utility to merge your customized files with the default configuration files installed in the latest release.

   Log in as root and go to the *da-base*`/sbin` directory (for example, `/opt/sun/comms/da/sbin`). Enter the command:

   ```
   # ./damerge
   ```

   The utility asks whether you want to proceed with the merge operation. Type **`y`**.

   To bypass this interactive prompt, use the `-s` option with the `damerge` command. For example:

   ```
   # ./damerge --s
   ```

   The utility merges your customized files into a new directory: *da-base*`/data/staging/new`.

2. Examine the merge reports to check if any conflicts occurred between your customized files and the newly installed configuration files.

Go to the *da-base*/`data/staging` directory and examine the following files:

`all.list`

Lists all files processed by the `damerge` utility. Shows the status of each file, as follows:

`Merge` indicates that the customized and newly released files were merged successfully.

`Skip` indicates that a file was not merged; typically, a binary file would be skipped. Text files such as the properties files are merged.

`Conflict` indicates that a conflict remains between the customized file and newly released file.

`conflict.list`

Lists the names of the files in which a conflict occurred.

3. If a merged file contains a conflict, resolve it by editing the differing lines.
   a. Open the merged file in the *da-base*/`data/staging/new` directory.
   b. Search for the `diffs`.

      The merged file lists both your original customized line and the line derived from the new release. Both lines are bracketed in angle brackets:

      ```
      <conflicting line>
      <conflicting line>
      ```

   c. Delete one line and remove the angle brackets from the remaining line. You could also edit the remaining line to resolve the conflict correctly.
   d. Repeat these steps for each conflict in the file.
4. Repeat Step 3 for each file that contains conflicts, until all files are successfully merged.
5. Copy the customized configuration files from:

   ```
   da--base/data/staging/new
   ```

   to:

   ```
   da--base/data
   ```

6. Redeploy the merged files to the Web container (or containers) used by the Delegated Administrator server and console.

   Before the customized values can take effect, you must run the script that deploys the resolved files to your Web container.

   For instructions on how to deploy customized files to a particular Web container, see Deploying a Customized Configuration File.

> **Note**
> If you run `config-commda` a second time without upgrading the software, the default configuration of the new release again replaces your customized configuration. You can run `damerge` again to restore your customization from the earlier release. However, `damerge` cannot restore any customization performed *since* the upgrade.

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Delegated Administrator Properties Files

Delegated Administrator installs the following properties files:

- Delegated Administrator utility
  - `cli-usrprefs.properties`

Location: *da-base*`/data/config`

- Delegated Administrator console
  - `daconfig.properties`
  - `logger.properties`
  - `Resources.properties`
  - `Security.properties`

For the default location of the Delegated Administrator console files, see Original (Standard) Locations of the Configuration Files.

- Delegated Administrator server
  - `resource.properties`

For the default location of the `resource.properties` file, see Original (Standard) Locations of the Configuration Files.

For more information, see Delegated Administrator Files and Directories.

Chapter 21. Communications Suite on a Single Host

Deployment Example: Oracle Communications Unified Communications Suite on a Single Host Version 7 Update 4

This deployment example describes how to install Communications Suite 7 Update 4 software on one computer for a functioning deployment. This document is intended for any evaluator, system administrator, or installation technician who wants to install and evaluate the services delivered by these components.

> **Note**
> Installing the back-end messaging, calendar, instant messaging, and address book servers on the same system is not the optimal configuration, nor does it provide the best performance. This example deployment is not intended for production purposes. Use this configuration for evaluation and for training purposes only. Performance is better if you install services on separate machines. For more information on deploying Communications Suite, see Communications Suite Deployment Planning Guide.

Topics:

- About This Deployment Example
- Installing the Example
- Installing Communications Suite Components
- Installing and Configuring Directory Server
- Downloading and Installing Java
- Installing and Configuring GlassFish Server
- Configuring Communications Suite Components
- Creating Additional User Accounts and Groups
- Known Issues and Limitations

About This Deployment Example

This section provides an overview of this deployment scenario, the hardware and software used, and the procedures you follow to install, configure, and use this deployment.

This section contains the following topics:

- Installation Overview
- Implementation Specifications for This Example
- Installation Time Estimates
- Installation Notes and Recommendations
- Summary of Installation and Configuration

Installation Overview

This scenario results in a functioning deployment suited for the evaluation and testing of Oracle Communications Unified Communications Suite 7 Update 4 for Solaris OS 10. These instructions are not

intended to act as a replacement for the individual component product documentation, but merely to guide the evaluator through an initial installation.

What Components Are Installed?

This example guides you through installing the following Communications Suite components:

- Messaging Server 7 Update 5
- Calendar Server 7 Update 3
- Instant Messaging 9
- Directory Server 7.0.1 (Oracle Directory Server Enterprise Edition 11g R1 Patch Set 1)
- GlassFish Server 2.1.1 Patch 19 with HADB support
- Delegated Administrator 7
- Convergence 2
- Indexing and Search Service 1 Update 4 Patch 16
- MySQL 5.5.28 or later, but not MySQL 5.5.29; for new installations, download the most recent version, which at the time of this writing is 5.5.31.
- Java SE 7u21 or later

The example installation in this document uses the following data that you change according to your installation and test machine:

- Domain name: `comms.beta.com`
- Host name: `wireless` (running Solaris OS 10)
- Fully qualified (external) host name: `wireless.comms.beta.com`
- Password: `adminpass` used for all passwords

This example installs all of the software on a single system. Adjust host names accordingly if you install the components on multiple systems.

Recommended Ports

For convenience, this example uses a set of recommended ports. If you use different ports, be sure to make the changes consistently throughout the installation. For example, this document uses port 4848 for the GlassFish Server admin port. If you decide to use port 3333 instead, be sure to change it everywhere 4848 occurs in the deployment example. See Table 3 for more information.

Implementation Specifications for This Example

This section describes implementation specifications for this example.

Table 1 Evaluation Host Hardware and Software Requirements

Component	Platform Requirement
CPU	SPARC or x86 64-bit
RAM	2 Gbytes or more
Disk Space	8.5 Gbytes or more free disk space for installation. As much as 5.4 Gbytes of this space is for zip files and unzipped directories. Removing zip files after unzipping them reduces the disk space requirement from 8.5 Gbytes to 6.8 Gbytes.
Software	Solaris 10 OS. This example uses an installation based on Solaris OS 10 Update 10. Solaris 11 is not supported.
Users	Provisioned with test users.

Table 2 Client Software Requirements

Component	Platform Requirement
Browser	Firefox 3.6 or later, Internet Explorer 7.x or later, Safari 5.x, Chrome

Table 3 Server Configuration Information

Component	Install Notes	Install Location	Database Location	Port Name and Numb
GlassFish Server 2.1.1	Installed separately. Required for Convergence, Delegated Administrator, and Instant Messaging.	`/opt/SUNWappserver`	Not applicable	HTTP Port: 80 Admin Port 4848 HTTPS Po 443
Directory Server 11gR1	Installed separately. This version is not included with Identity Management Suite.	`/opt/SUNWdsee`	`/var/opt/SUNWdsee`	Directory Server Por 389 LDAP Port: 389 SSL Port: 6
Messaging Server 7 Update 5	Installed by using Communications Installer. Additional configuration required.	`/opt/sun /comms/messaging64`	`/var/opt/sun /comms/messaging64`	Webmail P (HTTP): 89 SMTP Port 25 POP Port: 110 IMAP Port: 143
Instant Messaging 9	Installed by using Communications Installer. Additional configuration required.	`/opt/sun/comms/im`	`/var/opt/sun/comms/im`	XMPP Port 5222 Multiplexed XMPP Port 45222 Gateway Connector Port: 5522 XMPP Serv Port: 5269 Notification Server Por 47676

GlassFish Server 2.1.1	Installed separately. Required by Calendar Server 7 Update 3	`/opt/SUNWappserverCS`	Not applicable	HTTP Port: 8080 Admin Port 8800 HTTPS Po 8181
MySQL 5.5.8, or later, but *not* MySQL 5.5.29	Installed separately. Required for Calendar Server 7 Update 3.	`/opt/mysql`	`/var/mysql/caldav`	DB Port: 33
Java	Installed separately. Required for UCS7U4	`/usr/jdk`	Not applicable	Not applicable
Calendar Server 7 Update 3	Installed by using Communications Installer. Additional configuration required.	`/opt/sun /comms/davserver`	`/var/mysql/caldav`	HTTP Port: 8080 Admin Port 8800 HTTPS: 81 JMQ Port: 47676
GlassFish Message Queue	Installed by Communications installer. Additional configuration required.	`/etc/imq`	Not applicable	JMQ Port: 7676
Convergence 2	Installed by using Communications Installer. Additional configuration required.	`/opt/sun/comms/iwc`	`/var/opt/sun /comms/iwc`	Server Instance HTTP Port: 80 Administrat Server Por 4848
Indexing and Search Service 1 Update 4	Installed by using Communications Installer. Additional configuration required.	`/opt/sun/comms/jiss`	`/var/opt/sun /comms/jiss`	HTTP Port: 80 Admin Port 4848 HTTPS Po 443 IMAP Port: 143 JMQ Port: 7676 Directory Server Por 389

Installation Time Estimates

The following table provides time estimates for installing this example.

Table 4 Installation Time Estimates

Activity	Estimate
Install Solaris OS	2 hours
Install Communications Suite, GlassFish Server and Directory Server	1 hour
Configure software	3 hours
Total	6 hours (average)

As part of the configuration, you use Delegated Administrator to add users for Messaging Server, Calendar Server and Instant Messaging Server.

> **Note**
> Communications Suite 7 Update 4 is supported on Solaris OS 10. This example uses Solaris 10 Update 10.

Installation Notes and Recommendations

1. Use `gzip -d` or `gunzip` to decompress the `*.gz` files.
2. Use `unzip` to decompress the `*.zip` files.

Expected User Input

During installation, your are prompted for various input. User input is indicated by text of the form **<user-input>**. The following table helps you plan for the types of information you must provide during installation.

Table 5 Information Input During Installation

User Input	User Input Action
<enter>	Verify that the default value shown makes sense and then press Enter.
<sample-password>	Any password, minimum of 8 characters in length, suitable for evaluation purposes. Use this password any time that **<sample-password>** is specified.
<fully-qualified-hostname>	For example, assuming that the host name is `abc`, and the domain name is `demo.xyz.com`, then this value would be `abc.demo.xyz.com` .
<full-cookie-domainname>	For example, assuming that the full domain name is `demo.xyz.com`, then this value would be `.demo.xyz.com` (note the inclusion of the leading `".`").

Summary of Installation and Configuration

Installing and configuring this example involves the following high-level steps:

1. Preparing the system for Communications Suite
2. Running the Communications Installer to install the Communications Suite component software
3. Installing and Configuring Directory Server

4. Installing Java (which is no longer shipped as part of the Communications Suite bundle)
5. Installing and Configuring GlassFish Server
6. Preparing Directory Server for Communications Suite
7. Configuring Delegated Administrator and Communications CLI
8. Configuring Messaging Server
9. Installing and configuring MySQL Server
10. Configuring Calendar Server 7
11. Configuring Instant Messaging
12. Configuring Indexing and Search Service
13. Configuring Convergence
14. Configuring users

These installation steps result in a suitable deployment to evaluate and test Communications Suite 7 Update 4. These instructions are not intended to act as a replacement for the individual component documentation, but to merely guide the evaluator through an initial installation.

Installing the Example

This section describes how to install and configure components on a single machine for evaluation purposes. Some components are configured after installation, using component configuration tools.

> **Note**
> Unless otherwise indicated, all of the examples and instructions in this document assume that you are logged in as `root`.

This section contains the following topics:

- Checking Installation Requirements
- Getting the Necessary Software

Checking Installation Requirements

Before you install components, use the steps in this section to make sure the computer on which you are installing is ready. These instructions assume all actions are performed by the `root` user.

To Check System Requirements

- Make sure that the computer meets the requirements specified in Table 1.

To Check DNS

Verify that DNS is running and configured properly:

1. Make sure that the `/etc/resolv.conf` file has name server entries with the IP addresses of valid name servers. For example:

   ```
   domain comms.beta.com
   nameserver 192.168.100.22
   nameserver 192.168.100.23
   nameserver 192.168.100.24
   nameserver 192.168.100.25
   ```

2. Make sure that the `/etc/hosts` file has an entry for the fully qualified host name of the server. This fully qualified host name should be listed before the non-fully qualified host name. For example:

   ```
   10.1.82.52 wireless.comms.beta.com wireless loghost
   ```

3. Make sure that the `/etc/nsswitch.conf` file is configured to use files first to resolve host names. The hosts line in the `nsswitch.conf` file should list files first in its entry:

```
hosts: files dns nis [NOTFOUND=return]
# OR (if NIS is not used)
hosts: files dns
```

Getting the Necessary Software

To Get the Software

- Get the Software from the Communications Suite 7 Update 4 download site.
- See Communications Suite Component Patches for the most recent patches for Communications Suite component products.

Installing Communications Suite Components

Deploying Communications Suite components is a two-step process. You first install the software and the shared components then you configure the individual server components.

This section contains the following topics:

- Before You Begin
- Installing Communications Suite 7 Update 4 Software

Before You Begin

Before you configure the Communications Suite software, you need to create the `mailsrv` user and disable the `sendmail` process. The `mailsrv` user is used to configure Messaging Server.

- Messaging Server requires a mail server user, which must exist before you can finish the installation. You can skip this step, because the group and user are created during the configuration time. However, you might want to create the `mailsrv` user yourself as shown below. For this installation, use the `useradd` command to create a user with username `mailsrv` and group `mail`. You use this ID in Step 2 in the Configuring Messaging Server section.

Type the following commands to create the user `mailsrv` with a user ID of `7633`, a group ID of `mail`, and a user home directory of `/export/home/mailsrv`.

```
/usr/sbin/groupadd mail
mkdir -p /export/home
/usr/sbin/useradd -u 7633 -g mail -d /export/home/mailsrv -m mailsrv
```

Note
If the `mailsrv` user is already in use, this could be an indication that `mailsrv` is not a local user as required by the Messaging Server. Messaging Server requires a local user and group and not one defined in a naming service such as NIS. You should create a different user such as `mailsrv2` but be sure to change the reference to that user when prompted for the mail server username. For example:

```
/usr/sbin/useradd -u 7633 -g mail -d /export/home/mailsrv2 -m
mailsrv2
```

To Disable sendmail

- Prior to configuring Messaging Server, use the following procedures to kill the `sendmail` process and prevent it from starting during bootup.

```
svcadm disable sendmail
```

- If there are 2 sendmail processes and one of the processes still lingers after executing the above command, execute the following commands:

```
/usr/sbin/svcadm disable svc:/network/smtp:sendmail
/usr/sbin/svcadm disable svc:/network/sendmail-client:default
```

> **Note**
> If end users (or system utilities, for example, `cron`) send messages through `sendmail` clients, you can configure Messaging Server to work with those clients over protocol. Users can continue to use the UNIX sendmail client. See Handling sendmail Clients.

Installing Communications Suite 7 Update 4 Software

This section describes how to install the Communications Suite software on your host.

To Install the Communications Suite Software

1. Create a `/tmp/UCS7U4` directory, move the Communications Suite 7 Update 4 software ZIP file (`V38014-01.zip`) to this directory, and extract the files.

```
cd /temp/UCS7U4
unzip V38014-01.zip
```

2. Run the Communications Suite installer, which is in the root of the directory in which you unzipped the file.

```
./commpkg install
```

3. Accept the License Agreement by typing **`Yes`** if prompted.
4. Accept the default Install location: `/opt/sun/comms.`
5. Select the following components for installation:
   - Messaging Server (64bit) 7u5 (7.5-28.21)
   - Comms DSsetup 6.4 (6.4-24.03
   - Calendar Server 7u3 (7.0.3.10.0)
   - Instant Messaging 9 (9.0.0.3.0)
   - Convergence 2 (2.0-6.01)
   - Indexing and Search Service 1u4 (1.0.4.16.0)
   - Comms Delegated Administrator 7 (7.0-7.00)
     This corresponds to selections 1, 2, 3, 4, 5, 6, 7.
6. The installation script prompts for a series of options. You might not be prompted for all options, depending on your system.
   The following table shows how to respond to the configuration options:
   Table 6 Values for NSS, Message Queue, and Service Tags Options

Option	[Default Value]	Enter:
Change pkg versions for Service Tags	[n]	**y**
Change pkg versions for NSS/NSPR/JSS	[n]	**y**
Change pkg versions for Message Queue	[n]	**y**
Change pkg versions for Message Queue Localization	[n]	**y**

7. Press Return when prompted to continue.
   The installation proceeds.
8. Press Return when prompted to continue.
9. Continue with the next section.

Installing and Configuring Directory Server

Directory Server 11gR1 (7.0.1, also known as ODSSEE11g) is the preferred version. Before you proceed, make sure that you get the Directory Server 11gR1 software from the Oracle Software Delivery Cloud. See Dependent Component Product Software for download instructions.

1. Check for the existence of the `/opt/SUNWdsee` directory.
   If this directory does not exist, type the following command to create the directory:

   ```
   mkdir /opt/SUNWdsee
   ```

2. Move the downloaded Directory Server zip file `V25760-01.zip` to a temporary location, such as `/temp/DS`, then unzip the file, change to the distribution directory, and unzip the installation file into the `/opt/SUNWdsee` directory.

   ```
   mkdir temp/DS
   cd /temp/DS
   unzip V25760-01.zip
   cd ODSEE_ZIP_Distribution
   unzip -qq sun-dsee7.zip -d /opt/SUNWdsee
   ```

   The installation installs the Directory Server in the specified location, `/opt/SUNWdsee`.

3. Create your Directory Server instance.

   ```
   mkdir /var/opt/SUNWdsee
   cd /opt/SUNWdsee/dsee7/bin
   ./dsadm create /var/opt/SUNWdsee/dsins1
   ```

4. When prompted, type **`adminpass`** for the Directory Manager password.
5. Start the Directory Server instance.

   ```
   ./dsadm start /var/opt/SUNWdsee/dsins1
   ```

6. Create the user and group suffix **`o=isp`**.

   ```
   ./dsconf create-suffix -h wireless -p 389 o=isp
   ```

7. When prompted, type **Y** to accept the certificate.

8. When prompted, type **`adminpass`** for the Directory Manager password.
9. Start the Directory Server instance.

```
./dsadm stop /var/opt/SUNWdsee/dsins1
./dsadm start /var/opt/SUNWdsee/dsins1
```

10. Continue with the next section.

Downloading and Installing Java

Java is no longer bundled with the Oracle Communications Unified Communications Suite installer. The 32-bit and 64-bit JDKs require manual installation.

This deployment example:

- Installs the JDKs, rather than the JRE.
  The JDKs include debugging tools, such as `jstack`, and the Delegated Administrator requires the JAR utility.
- Installs the Java 7u21 JDK for SPARC; you can use a later version of Java 7.
  Although Java 6 is not used in this example, it is supported by Communications Suite 7 Update 4.

Downloading Java 7 for Solaris SPARC

When you download Java:

- Download both the 32-bit and 64-bit versions of Java 7.
  64-bit Java is treated as an add-on to 32-bit Java; both need to be installed.
- Download the tar.Z files for SPARC. The tar.Z files contain SVR4 packages, and only the Java versions in SVR4 packages are covered by OS-recommended patch sets.

To download Java 7:

1. Navigate to Oracle Java SE Downloads.
2. Click the Download button for the latest release of the JDK for Java 7.
   This displays the download page and a license agreement for the release you selected.
3. Accept the license agreement.
4. Download the SVR4-package tar.Z files for 32-bit and 64-bit installations:
   - jdk-7u21-solaris-sparc.tar.Z
   - jdk-7u21-solaris-sparcv9.tar.Z

Installing Java 7 for Solaris SPARC

To install Java 7:

1. Uncompress, and untar the downloaded 32- and 64-bit Java tar.Z files.
   For example:

```
zcat jdk-7u21-solaris-sparc.tar.Z | tar xf -
zcat jdk-7u21-solaris-sparcv9.tar.Z | tar xf -
```

2. Become root.
3. If there is an earlier version of Java 7 installed, uninstall it.
4. Install the package files, first the file for 32-bit Java, then the file for 64-bit Java.
   For example:

```
pkgadd -d . SUNWj7rt SUNWj7dev SUNWj7cfg SUNWj7man
pkgadd -d . SUNWj7rtx SUNWj7dvx
```

5. Verify that Java has been set up correctly.

```
/usr/jdk/jdk1.7.0_21/bin/java -d64 -version
```

The shell returns the current Java version. It should match the version you have just installed. For example:

```
java version "1.7.0_21"
Java(TM) SE Runtime Environment (build 1.7.0_21...)
...
```

6. Install and configure GlassFish Server, as described in the next section.

Installing and Configuring GlassFish Server

GlassFish Enterprise Server with HADB Version 2.1.1 Patch 19 (v2.1 Patch33) is the primary web container used by Convergence and the Indexing and Search Service.

Prior to installing the GlassFish Server, check the Java version on your host. GlassFish Server requires at least Java 1.6.0. Solaris 10 Update 6 ships with version 1.5.0_16, which is not sufficient for Unified Communications Suite components.

- Use the following command to check your Java version.

```
/usr/jdk/jdk1.7.0_21/bin/java -d64 -version
```

The shell returns results that look similar to the following:

```
java version "1.7.0_21"
Java(TM) SE Runtime Environment (build 1.7.0_21...)
Java HotSpot(TM) Client VM (build ..., mixed mode)
```

If the version is not 1.7.0_21, make sure that `/usr/java` links to `/usr/jdk/jdk1.7.0_21`, and that `/usr/jdk/latest` links to `jdk1.7.0_21`. (These links should have automatically been established during installation of Java.)

To Install GlassFish Server

1. Create the `/temp/Glassfish` directory and copy GlassFish Enterprise Server 2.1.1 Patch 19 to this directory, then run the installer.

```
cp 128643-33.zip /temp/Glassfish
cd /temp/Glassfish
unzip 128643-33.zip
cd 128643-33
./sges_ee-2_1_1-p19-solaris-sparc-ml.bin -console
```

2. When prompted, press Enter to continue.

3. Accept the License Agreement by typing **yes** when prompted.
   The installation script prompts for a series of options. The following table shows how to respond to the configuration options:
   Table 7 GlassFish Server Settings

Option	[Default Value]	Enter:
Installation Directory	[/opt/SUNWappserver]	*accept default*
Create Directory or Choose New	Create Directory	*accept default*
Install Node Agent	[yes]	**no**
Install High Availability Database Server	[no]	*accept default*
Install Load Balancing Plugin	[no]	*accept default*
Install Domain Administration Server	[yes]	*accept default*
Install Sample Applications	[yes]	*accept default*
Install New or Reuse existing Java 2 SDK	[Install Java 2 SDK]	**Reuse existing Java 2 SDK**
Path to Java 2 SDK Version 1.5.0 or greater	[/usr/jdk/jdk1.7.0_11]	*accept default*
Admin User	[admin]	*accept default*
Admin User's Password	NA	**adminpass**
Master Password for SSL Certificate DB	NA	**adminpass**
Admin Port	[4848]	*accept default*
HTTP Port	[8080]	**80**
HTTPS Port	[8181]	**443**
Enable Updatecenter client	[yes]	*accept default*
Upgrade from previous AS version	[no]	*accept default*

4. Select 1. Install Now.
   The installation proceeds.
5. When the installation completes, press Return to exit.
6. Edit the `/opt/SUNWappserver/domains/domain1/config/domain.xml` file to change the Java Message Queue (JMQ) port from 7676 to 37676. Look for a line similar to the following:

```
jms-host name="default_JMS_host" host="wireless.comms.beta.com"
port="7676"
```

   Change the port to 37676, save and exit the file.

   Note
   By default, GlassFish Server starts a bundled instance of JMQ on port 7676. This port assignment conflicts with the instance of JMQ used by Indexing and Search Service. To avoid the conflict, change the port used by the GlassFish JMQ.

7. Start GlassFish Server:

```
/opt/SUNWappserver/bin/asadmin start-domain domain1
```

8. When prompted, type:
   username: **`admin`**
   admin password: **`adminpass`**
   master password: **`adminpass`**
9. Perform the following steps to save the `admin` username and password so that you do not need to provide them each time GlassFish Server is started. (You must still type the master password.)

```
cd /opt/SUNWappserver/bin/
./asadmin login
```

10. Type **`admin`** and **`adminpass`** as the username and password when prompted.
11. Continue with the next task.

To Verify GlassFish Server

- In your web browser, open a URL for GlassFish Server. The URL is: `http://` *fully-qualified-hostname*
  In this example, type:

```
http://wireless.comms.beta.com
```

  You should see the Server is Running web page.

Configuring Communications Suite Components

This section describes how to run the individual component configuration utilities to perform initial software configuration.

This section contains the following topics:

- Preparing the Directory
- Configuring Delegated Administrator and Communications CLI
- Configuring Messaging Server
- Configuring Calendar Server 7
- To Install MySQL Database
- Configuring Instant Messaging
- Configuring Indexing and Search Service
- Configuring Convergence

Preparing the Directory

This section explains how to prepare the Directory Server LDAP schema.

To Apply Schema 2 to Your Directory Tree

1. Change to the directory where the `comm_dssetup.pl` script is located and run the script, for example:

```
cd /opt/sun/comms/dssetup/sbin
./comm_dssetup.pl
```

2. Type **y** to continue.
   The script prompts for a series of options. The following table shows how to respond to the prompts.
   Table 8 Values for comm_dssetup.pl Script

Option	[Default Value]	Enter:
Directory server root	[/var/opt/SUNWdsee/dsins1]	*accept default*
Directory Manager DN	[cn=Directory Manager]	*accept default*
Directory Manager Password	NA	**adminpass**
Use directory server for users/groups	[yes]	*accept default*
Users/Groups base suffix	[o=isp]	*accept default*
Schema type?	[1]	**2**
Confirm Schema Type	[n]	**y**
Update the schema files?	[yes]	*accept default*
Configure new indexes?	[yes]	*accept default*
Reindex new indexes?	[yes]	*accept default*

3. Confirm your choices and type **y** to continue.
   The `comm_dssetup.pl` script proceeds.
4. When prompted, type **y** to continue with the script.
   Continue with the next section after `comm_dssetup.pl` completes and the Successful Completion message is displayed.

Configuring Delegated Administrator and Communications CLI

This section describes configuring Delegated Administrator console and utility, which provide user management.

To Configure Delegated Administrator

1. Set the `JAVA_HOME` environment variable.
   For example, if you are running `csh`, type:

   ```
   setenv JAVA_HOME /usr/jdk/latest
   ```

   If you are running `sh` or `bash`, type:

   ```
   export JAVA_HOME=/usr/jdk/latest
   ```

2. Change to the directory where the configuration script was installed and run the script, for example:

   ```
   cd /opt/sun/comms/da/sbin
   ./config-commda
   ```

3. Click Next in the Welcome window.
4. Accept the default for the Directory to store Configuration and Data Files:
   `/var/opt/sun/comms/da`
   If the directory does not exist, click Create Directory to create the directory.

5. Install Delegated Administrator Utility, Console, and Server.
   The installation script prompts for a series of options. The following table shows how to respond to the configuration options:
   Table 9 Values for config-commda Script

Option	[Default Value]	Enter:
DA Server Hostname	[wireless.comms.beta.com]	*accept default*
DA Server Port	[8080]	**80**
Default Domain	[comms.beta.com]	*accept default*
Default SSL Port	[443]	*accept default*
Web Container	[Web Server 6.x]	**App Server 8.x and up**
Install Root Directory (for DA Console)	[/opt/SUNWappserver]	*accept default*
Domain Directory	[/opt/SUNWappserver/domains/domain1]	*accept default*
Domain Root Directory	[/opt/SUNWappserver/domains/domain1/docroot]	*accept default*
Server Target Name	[server]	*accept default*
Virtual Server Identifier	[server]	*accept default*
Server Instance HTTP Port	[80]	*accept default*
Administration Server Port	[4849]	**4848**
Administrator User ID	[admin]	*accept default*
Administrator Password	NA	**adminpass**
Secure Administration Server Instance?	[checked]	*accept default*
Default Domain Separator	[@]	*accept default*
Access Mode	Direct LDAP	*accept default*
Web Container (DA Server)	[Web Server 6.x]	**App Server 8.x and up**
Install Directory (for DA Server)	[/opt/SUNWappserver]	*accept default*
Domain Directory	[/opt/SUNWappserver/domains/domain1]	*accept default*

Document Root Directory	[/opt/SUNWappserver/domains/domain1/docroot]	*accept default*
Server Target Name	[server]	*accept default*
Virtual Server Identifier	[server]	*accept default*
Server Instance HTTP Port	[80]	*accept default*
Administration Server Port	[4849]	**4848**
Administrator User ID	[admin]	*accept default*
Administrator Password	NA	**adminpass**
Secure Administration Server Instance?	[checked]	*accept default*
URL of Directory Server	[ldap://wireless.comms.beta.com:389]	*accept default*
Bind As	[cn=Directory Manager]	*accept default*
Password	NA	**adminpass**
LDAP Username	[daAdmin]	*accept default*
LDAP Password	NA	**adminpass**
Organization DN	[o=comms.beta.com,o=isp]	*accept default*
Top Level Admin for Default Organization	[admin]	*accept default*
Password	NA	**adminpass**
Load Sample Service Packages	[Y]	*accept default*
Load Sample Organizations	[Y]	**n**
Preferred Mailhost for Sample	[wireless.comms.beta.com]	*accept default*

6. Click Configure Now.
   The script begins to run.
7. When the panel displays "All Tasks Passed," click Next to continue.
   Two warnings appear: one reminds you to restart the GlassFish Server; the other reminds you to enable the mail, calendar, and instant messaging services in the domain. Steps 9 and 10 restart GlassFish Server and enable the services.
8. Click Close to exit the Delegated Administrator Configuration wizard.
9. Restart GlassFish Server.

```
cd /opt/SUNWappserver/bin
./asadmin stop-domain domain1
./asadmin start-domain domain1
```

10. Modify the mail, calendar, and instant messaging domains, and create users by using the `commadmin` utility:

```
/opt/sun/comms/da/bin/commadmin domain modify -D admin -S
mail,cal,im -H wireless.comms.beta.com -B wireless.comms.beta.com

Enter login password: adminpass
Enter DNS domain name: comms.beta.com
OK

/opt/sun/comms/da/bin/commadmin user create -D admin -F John -l
jdoe -L Doe -W demo -d comms.beta.com -S mail,cal,im -E
jdoe@comms.beta.com -H wireless.comms.beta.com -B
wireless.comms.beta.com

Enter login password: adminpass
OK

/opt/sun/comms/da/bin/commadmin user create -D admin -F Calendar -l
calmaster -L Master -W adminpass -d comms.beta.com -S mail,cal,im
-E calmaster@comms.beta.com -H wireless.comms.beta.com -B
wireless.comms.beta.com

Enter login password: adminpass
OK
```

The `commadmin user create` steps create an end-user, `jdoe`, and the Calendar Server administrative user, `calmaster`. Continue to create as many users as you like at this point.

To Log in to Delegated Administrator

1. In your web browser, open a URL for Delegated Administrator. The URL for Delegated Administrator is: `http://`*fully-qualified-hostname*`:`*app-server-port*`/da`
   In this example, type:

   ```
   http://wireless.comms.beta.com/da
   ```

2. Log in using `admin` and `adminpass` as the user ID and password.
3. After verifying that you can access Delegated Administrator, log out.
4. Continue with the next section.

Configuring Messaging Server

This section describes configuring Messaging Server.

To Configure Messaging Server

1. Change to the directory where the Messaging Server `configure` script is stored, then run the script, for example:

   ```
   cd /opt/sun/comms/messaging64/sbin
   ./configure
   ```

   The Configuration Wizard appears. Read the introductory information and proceed by clicking

Next if prompted.

2. Verify the following:
   - Accept the default for the Directory to store Configuration and Data Files: `/var/opt/sun/comms/messaging64`
   - Name of the mail server Unix user: username [`mailsrv`]
     You might need to change to `mailsrv2` if this was the actual user created previously.
   - Fully qualified host name of messaging server, FQHN: [`wireless.comms.beta.com`]
3. The installation script prompts for a series of options. The following table shows how to respond to the configuration options:
   Table 10 Values for Messaging Server configure Script

Option	[Default Value]	Enter:
Default Mail Domain Name	[comms.beta.com]	*accept default*
Hostname for LDAP Directory Server	NA	**wireless.comms.beta.com**
LDAP Administrator Login	[cn=Directory Manager]	*accept default*
Password	NA	**adminpass**
Postmaster email address	[admin@comms.beta.com]	**jdoe@comms.beta.com**
IP address info for mail relay systems	NA	*accept default*
Password for Server Administration	NA	**adminpass**

4. The Messaging Server configuration proceeds.
5. Start Messaging Server:

```
cd /opt/sun/comms/messaging64/bin/
./stop-msg
./start-msg
```

6. Continue with the next section.

Configuring Calendar Server 7

Configuring Calendar Server 7 consists of installing a second instance of GlassFish Server and installing MySQL.

Topics in this section:

- To Install a Second Instance of GlassFish Server
- To Install MySQL Database

To Install a Second Instance of GlassFish Server

1. Install a second instance of GlassFish that runs on port 8080.

```
cd /temp/GF
cd 128643-33
./sges_ee-2_1_1-p19-solaris-sparc-ml.bin -console
```

2. Press Enter to continue when prompted.
3. Accept the License Agreement by typing **`yes`** when prompted.
   The installation script prompts for a series of options. The following table shows how to respond to

the configuration options:

Table 11 Values for Calendar Server 7 Update 3 configure Script

Option	[Default Value]	Enter
Installation Directory	[/opt/SUNWappserver]	**/opt/SUNWappserverCS**
Create Directory or Choose New	Create Directory	*accept default*
Install Node Agent	[yes]	**no**
Install High Availability Database Server	[no]	*accept default*
Install Load Balancing Plugin	[no]	*accept default*
Install Domain Administration Server	[yes]	*accept default*
Install Sample Applications	[yes]	*accept default*
Install New or Reuse existing Java 2 SDK	[Install Java 2 SDK]	**Reuse existing** (as long as correct version)
Path to Java 2 SDK Version 1.5.0 or greater	[/usr/jdk/jdk1.7.0_21]	*accept default*
Admin User	[admin]	*accept default*
Admin User's Password	NA	**adminpass**
Master Password (for SSL Certificate)	NA	**adminpass**
Admin Port	[38295]	**8800**
HTTP Port	[38292]	**8080**
HTTPS Port	[38298]	**8181**
Enable Updatecenter client	[yes]	*accept default*
Upgrade from previous AS version	[no]	*accept default*

4. Confirm that you would like to "Install Now" when prompted.
   The installation proceeds.
5. Edit the `domain.xml` file to change the JMQ port from 7676 to 47676.

```
cd /opt/SUNWappserverCS/domains/domain1
cd config
vi domain.xml
```

6. Change port 7676 to 47676, save and exit the file.
7. Start the GlassFish Server.

```
/opt/SUNWappserverCS/bin/asadmin start-domain domain1
Starting Domain domain1, please wait.
Default Log location is
/opt/SUNWappserverCS/domains/domain1/logs/server.log.
Please enter the admin user name>admin
Please enter the admin password>adminpass
Please enter the master password>adminpass
```

8. Continue with the next section.

To Install MySQL Database

You can install the latest available version of MySQL 5.5.*x*, excluding version 5.5.29. This example uses MySQL Advanced Server (Commercial sun4u) 5.5.31. For download instructions, see Get the Software.

1. Make a temporary directory for the MySQL package and copy it to that directory.

```
mkdir /temp/MySQL
cp mysql-advanced-5.5.28-solaris10-sparc-64bit.pkg /temp/MySQL
```

2. Create a `mysql` group and user.

```
cd /usr/sbin
./groupadd mysql
./useradd -g mysql mysql
```

3. Add the MySQL package to the system.

```
cd /temp/MySQL
/usr/sbin/pkgadd -d mysql-advanced-5.5.31-solaris10-sparc-64bit.pkg
```

4. Install the packages into the default directory `/opt/mysql`.

```
The selected base directory /opt/mysql must exist before
installation is attempted.

Do you want this directory created now [y,n,?,q] y
Using /opt/mysql as the package base directory.
```

5. Set up the MySQL database for Calendar Server 7:

```
cd /opt/mysql/mysql
rm -rf data
rm -rf /var/lib/mysql
/opt/mysql/mysql/scripts/mysql_install_db --user=mysql
--ldata=/var/mysql
```

6. Create the `/etc/my.cnf` file with the following content.

```
[mysqld]
basedir = /opt/mysql/mysql
datadir = /var/mysql
default-storage-engine = InnoDB
character-set-server = utf8
transaction-isolation = READ-COMMITTED
```

7. Install the MySQL startup script if not already present. (First check to make sure that `/etc/init.d/mysql` does not already exist. If not, perform the following command.)

```
cp /opt/mysql/mysql/support-files/mysql.server /etc/init.d/mysql
```

8. Start MySQL.

```
/etc/init.d/mysql start
```

9. Change the MySQL root password and remove test databases.

```
/opt/mysql/mysql/bin/mysqladmin -u root password adminpass
/opt/mysql/mysql/bin/mysql_secure_installation
```

10. Answer "y" to all questions except "Change the root password."
    You do not need to change the root password because you have already done so. The `mysql_secure_installation` script:
    - Removes anonymous users
    - Disallows root login remotely
    - Removes test database and access to it
    - Reloads privilege tables
11. Create the MySQL user and caldav database.

```
/opt/mysql/mysql/bin/mysql -u root -p
Enter password: adminpass
mysql> CREATE DATABASE caldav CHARACTER SET = UTF8;
mysql> CREATE USER 'caldav'@'localhost' IDENTIFIED BY 'adminpass';
mysql> GRANT ALL ON caldav.* TO 'caldav'@'localhost';
mysql> CREATE DATABASE ischedule CHARACTER SET = UTF8;
mysql> GRANT ALL ON ischedule.* TO 'caldav'@'localhost';
mysql> exit
```

12. Configure MySQL to start automatically upon reboot.
    a. Check for a symbolic link to `S99mysql`.

```
ls -l /etc/rc3.d
```

    b. If there is no `S99mysql`, create a symbolic link.

```
ln -s /etc/init.d/mysql /etc/rc3.d/S99mysql
```

13. Make sure that you are `root` user.

```
su -
```

14. Set the `JAVA_HOME` environment variable.
    For example, if you are running `csh`:

```
setenv JAVA_HOME /usr/jdk/latest
```

15. Change directories to where the configuration script was installed and run the Calendar Server 7 configuration script:

```
cd /opt/sun/comms/davserver/sbin
./init-config
```

16. Click Next at the Welcome page.

17. Accept the default for the Directory to store Configuration and Data Files:
    `/var/opt/sun/comms/davserver`
18. Configure Calendar Server 7.
    The installation script prompts for a series of options. The following table shows how to respond to the configuration options:
    Table 12 Values for Calendar Server 7 Update 3 configure Script

Option	[Default Value]	Enter
Host Name	[wireless]	*accept default*
DNS Domain Name	[comms.beta.com]	*accept default*
MySQL or Oracle Database	[MySQL]	*accept default*
MySQL Server Host Name	[localhost]	*accept default*
MySQL Server Port Number	[3306]	*accept default*
MySQL Database User ID	[caldav]	*accept default*
MySQL Database User Password	NA	**adminpass**
Calendar Database Name	[caldav]	*accept default*
iSchedule Database Name	[ischedule]	*accept default*
Directory to Store Documents	[/var/opt/sun/comms/davserver/db]	*accept default*
Application Server Install Directory	[/opt/SUNWappserver]	**/opt/SUNWappserverCS**
Application Server Domain Directory	[/opt/SUNWappserverCS/domains/domain1]	*accept default*
Application Server Document Root Directory	[/opt/SUNWappserverCS/domains/domain1/docroot]	*accept default*
Appserver Instance Name	[server]	*accept default*

Virtual Server Identifier	[server]	*accept default*
Instance HTTP Port	[8080]	**8080**
Administration Server Port	[4848]	**8800**
Administrator User ID	[admin]	*accept default*
Administrator Password	NA	**adminpass**
Secure Administration Server Instance	checked	*accept default (Is Secure)*
URI Path	[/]	**/davserver**
Directory Server LDAP URL	[ldap://wireless.comms.beta.com:389]	*accept default*
Bind DN	[cn=Directory Manager]	*accept default*
Bind Password	NA	**adminpass**
DC Tree suffix	[o=isp]	*accept default*
LDAP Unique ID Attribute	[davuniqueid]	*accept default*
Default Domain Name	[comms.beta.com]	*accept default*
Organization DN	[o=comms.beta.com,o=isp]	*accept default*
SMTP Server Host Name	[wireless.comms.beta.com]	*accept default*
SMTP Server Port Number	[25]	*accept default*
Calendar Administrator User ID	[calmaster]	*accept default*
Calendar Administrator User Password	NA	**adminpass**

19. Click the "Configure Now" button to configure Calendar Server 7.
20. After the configuration is complete, click Next to continue.
21. Click Next to continue.
22. Click Close to quit the Calendar Server configuration wizard.
23. Restart GlassFish Server.

```
cd /opt/SUNWappserverCS/bin
./asadmin stop-domain domain1
./asadmin start-domain domain1
```

24. Configure a Lightning client to use this new server.
    The Calendar Server URL format for your test user is:

    ```
    http://<fully-qualified-server-name>:8080/davserver/dav/home/<usernam
    ```

    For example:

    ```
    http://wireless.comms.beta.com:8080/davserver/dav/home/jdoe/calendar/
    ```

    Alternatively, you can configure Apple iCal to access this calendar. The server URI is as follows:

    ```
    http://<fully-qualified-server-name>:8080/davserver/dav/principals/<u
    ```

    For example:

    ```
    http://wireless.comms.beta.com:8080/davserver/dav/principals/jdoe/
    ```

25. To enable subscription to other user's calendars in your own domain, create an ACI file with the following contents, making sure that the entry for Access Control Instructions (ACI) is on a single line:

    ```
    dn: o=isp
    changetype: modify
    add: aci
    aci: (target="ldap:///($dn),o=isp")
    (targetattr!="userPassword")
    (targetfilter=(|(objectClass=icscalendaruser)(objectclass=icscalendarresc
    3.0; acl "CS User search access to all users and resources in own domain
    - product=davserver,class=install,num=3,version=1";
    allow (read,search)
    userdn="ldap:///[$dn],o=isp??sub?(objectclass=icscalendaruser)";)
    ```

26. Run the `ldapmodify` command on this ACI file (named `acifile` in this example).

    ```
    ldapmodify -D "cn=Directory Manager" -w adminpass -f acifile
    ```

27. Continue with the next section.

Configuring Instant Messaging

This section shows you how to run the Instant Messaging configurator script.

To Configure Instant Messaging

1. Change to the directory where the configuration script was installed then run the configurator script.
   For example:

```
cd /opt/sun/comms/im/sbin
./configure
```

The Components Selection page appears.

2. Verify that both Server components and Client components are selected for configuration, then click Return to continue.
3. Hit Enter whenever prompted whether to go back to the previous panel.
   The configuration wizard prompts for a series of options.
4. Respond to the series of options as follows.
   After each question, you are prompted if you want to go back to previous panel. Always accept the default answer of no unless you need to make a change to a previous answer.
   The following table shows how to respond to the configuration options:
   Table 13 Values for Instant Messaging configure Script

Option	[Default Value]	Enter:
Use AM for Single-Sign-On	[no]	*accept default*
Use AM for Policy	[no]	*accept default*
Where to Store IM User Data	[On the file system]	**In the directory**
Runtime User ID	[inetuser]	*accept default*
Runtime Group ID	[inetgroup]	*accept default*
Runtime Directory	[/var/opt/sun/comms/im]	*accept default*
Create User ID	[Choose New]	**Create User ID**
Create Runtime Directory	[Choose New]	**Create Directory**
Domain Name	[comms.beta.com]	*accept default*
XMPP Port	[5222]	*accept default*
Multiplexed XMPP Port	[45222]	*accept default*
Gateway Connector Port	[55222]	*accept default*
XMPP Server Port	[5269]	*accept default*
Disable Server (enable only multiplexor)	[no]	*accept default*
Enable SSL	[yes]	**no**
LDAP Host Name	[wireless.comms.beta.com]	*accept default*
LDAP Port Number	[389]	*accept default*
SSL Enabled	[no]	*accept default*
Base DN	[dc=comms,dc=beta,dc=com]	**o=isp**
Bind DN	NA	**cn=Directory Manager**
Bind Password	NA	**adminpass**
Enable Email Integration	[yes]	*accept default*
SMTP Server	[wireless.comms.beta.com]	*accept default*
Enable Email Archiving	[yes]	*accept default*

Deploy IM HTTP Gateway	[yes]	**no**
Deploy IM IMPS Gateway	[yes]	**no**
Enable Calendar Agent	[no]	**yes**
Enable local component	[no]	**yes**
Select type of notification	[JMQ]	*accept default*
XMPP server Hostname	[wireless.comms.beta.com]	*accept default*
XMPP server port	[5269]	*accept default*
JMQ Username	NA	**guest**
JMQ Password	NA	**guest**
Notification Server Hostname	[localhost]	**wireless.comms.beta.com**
Notification Server Port	[7676]	**47676**
Topic	[DavNotificationTopic]	*accept default*
Enable SMS Gateway	[no]	*accept default*
Enable local component	[no]	*accept default*
Enable MSN Gateway	[no]	*accept default*
Enable local component	[no]	*accept default*
Enable AIM Gateway	[no]	*accept default*
Enable local component	[no]	*accept default*
Enable YIM Gateway	[no]	*accept default*
Enable local component	[no]	*accept default*
Enable Facebook Gateway	[no]	*accept default*
Start Services After Successful Configuration	[yes]	**no**
Start Services When System starts	[yes]	**no**

The Instant Messaging configuration begins.

5. When the configuration is complete, at the Configuration Summary page, select **Done** to exit.
6. To configure Instant Messaging Server for integration with Convergence, first make a backup copy of the configuration:

```
cd /opt/sun/comms/im/config
cp iim.conf.xml iim.conf.xml.orig
```

7. Next, add the new httpbind and avatar component JIDs to this configuration by running the following commands:

```
cd /opt/sun/comms/im/sbin
./imconfutil set-prop -c /opt/sun/comms/im/config/iim.conf.xml
iim_agent.enable=true
./imconfutil add-component -c /opt/sun/comms/im/config/iim.conf.xml
id=httpbind jid=wireless.httpbind.comms.beta.com password=adminpass
./imconfutil add-component -c /opt/sun/comms/im/config/iim.conf.xml
id=avatar jid=wireless.avatar.comms.beta.com password=adminpass
```

Note
The `httpbind.jid` and `avatar.jid` strings are in the form *host*`.httpbind.`*domain* and *host*`.avatar.`*domain* respectively as this is the value auto-generated during the upcoming Convergence configuration stage.

8. Enable Hosted Domain Schema 2 and listener prop support by making the following changes:

```
./imconfutil set-prop -c /opt/sun/comms/im/config/iim.conf.xml
iim_ldap.useidentityadmin=false iim_server.usesso="0"
iim.policy.modules=iim_ldap_schema2 iim.userprops.store="ldap"
iim_ldap.schema2.domain_config_root="o=isp"
./imconfutil -u set-listener-prop -c
/opt/sun/comms/im/config/iim.conf.xml s2s
protocols=s2s,component,c2s
```

9. Start the Instant Messaging server.

```
/opt/sun/comms/im/sbin/imadmin start
```

10. If you choose to monitor the SMF logs, they are located in the `/var/svc/log` directory. The log name is `application-sunim:default.log`.
11. Continue with the next section.

Configuring Indexing and Search Service

1. Enable the NTP service for the Messaging Server and ISS host machine.
   a. Check if the NTP service is enabled.

```
# svcs ntp
STATE STIME FMRI
disabled Aug_16 svc:/network/ntp:default
```

   b. If the NTP service is disabled, enable it as follows then verify that the service is running.

```
# /usr/sbin/svcadm enable ntp
# svcs ntp
STATE STIME FMRI
maintenance 16:35:43 svc:/network/ntp:default
```

2. Configure the IMQ broker by editing the `imqbrokerd.conf` file.

```
vi /etc/imq/imqbrokerd.conf
```

3. Type in the following configuration. (It is possible that the file already contains some of this information.)

```
AUTOSTART=YES
ARGS=-vmargs -Xmx1024m
RESTART=YES
```

4. Check for the existence of the `/var/imq/instances/imqbroker/props/config.properties` file. If it does not exist, start the IMQ broker to generate it.

```
cd /var/imq/instances/imqbroker/props
/var/imq/instances/imqbroker/props: No such file or directory
nohup /etc/init.d/imq start
```

5. Edit the `/var/imq/instances/imqbroker/props/config.properties` file.

```
cd /var/imq/instances/imqbroker/props
vi config.properties
```

6. At the bottom of this file, make sure the following lines are included:

```
imq.portmapper.backlog=-1
imq.destination.DMQ.truncateBody=true
imq.autocreate.reaptime=7200
imq.autocreate.destination.maxNumProducers=-1
imq.autocreate.destination.limitBehavior=REMOVE_OLDEST
imq.jms.max_threads=2000
```

   For an explanation of these changes, see Message Queue Broker config.properties Changes for Indexing and Search Service.

7. After making these changes, save and exit the file.
8. Restart the IMQ broker to pick up the changes.

```
/etc/init.d/imq stop
nohup /etc/init.d/imq start
```

9. Create the JMQ user by using the `imqusermgr` command.

```
cd /usr/bin
./imqusermgr add -u jmquser -p adminpass -g user
User repository for broker instance: imqbroker
User jmquser successfully added.
```

10. Reset the default admin account password.

```
./imqusermgr update -u admin -p adminpass
User repository for broker instance: imqbroker
Are you sure you want to update user admin? (y/n)[n] y
User admin successfully updated.
```

11. Set the `local.store.notifyplugin` `configutil` parameter to include a JMQ notification named `index`.

```
cd /opt/sun/comms/messaging64/bin
./configutil -o local.store.notifyplugin
```

If no response is returned, execute the following command:

```
./configutil -o local.store.notifyplugin -v
'/opt/sun/comms/messaging64/lib/libjmqnotify$index'
```

If a response such as `libibiff$ms-internal$` or `lib/libibiff$ms-internal$` is returned, append the new JMQ notification to the existing one, as in the following examples:

```
./configutil -o local.store.notifyplugin -v
'libibiff$ms-internal$libjmqnotify$index'
./configutil -o local.store.notifyplugin -v
'lib/libibiff$ms-internal$lib/libjmqnotify$index'
```

12. Configure the index JMQ notification plugin by using the `configutil` command.

```
./configutil -o local.store.notifyplugin.index.annotatemsg.enable
-v 0
./configutil -o local.store.notifyplugin.index.changeflag.enable -v
1
./configutil -o local.store.notifyplugin.index.copymsg.enable -v 1
./configutil -o local.store.notifyplugin.index.debuglevel -v 0
./configutil -o local.store.notifyplugin.index.deletemsg.enable -v
0
./configutil -o local.store.notifyplugin.index.destinationtype -v
queue
./configutil -o local.store.notifyplugin.index.expungemsg.enable -v
1
./configutil -o local.store.notifyplugin.index.jmqhost -v 127.0.0.1
./configutil -o local.store.notifyplugin.index.jmqport -v 7676
./configutil -o local.store.notifyplugin.index.jmqpwd -v adminpass
./configutil -o local.store.notifyplugin.index.jmqtopic -v INDEXMS
./configutil -o local.store.notifyplugin.index.jmquser -v jmquser
./configutil -o local.store.notifyplugin.index.loguser.enable -v 0
./configutil -o local.store.notifyplugin.index.maxbodysize -v
262144
./configutil -o local.store.notifyplugin.index.maxheadersize -v
16384
./configutil -o local.store.notifyplugin.index.msgflags.enable -v 0
./configutil -o local.store.notifyplugin.index.msgtypes.enable -v 0
./configutil -o local.store.notifyplugin.index.newmsg.enable -v 1
./configutil -o local.store.notifyplugin.index.noneinbox.enable -v
1
./configutil -o local.store.notifyplugin.index.persistent -v 0
./configutil -o local.store.notifyplugin.index.priority -v 4
./configutil -o local.store.notifyplugin.index.purgemsg.enable -v 0
./configutil -o local.store.notifyplugin.index.readmsg.enable -v 0
./configutil -o local.store.notifyplugin.index.updatemsg.enable -v
1
./configutil -o local.store.notifyplugin.index.ttl -v 3600000
```

13. Restart Messaging Server and verify that the JMQ index plugin is working.

```
./stop-msg
./start-msg

cat /opt/sun/comms/messaging64/log/imap
```

You should see entries similar to these:

```
[28/May/2013:22:35:35 +0000] mailhost imapd[13996]: General Notice: JMQ
notifica tions enabled: index
[28/May/2013:22:35:35 +0000] mailhost imapd[13996]: General Notice:
jmqNotify JM Q initialization MQCreateConnection [dest : index] [host :
127.0.0.1]
[28/May/2013:22:35:35 +0000] mailhost imapd[13996]: General Notice:
jmqNotify JM Q initialization MQCreateSession [dest : index] [host :
127.0.0.1]
[28/May/2013:22:35:35 +0000] mailhost imapd[13996]: General Notice:
jmqNotify JM Q initialization MQCreateDestination [dest : index] [host :
127.0.0.1] [topic : INDEXMS]
[28/May/2013:22:35:35 +0000] mailhost imapd[13996]: General Notice:
jmqNotify JM Q initialization MQCreateMessageProducerForDestination
[dest : index] [host : 12 7.0.0.1]
[28/May/2013:22:35:35 +0000] mailhost imapd[13996]: General Notice:
jmqNotify JM Q initialization MQCreateTextMessage [dest : index] [host :
127.0.0.1]
[88/May/2013:15:11:07 -0700] mailhost imapd[19507]: General Warning:
Oracle Communications Messaging Server IMAP4 7u5-28.21(7.0.5.28.0) 64bit
(built Apr 8 2013) starting up
```

14. Verify that the IMQ broker started up cleanly.

```
cat /var/imq/instances/imqbroker/log/log.txt
```

You should see entries similar to these:

```
----------
[28/May/2013:22:35:35 UTC] [B1065]: Accepting:
jmquser@127.0.0.1:58318->jms:57672. Count: service=1 broker=1
[28/May/2013:22:35:36 UTC] [B1065]: Accepting:
jmquser@127.0.0.1:58324->jms:57672. Count: service=2 broker=2
[28/May/2013:22:35:37 UTC] [B1065]: Accepting:
jmquser@127.0.0.1:58330->jms:57672. Count: service=3 broker=3
```

15. Verify that the Messaging Server has producers connected to `INDEXMS`.

```
# imqcmd list dst
Username: admin
Password: adminpass

Listing all the destinations on the broker specified by:

-------------------------
Host Primary Port
-------------------------
localhost 7676

----------------------------------------------------------------------
Type State Producers Consumers Msgs
Total Wildcard Total Wildcard Count Remote UnAck Avg Size
----------------------------------------------------------------------
Queue RUNNING 9 - 0 - 0 0 0 0.0
mq.sys.dmq Queue RUNNING 0 - 0 - 0 0 0 0.0

Successfully listed destinations.
```

16. Prepare the Messaging Server to forward IMAP SEARCH queries to Indexing and Search Service.

```
cd /opt/sun/comms/messaging64/bin
./configutil -o service.imap.indexer.hostname -v
wireless.comms.beta.com
./configutil -o service.imap.indexer.port -v 80
./configutil -o service.imap.indexer.enable -v 0
./configutil -o store.indexeradmins -v indexeradmin
```

17. Restart Messaging Server.

```
./stop-msg
./start-msg
```

18. Change directories to where the configuration script was installed and run the ISS configuration script:

```
cd /opt/sun/comms/jiss/bin
./setup
```

The installation script prompts for a series of options. The following table shows how to respond to the configuration options:

Table 14 Values for Indexing and Search configure Script

Option	[Default Value]	Enter
Cluster configuration (iss.cluster.install)	[standalone]	*accept default*
Fully qualified domain name of system (hostname)	NA	**wireless.comms.beta.com**

Instance name of the installation for an indexing node, for example, iss1 (instance.name)	NA	**iss1**
User under which all JISS services will run (iss.user)	[jiss]	*accept default*
Group under which all JISS services will run (iss.group)	[jiss]	*accept default*
Location to store the Lucene indexes (iss.store.dir)	[/var/opt/sun/comms/jiss/index]	*accept default*
Location of attachment data (iss.data.dir)	[/var/opt/sun/comms/jiss/attach]	*accept default*
Location of JISS log files (iss.log.dir)	[/var/opt/sun/comms/jiss/logs]	*accept default*
Location of Java (java.home)	[/usr/jdk/latest]	*accept default*
User/Group Directory Server format (mail.ldap)	NA	**wireless.comms.beta.com:38**
User/Group Base DN format (mail.basedn)	NA	**o=isp** (normally autodetected)
Schema Level (mail.schemalevel)	NA	**2** (normally autodetected)
User/Group Default Domain (mail.defaultdomain)	NA	**comms.beta.com**
User/Group Directory Manager DM (mail.searchbind)	[cn=Directory Manager]	*accept default*
User/Group Directory Manager password (mail.searchbind.password)	NA	**adminpass**
Messaging Server store hostname (mail.server)	NA	**wireless.comms.beta.com**
Comma-delimited list of mail server IPs (mail.server.ip)	NA	**Enter IP address of wireless.comms.beta.com such as 192.168.49.94**
Read-only store admin username (mail.imap.admin.username)	[indexeradmin]	*accept default*
Read-only store admin password (mail.imap.admin.password)	NA	**adminpass**
Messaging Server IMAP port (mail.imap.port)	[143]	*accept default*
Messaging Server JMQ broker (mail.imq)	NA	**wireless.comms.beta.com:76**
JMQ notification user (mail.imq.user)	[jmquser]	*accept default*

JMQ notification user's password (mail.imq.password)	NA	**adminpass**
Directory location of the appserver (appserv.dir)	[/opt/SUNWappserver]	*accept default*
Appserver web port (appserv.web.port)	[8080]	**80**
Appserver admin port (appserv.admin.port)	[4848]	*accept default*
Appserver admin user (appserv.admin.user)	[admin]	*accept default*
Appserver admin user's password (appserv.admin.password)	NA	**adminpass**
Deploy the SearchUI web application (appserv.searchui.enabled)	[false]	**true**
JISS JMQ broker hostname(s) list, that is host:7676,host2:7677 (imq.host)	NA	**wireless.comms.beta.com:76**
Username for JISS JMQ broker (iss.imq.user)	[jmquser]	*accept default*
Password for JISS JMQ user (iss.imq.password)	NA	**adminpass**
Password for admin user on JISS JMQ broker (iss.imq.admin.password)	NA	**adminpass**
File based or Directory Server based JNDI lookups (jndi.type)	NA	**ldap**
JISS Directory Server host list host:port,host2:port2 (ldap.host)	NA	**wireless.comms.beta.com:38**
JISS Directory Manager DN format (java.naming.security.principal)	[cn=Directory Manager]	*accept default*
JISS Directory Server password (ldap.password)	NA	**adminpass**
Storeui access method (iss.storeui.access.method)	[disk]	*accept default*
Watcher service enabled on this host (iss.watcher.enabled)	[false]	*accept default*

19. Restart GlassFish Server.

```
cd /opt/SUNWappserver/bin
./asadmin stop-domain domain1
./asadmin start-domain domain1
```

20. Bootstrap existing users to create their index by using the following `issadmin.sh --bootstrap` command.

```
cd /opt/sun/comms/jiss/bin
./issadmin.sh --bootstrap --user <username> --host <hostname>
--runoptimizer true
```

In this example, type the following command:

```
cd /opt/sun/comms/jiss/bin
./issadmin.sh --bootstrap --user jdoe --host
wireless.comms.beta.com --runoptimizer true
```

21. Test that search works by typing the URL of the Search UIs in your browser and log in as a user.
    - The URL for the Restful service is: `http://`*fully-qualified-server-name*`/rest`
      For this example, type:

      ```
      http://wireless.comms.beta.com/rest
      ```

    - The URL for the Searchui is: `http://`*fully-qualified-server-name*`/searchui`
      For this example, type:

      ```
      http://wireless.comms.beta.com/searchui
      ```

    - In each case, log in as user `jdoe`. The password is `demo`.
22. Configure Messaging Server to send searches to Indexing and Search Service:

```
cd /opt/sun/comms/messaging64/bin
./configutil -o service.imap.indexer.enable -v 1
./stop-msg
./start-msg
```

23. Increase the number of GlassFish request processing threads to support Convergence and Indexing and Search Service in the same web container.
    a. Find the number of CPUs on the system.

    ```
    mpstat | grep -v CPU | wc -l
    ```

    b. Use that number to increase GlassFish processing threads.

    ```
    cd /opt/SUNWappserver/bin
    ./asadmin set
    server.http-service.request-processing.thread-count=<2 x
    number of CPUs from mpstat command>
    ```

    c. When prompted, type the `admin` user and `adminpass` password.

```
Please enter the admin user name: admin
Please enter the admin password: adminpass
```

24. Configure ISS to autoprovision, autobootstrap, and autosync users.
    a. Change to the `jiss/etc` directory, make a copy of the `jiss.conf` file, then edit the file.

    ```
    cd /opt/sun/comms/jiss/etc
    cp jiss.conf jiss.conf.orig
    vi jiss.conf
    ```

    b. Set the following configuration parameters:

    ```
    iss.autoprovision.enabled = true
    iss.indexsvc.periodic.autosync.enabled = true
    iss.indexsvc.periodic.autobootstrap.enabled = true
    iss.indexsvc.periodic.autosync.count = 2
    ```

    Note
    Set the `iss.indexsvc.periodic.autosync.count` parameter to the number of user accounts that should be synced every five minutes. If you want to ensure an autosync every 12 hours for each user in a 288 user deployment, you can set this value as shown.

25. Refresh ISS.

    ```
    /opt/sun/comms/jiss/bin/issadmin.sh --refresh
    ```

26. Restart GlassFish Server.

    ```
    cd /opt/SUNWappserver/bin
    ./asadmin stop-domain domain1
    ./asadmin start-domain domain1
    ```

27. Continue with the next section.

Configuring Convergence

This section describes how to configure Convergence by using the `init-config` command.

1. Become the `root` user in the root directory

   ```
   su -
   ```

2. Set the `JAVA_HOME` environment variable.
   For example, to set it for the C shell (`csh`):

   ```
   setenv JAVA_HOME /usr/jdk/latest
   ```

3. Run the Convergence configuration script.

```
cd /opt/sun/comms/iwc/sbin
./init-config
```

4. Read the Software Requirements and click Next to continue.
5. Accept the default for the Directory to store Configuration and Data Files:
   `/var/opt/sun/comms/iwc`
   The Components Selection page appears.
6. Verify that Mail Service, Calendar Service, and Instant Messaging Service are selected for configuration, then click Next to continue.
   The configuration wizard prompts for a series of options. The following table shows how to respond to the configuration options:
   Table 15 Values for Convergence configure Script

Option	[Default Value]	Enter:
Host Name	[wireless]	*accept default*
DNS Domain Name	[comms.beta.com]	*accept default*
GlassFish Server Install Directory	[/opt/SUNWappserver]	*accept default*
Domain Directory	[/opt/SUNWappserver/domains/domain1]	*accept default*
Document Root Directory	[/opt/SUNWappserver/domains/domain1/docroot]	*accept default*
Application Server Instance Name	[server]	*accept default*
Virtual Server Identifier	[server]	*accept default*
Server Instance HTTP Port	[8080]	**80**
Administration Server Port	[4848]	*accept default*
Administrator User ID	[admin]	*accept default*
Administrator Password	NA	**adminpass**
Secure Administration Server Instance	Checked	**Checked**
URI Path	[/iwc]	*accept default*
Enable Hosted Domain Support	checked	*accept default*
Directory Server LDAP URL	[ldap://wireless.comms.beta.com:389/]	*accept default*
Bind DN	[cn=Directory Manager]	*accept default*

Bind Password	NA	**adminpass**
DC Tree suffix	[o=isp]	*accept default*
Default Domain Name	[comms.beta.com]	*accept default*
Webmail Server Host Name	[wireless.comms.beta.com]	*accept default*
Webmail Server Port Number	[8990]	*accept default*
Webmail Admin User ID	[admin]	*accept default*
Admin Password	NA	**adminpass**
Calendar Server Version	[7]	*accept default*
Calendar Server Host Name	[wireless.comms.beta.com]	*accept default*
Calendar Server Port	[80]	**8080**
Calendar server running in secure mode	[unchecked]	*accept default* (Not secure)
Service URI	[/davserver/wcap]	*accept default*
Access in SSL mode	unchecked	*accept default (Not secure)*
Administrator User ID	[calmaster]	*accept default*
Administrator User Password	NA	**adminpass**
Instant Messaging Server Domain Name	[comms.beta.com]	*accept default*
Instant Messaging Server Host Name	[wireless.comms.beta.com]	*accept default*
Server Port	[5269]	*accept default*
httpbind Component JID	[wireless.httpbind.comms.beta.com]	*accept default*
Password	NA	**adminpass**
Avatar Component JID	[wireless.avatar.comms.beta.com]	*accept default*
Password	NA	**adminpass**
Convergence Administrator Username	[admin]	*accept default*

Password	NA	**adminpass**

7. Click Configure Now to configure Convergence.
8. Click Next when the configuration is complete.
9. Click Next to continue.
10. Click Close to quit the Convergence configuration wizard.
11. Configure Convergence to use Indexing and Search Service:

```
cd /opt/sun/comms/iwc/sbin
./iwcadmin -w adminpass -o ISS.enable -v true
./iwcadmin -w adminpass -o ISS.host -v wireless.comms.beta.com
./iwcadmin -w adminpass -o ISS.port -v 80
./iwcadmin -w adminpass -o ISS.proxyadminid -v indexeradmin
./iwcadmin -w adminpass -o ISS.proxyadminpwd -v adminpass
```

12. Restart GlassFish Server.

```
cd /opt/SUNWappserver/bin
./asadmin stop-domain domain1
./asadmin start-domain domain1
```

13. In your web browser, open a URL for Convergence and log in as a test user.
    The URL for Convergence is:
    `http://`*fully-qualified-hostname*`/iwc`
    In this example, type:

```
http://wireless.comms.beta.com/iwc
```

At this point, you have completed installing and configuring the single host deployment example. You should now try out the system by conducting tasks such as:

- Creating users
- Logging in as various users and using email, calendaring, instant messaging, and address book functions
- Getting familiar with Communications Suite services and architecture

For more information on these topics, see the documentation at the Communications Suite wiki.

Creating Additional User Accounts and Groups

This section describes how to create additional users accounts and groups.

To Create Users and Groups using the CLI

The following example shows how to create two new users (`demo1` and `demo2`) with the password `demo` using the Delegated Administrator command-line utility and also how to create a mailing and calendar group (`Demostaff@comms.beta.com`) consisting of the newly created users.

1. Run the following Delegated Administrator commands.

```
/opt/sun/comms/da/bin/commadmin user create -D admin -F Demo -l demo1 -L
One -d comms.beta.com -W demo -S mail,cal,im -E demo1@comms.beta.com -H
wireless.comms.beta.com -B wireless.comms.beta.com

/opt/sun/comms/da/bin/commadmin user create -D admin -F Demo -l demo2 -L
Two -d comms.beta.com -W demo -S mail,cal,im -E demo2@comms.beta.com -H
wireless.comms.beta.com -B wireless.comms.beta.com

/opt/sun/comms/da/bin/commadmin group create -D admin -G Demostaff -d
comms.beta.com -S mail -E Demostaff@comms.beta.com -H
wireless.comms.beta.com -o calmaster -m demo1 -m demo2
```

Bootstrap the users you just added to create their index by using the following commands:

```
cd /opt/sun/comms/jiss/bin
./issadmin.sh --bootstrap --user demo1 --host
wireless.comms.beta.com --runoptimizer true
./issadmin.sh --bootstrap --user demo2 --host
wireless.comms.beta.com --runoptimizer true
```

Note
Creating groups by using the Delegated Administrator command-line interface guarantees that these groups will be recognized as LDAP groups that Instant Messenger can search for. They can also be used to send email to the entire group.

To Use the Delegated Administrator GUI to Create Users

An alternative to using the Delegated Administrator command-line utility to create users is to use the Delegated Administrator web-based GUI.

Prior to using Delegated Administrator, check the `resource.properties` file to make sure users will be created using options consistent with your usage. Because this example uses a hosted domain scenario, you do not need to edit this file to make changes. If you do want to make changes, perform the following steps.

1. Change to the `/var/opt/sun/comms/da/WEB-INF/classes/sun/comm/cli/server/servlet` directory and edit the `resource.properties` file.
   - The default settings for `servicepackage` refresh rates are:

     ```
     servicepackage-ttlhours=5
     servicepackage-ttlminutes=0
     ```

     These parameters establish the time between service packages refreshes. In this demo scenario, service packages do not change very often so there is no need to refresh them every five minutes. Instead, change the rate to refresh service packages every five hours. Making this change improves Delegated Administrator performance. If you later decide to change the refresh rate to 20 hours, set `servicepackage-ttlhours` to 20, that is, `servicepackage-ttlhours=5`.

   - The default setting for calender ID type is set using the `switch-caltype` variable as follows:

     ```
     switch-caltype=hosted
     ```

The caltype can be either `hosted` or `legacy`. When `caltype` is set to `hosted`, users that are created through Delegated Administrator are created as *uid@domain* rather than *uid*.

2. If you make any changes to the `resource.properties` file, restart GlassFish Server.
3. The first time you use Delegated Administrator, you must add service packs to the organization that contains your users:
   - In your web browser, open the URL for Delegated Administrator.
     In this example, type:

     ```
     http://wireless.comms.beta.com/da/DA/Login
     ```

4. Log in as `admin`. The password is `adminpass`.
   - Click the check box next to `comms.beta.com organization`, then click the Allocate Service Package button.
     The Allocate Service Package window appears with a list of service packages organized within a set of three pages. Near the top of this list is a Compare button. To the right of this button is a button that maps the three pages into a single view.
   - Click the Single Page button.
   - Select the desired service packages then click Next.
     The `earth`, `mars`, `mercury`, and `venus` choices are appropriate for this example, because they have mail and calendar services enabled. If you want to include Instant Messaging, choose the `mailcalendarimsample` package. Each service package has a different mail quota.
   - Accept the Mail Service defaults, then click Next.
   - If you chose a service package that contains Calendar, type the Calendar Host **`wireless.comms.beta.com`** and **`No`** for Anonymous Login. Then click Next.
   - Select the quantity of each service pack desired then click Next.
     A quantity of 100 is appropriate for this example.
   - Review your choices and click Finish to create the service packages.
     Once the service packs have been allocated for the domain, you can add users to the domain.
   - Click the domain link. That is, click `comms.beta.com`.
   - Click the New button to create a new user within this domain.
   - Type a First Name (such as **`Demo`**), a Last Name (such as **`Five`**), a Display Name (such as **`Demo Five`**), then click Next.
   - You do not need to type postal information. Click Next again.
   - Select a service pack for this user, for example, `earth`, then click Next.
   - Type the email address, for example, **`demo5@comms.beta.com`**. The Mail Delivery Option should be Local Inbox. Leave the remaining fields blank then click Next.
   - Choose your calendar preferences, select your preferred timezone, then click Next.
   - If you selected a service package that includes Instant Messaging, you can leave the "User Roster" entry box blank.
   - Type the Login ID and Password then click Next.
     In this example, Login ID is **`demo5`** and password is **`demo`**.
   - Verify the user information then click Finish to create the user.

Known Issues and Limitations

For more information about known issues, see the Release Notes.

Message Queue Broker config.properties Changes for Indexing and Search Service

Message Queue Broker config.properties Changes for Indexing and Search Service

The following information provides more details on the changes made to the `config.properties` file for Indexing and Search Service as part of the Single Host Deployment Example.

- `imq.portmapper.backlog=-1`
  When multiple Port Mapper requests are received concurrently, they are stored in an operating system backlog while awaiting action. The `imq.portmapper.backlog` property specifies the maximum number of such backlogged requests. When this limit is exceeded, any further requests are rejected until the backlog is reduced. For more information, see http://docs.oracle.com/cd/E19575-01/821-0027/gheau/index.html.

- `imq.destination.DMQ.truncateBody=true`
  When set to `true`, this parameter specifies to truncate the body of a dead message. For more information, see http://docs.oracle.com/cd/E19587-01/821-0029/aeqdj/index.html.

- `imq.autocreate.reaptime=7200`
  Specifies the delay, in seconds, before which auto-created destinations are removed from the system when they no longer have consumers nor contain messages. A smaller value means that memory reclamation takes place more often. For more information, see http://docs.oracle.com/cd/E19575-01/821-0027/6nl40dsor/index.html#gbnof.

- `imq.autocreate.destination.maxNumProducers=-1`
  Specifies the maximum number of message producers for destination. When this limit is reached, no new producers can be created. A value of `-1` denotes an unlimited number of producers. For more information, see http://docs.oracle.com/cd/E19575-01/821-0027/6nl40dsor/index.html#gbnof .

- `imq.autocreate.destination.limitBehavior=REMOVE_OLDEST`
  Specifies the broker behavior when memory-limit threshold reached. In this case, the value causes the oldest messages to be thrown out. For more information, see http://docs.oracle.com/cd/E19575-01/821-0027/6nl40dsor/index.html#gbnof.

- `imq.jms.max_threads=2000`
  Specifies the maximum numbers of threads the broker can run.

Chapter 22. Communications Suite on a Single Host (Linux)

Deployment Example: Oracle Communications Unified Communications Suite on a Single Host (Linux) Version 7 Update 4

This deployment example describes how to install Communications Suite 7 Update 4 software on one computer for a functioning deployment. This document is intended for any evaluator, system administrator, or installation technician who wants to install and evaluate the services delivered by these components. Communications Suite 7 Update 4 supports both Oracle Linux 5 and Red Hat Enterprise Linux 5, 64-bit. These instructions apply to both operating systems.

> **Note**
> Installing the back-end messaging, calendar, instant messaging, and address book services on the same system is not the optimal configuration, nor does it provide the best performance. This example deployment is not intended for production purposes. Use this configuration for evaluation and for training purposes only. Performance is better if you install services on separate machines. For more information on deploying Communications Suite, see Communications Suite Deployment Planning Guide.

Topics:

- About This Deployment Example
- Installing the Example
- Installing Communications Suite Components
- Configuring Communications Suite Components
- Enabling Service Start-up Upon Boot
- Creating Hosted Domains
- Single Host Installation Tuning Tips
- Known Issues and Limitations

About This Deployment Example

This section provides an overview of this deployment scenario, the hardware and software used, and the procedures you follow to install, configure, and use this deployment.

This section contains the following topics:

- Installation Overview
- Implementation Specifications for This Example
- Installation Time Estimates
- Installation Notes and Recommendations
- Summary of Installation and Configuration

Installation Overview

This scenario results in a functioning deployment suited for the evaluation and testing of Oracle Communications Unified Communications Suite 7 Update 4 on Oracle Linux 5. These instructions are not

intended to act as a replacement for the individual component documentation, but to merely guide the evaluator through an initial installation.

What Components Are Installed?

This example guides you through installing the following Communications Suite and pre-requisite components:

- Messaging Server 7 Update 5 Patch 28
- Calendar Server 7 Update 3 Patch 10
- Instant Messaging 9 Patch 3
- Directory Server Enterprise Edition 11gR1
- GlassFish Server 2.1.1 Patch 20 with HADB support
- Delegated Administrator 7 Patch 7
- Convergence 2 Patch 6
- Indexing and Search Service 1 Update 4 Patch 16
- MySQL 5.5.28 or later, but *not* MySQL 5.5.29; for new installations, download the most recent version, which at the time of this writing is 5.5.31.
- Java SE 7u21

The example installation in this document uses the following data that you change according to your installation and test machine:

- Domain name: `comms.beta.com`
- Host name: `demo` (running Oracle Linux 5 64-bit)
- Fully qualified (external) host name: `demo.comms.beta.com`
- Password: `adminpass` used for all administrative accounts

This example installs all of the software on a single system. Adjust host names accordingly if you install the components on multiple systems.

Recommended Ports

For convenience, this example uses mostly a set of recommended ports. If you use different ports, be sure to make the changes consistently throughout the installation. For example, this document uses port 4848 for the GlassFish Server admin port. If you decide to use port 3333 instead, be sure to change it everywhere 4848 occurs in the deployment example. See Table 3 for more information.

Implementation Specifications for This Example

This section describes implementation specifications for this example.

Table 1 Evaluation Host Hardware and Software Requirements

Component	Platform Requirement
CPU	x86 64-bit
RAM	2 Gbytes or more
Disk Space	2 Gbytes or more free disk space for installed software. 3 Gbytes additional disk space may be needed for temporary storage of Communications Suite zip files, not included in this calculation.
Software	Oracle Linux 5 64-bit
Users	Provisioned with test users.

Table 2 Client Software Requirements

Component	Platform Requirement
Browser	Firefox 5 or later, Internet Explorer 8.x or later (NO IE10 yet), Safari 5.x, Chrome 24 or later

Table 3 Server Configuration Information

Component	Install Notes	Install Location	Database Location	Port Name and Number
GlassFish Server 2.1.1	Installed separately. Required for Convergence, Delegated Administrator, and Instant Messaging.	`/opt/sun/appserver`	`/opt/sun/appserver /domains/domain1`	HTTP Port: 80 Admin Port: 4848 HTTPS Port: 443 JMQ Port: 37676
Directory Server 11gR1	Installed separately. This version is not included with Identity Management Suite.	`/opt/sun/directory`	`/var/opt/sun /directory/dsins1`	Directory Server Port: 389 LDAP Port: 389 SSL Port: 636
Messaging Server 7 Update 5	Installed by using Communications Installer. Additional configuration required.	`/opt/sun /comms/messaging64`	`/var/opt/sun /comms/messaging64`	Webmail Port (HTTP): 8990 SMTP Port: 25 POP Port: 110 IMAP Port: 143
Instant Messaging 9	Installed by using Communications Installer. Additional configuration required.	`/opt/sun/comms/im`	`/var/opt/sun/comms/im`	XMPP Port: 5222 Multiplexed XMPP Port: 45222 XMPP Server Port: 5269
GlassFish Server 2.1.1	Installed separately. Required by Calendar Server 7 Update 3	`/opt/sun /appservercs`	`/opt/sun/appservercs /domains/domain1`	HTTP Port: 8080 Admin Port: 8800 HTTPS Port: 8181 JMQ Port: 47676

MySQL 5.5.28, or later, but *not* MySQL 5.5.29	Installed separately. Required for Calendar Server 7 Update 3.	`/usr`	`/var/lib/mysql`	DB Port: 3306
Java	Installed separately. Required for UCS7U4	`/usr/jdk`	Not applicable	Not applicable
Calendar Server 7 Update 3	Installed by using Communications Installer. Additional configuration required.	`/opt/sun /comms/davserver`	`/var/opt/sun/comms /davserver`	HTTP Port: 8080 Admin Port: 8800 HTTPS: 8181 JMQ Port: 47676
GlassFish Message Queue	Installed by Communications installer. Additional configuration required.	`/etc/opt/sun/mq`	Not applicable	JMQ Port: 7676
Convergence 2	Installed by using Communications Installer. Additional configuration required.	`/opt/sun/comms /iwc`	`/var/opt/sun /comms/iwc`	Server Instance HTTP Port: 80 Administration Server Port: 4848
Indexing and Search Service 1 Update 4	Installed by using Communications Installer. Additional configuration required.	`/opt/sun /comms/jiss`	`/var/opt/sun /comms/jiss`	HTTP Port: 80 Admin Port: 4848 HTTPS Port: 443 IMAP Port: 143 JMQ Port: 7676 Directory Server Port: 389

Installation Time Estimates

The following table provides time estimates for installing this example.

Table 4 Installation Time Estimates

Activity	Estimate
Install Oracle Linux Operating System	2 hours
Install Communications Suite, GlassFish Server and Directory Server	1 hour
Configure software	3 hours
Total	6 hours (average)

As part of the configuration, you use Delegated Administrator to add users for Messaging Server, Calendar Server and Instant Messaging Server.

Installation Notes and Recommendations

1. Use `gzip -d` or `gunzip` to decompress the `*.gz` files.
2. Use `unzip` to decompress the `*.zip` files.

Expected User Input

During installation, your are prompted for various input. User input is indicated by text of the form **<user-input>**. The following table helps you plan for the types of information you must provide during installation.

Table 5 Information Input During Installation

User Input	User Input Action
<enter>	Just hit enter, but verify that the default value shown makes sense.
<sample-password>	Any password, minimum of 8 characters in length, suitable for evaluation purposes. These instructions assume that anywhere **<sample-password>** is specified, you will enter the same value each time.
<fully-qualified-hostname>	For example, assuming that the host name is `abc`, and the domain name is `demo.xyz.com`, then this value would be `abc.demo.xyz.com` .
<full-cookie-domainname>	For example, assuming that the full domain name is `demo.xyz.com`, then this value would be `.demo.xyz.com` (note the inclusion of the leading `".`").

Summary of Installation and Configuration

Installing and configuring this example involves the following high-level steps:

1. Preparing the system for Communications Suite
2. Running the Communications Installer to install the Communications Suite component software
3. Installing and configuring Directory Server
4. Installing Java (which is no longer shipped as part of the Communications Suite bundle)
5. Installing and Configuring GlassFish Server
6. Preparing Directory Server for Communications Suite
7. Configuring Delegated Administrator and Communications CLI
8. Configuring Messaging Server
9. Installing and Configuring MySQL Server
10. Configuring Calendar Server 7
11. Configuring Instant Messaging
12. Configuring Indexing and Search Service

13. Configuring Convergence
14. Configuring users

These installation steps result in a suitable deployment to evaluate and test Communications Suite 7 Update 4. These instructions are not intended to act as a replacement for the individual component documentation, but to merely guide the evaluator through an initial installation.

Installing the Example

This section describes how to install and configure components on a single machine for evaluation purposes. Some components are configured after installation, using component configuration tools.

> **Note**
> Unless otherwise indicated, all of the examples and instructions in this document assume that you are logged in as `root`.

This section contains the following topics:

- Checking Installation Requirements
- Getting the Necessary Software

Checking Installation Requirements

Before you install components, use the steps in this section to make sure the computer on which you are installing is ready.

To Check System Requirements

Make sure that the computer meets the requirements specified in Table 1.

To Check DNS

Verify that DNS is running and configured properly:

1. Make sure that the `/etc/resolv.conf` file has name server entries with the IP addresses of valid name servers.
   For example:

   ```
   domain comms.beta.com
   nameserver 192.168.100.22
   nameserver 192.168.100.23
   nameserver 192.168.100.24
   nameserver 192.168.100.25
   ```

2. Make sure that the `/etc/hosts` file has an entry for the fully qualified host name of the server. This fully qualified host name should be listed before the non fully qualified host name.
   For example:

   ```
   10.1.82.52 demo.comms.beta.com demo
   ```

3. Make sure that the `/etc/nsswitch.conf` file is configured to use files first to resolve host names. The hosts line in the `nsswitch.conf` file should list files first in its entry:

```
hosts: files dns nis [NOTFOUND=return]
# OR (if NIS is not used)
hosts: files dns
```

To Check for Sufficient Number of File-Descriptors

The default installation of Oracle Linux 5 uses 1024 file descriptors, which is insufficient for the correct operation of Communications Suite 7 Update 4. A Communications Suite 7 Update 4 system needs the maximum file descriptors set to 16384.

1. In a terminal window, as `root` user, verify the number of file descriptors.

```
ulimit -n
```

2. If this number is less than 16384 you will need to increase the value.
3. To change the number of file descriptors, add the following to the `/etc/sysctl.conf` file. Or, if the parameter is already set, increase the value to 16384.

```
fs.file-max = 16384
```

4. Add the following two lines to the `/etc/security/limits.conf` file.

```
# Increase max file descriptors
* - nofile 16384
```

> **Note**
> Be careful when editing configuration files to not introduce extra spaces and lines, as this could cause errors. If you do accidentally type extra spaces, try copying existing lines and then overwriting them (by pasting) to get rid of any extra spaces. Using a text editor that displays hidden characters can also help.

5. Reboot the system for the value to take effect.
6. In a new terminal window, as `root` verify the change.

```
ulimit -n
```

To Enable Process Core Dumps

Oracle Linux disables process core dumps by default. Process core dumps are essential for tracing the root cause behind a process crashing. The following guide provides steps on enabling process core dumps:

http://www.cyberciti.biz/tips/linux-core-dumps.html

Note the following modifications:

- Store core dumps in a dedicated directory, such as `/var/core`.
- Make sure that the directory has the appropriate permissions. For example, you need to run a command such as the following:

```
chmod 1777 /var/core
```

Disable SELinux

If SELinux stays in 'Enforced' mode, errors will be shown when certain Communication Suite components are being configured. However, instead of completely disabling SELinux, it's maybe better to put it in 'Permissive' mode instead. How to do this can be found at RedHat Solutions .

Getting the Necessary Software

To Get the Software

- Get the software from the Communications Suite 7 Update 4 download site: Oracle Software Delivery Cloud .
- See Communications Suite Component Patches for the most recent patches for Communications Suite component products.

Installing Communications Suite Components

Deploying Communications Suite components is a two-step process. You first install the software and the shared components then you configure the individual server components.

This section contains the following topics:

- Before You Begin
- Installing Communications Suite 7 Update 4 Software
- Installing and Configuring Directory Server
- Downloading and Installing Java
- Installing and Configuring GlassFish Server

Before You Begin

Before you configure the Communications Suite software, you need to create the `mailsrv` user and disable the `sendmail` process. The `mailsrv` user is used to configure Messaging Server.

- Messaging Server requires a mail server user, which must exist before you can finish the installation. You can skip this step, because the group and user are created during the configuration time. However, you might want to create the `mailsrv` user yourself as shown in the following commands. For this installation, use the `useradd` command to create a user with username `mailsrv` and group `mail`. You use this ID later when configuring Messaging Server. The `mail` group might already exist, if, for example, `sendmail` has been installed.

Type the following commands to create the user `mailsrv` with a user ID of `7633`, a group ID of `mail`, and a user home directory of `/export/home/mailsrv`.

```
groupadd mail
mkdir -p /export/home
useradd -u 7633 -g mail -d /export/home/mailsrv -m mailsrv
```

> **Note**
> If the `mailsrv` user is already in use, this could be an indication that `mailsrv` is not a local user as required by the Messaging Server. Messaging Server requires a local user and group and not one defined in a naming service such as NIS. You should create a different user such as `mailsrv2` but be sure to change the reference to that user when prompted for the mail server username. For example:
>
> ```
> useradd -u 7633 -g mail -d /export/home/mailsrv2 -m mailsrv2
> ```

To Disable sendmail

1. Check to see if `sendmail` is already configured.
   For example, you can use one of the following commands.

   ```
   ps -elf | grep mail
   ls -al /etc/rc?.d/*mail
   chkconfig --list | grep mail
   netstat -an | grep LISTEN | grep 25
   ```

2. If `sendmail` is configured, prior to configuring Messaging Server, use the following procedures to kill the `sendmail` process and prevent it from starting during bootup.

   ```
   service sendmail stop
   chkconfig --del sendmail
   ```

Installing Communications Suite 7 Update 4 Software

This section describes how to install the Communications Suite software on your host.

To Install the Communications Suite Software

1. Create a `/temp/UCS` directory, move the Communications Suite 7 Update 4 software zip file (`V38016-01.zip`) to this directory and extract the files.

   ```
   cd /temp/UCS
   unzip V38016-01.zip
   ```

2. Run the Communications Suite installer.

   ```
   ./commpkg install
   ```

3. Accept the default Install location: `/opt/sun/comms`
4. Select the following components for installation (2,3,4,5,6,7,8).

```
2. Messaging Server (64bit) 7u5 (7.4-28.21)
3. Comms DSsetup 6.4 (6.4-24.03)
4. Calendar Server 7.3.10.0
5. Instant Messaging 9.0.0.3.0
6. Convergence 2 (2.0-6.01)
7. Indexing and Search Service 1.4.16.0
8. Comms Delegated Administrator 7 (7.0-7.00)
```

The installation proceeds.

> **Note**
> Starting with Communications Suite 7 Update 3, MySQL is no longer included in the suite bundle. You must download and install MySQL separately. See To Install MySQL Database for more information.

5. Press Return when prompted to continue.
6. Continue with the next section.

Installing and Configuring Directory Server

Directory Server 11gR1 (7.0.1, also known as ODSSEE11g) is the preferred version. Before you proceed, make sure that you get the Directory Server 11gR1 software from the Oracle Software Delivery Cloud. See Dependent Component Product Software for download instructions.

1. Move the downloaded Directory Server zip file `V25767-01.zip` to a temporary location, such as `/temp/DS` then unzip the file.

```
cd /temp/DS
unzip V25767-01.zip
```

2. Deploy the DSEE 11gR1 software to the `/opt/sun/directory` directory.

```
cd ODSEE_ZIP_Distribution
unzip sun-dsee7.zip
mv dsee7 /opt/sun/directory
```

3. Create a new directory server instance in the `/var/opt/sun/directory/dsins1` directory.

```
mkdir /var/opt/sun/directory
cd /opt/sun/directory/bin
./dsadm create /var/opt/sun/directory/dsins1
```

4. When prompted, type **`adminpass`** for the Directory Manager password.
5. Create the user and group suffix **`o=isp`**.

```
cd /opt/sun/directory/bin
./dsadm start /var/opt/sun/directory/dsins1
./dsconf create-suffix "o=isp"
```

6. When prompted, type **`Y`** to accept the certificate.
7. When prompted, type **`adminpass`** for the Directory Manager password.

8. Continue with the next section.

Downloading and Installing Java

Java is no longer bundled with the Oracle Communications Unified Communications Suite installer.

This deployment example:

- Installs a JDK, rather than the JRE.
  The JDKs include debugging tools, such as `jstack`, and the Delegated Administrator requires the JAR utility.
- Installs a Java 7u21, 32-bit JDK for Linux; you can use a later version of Java 7.
  Although Java 6 is not used in this example, it is supported by Communications Suite 7 Update 4.

> **Note**
> GlassFish 2.x does not support Java 7 for development or production environments, but it can be used with Java 7 for evaluation purposes. To install Java for use in a development or production environment, see Installing Java for Communications Suite 7 Update 4

Downloading Java 7 for Linux

To download 32-bit Java for Linux:

1. Navigate to Oracle Java SE Downloads.
2. Click the Download button for the latest release of the JDK for Java 7.
   This displays the download page and a license agreement for the release you selected.
3. Accept the license agreement.
4. Download `jdk-7u21-linux-i586.tar.gz`

Installing Java 7 for Linux

To install Java 7 for Linux:

1. Uncompress and open the downloaded `jdk-7u21-linux-i586.tar.gz` in `/usr/java`.
   For example:

   ```
   tar zxvf jdk-7u21-linux-i586.tar.gz
   ```

2. Remove any earlier version of Java pointed to by the latest symlink and update the symlink to point to the new version of Java.
   For example:

   ```
   rm latest
   ln -s jdk1.7.0_21 latest
   ```

3. Set the default java application :

   ```
   /usr/sbin/alternatives --install /usr/bin/java java
   /usr/java/jdk1.7.0_21/bin/java 20000
   /usr/sbin/alternatives --install /usr/bin/javac javac
   /usr/java/jdk1.7.0_21/bin/javac 20000
   /usr/sbin/alternatives --install /usr/bin/jar jar
   /usr/java/jdk1.7.0_21/bin/jar 20000
   ```

4. Verify that Java has been set up correctly.

```
/usr/java/jdk1.7.0_21/bin/java -d64 -version
```

5. The shell returns the current Java version. It should match the version you have just installed. For example:

```
# /usr/bin/java -version
java version "jdk1.7.0_21"
Java(TM) SE Runtime Environment (build 1.7.0_21...)
...
```

6. Install and configure GlassFish Server, as described in the next section.

Installing and Configuring GlassFish Server

GlassFish Server 2.1.1 with HADB is the primary web container used by Convergence, Delegated Administrator, Instant Messaging, and the Indexing and Search Service.

1. Prior to installing GlassFish Server, verify the Java version running on the host. GlassFish Server requires at least Java 1.6.0.

```
java -version
```

   The shell returns results that look similar to the following:

```
java version "1.7.0_21"
Java(TM) SE Runtime Environment (build 1.7.0_21-b11)
Java HotSpot(TM) Client VM (build 23.21-b01, mixed mode, sharing)
```

   If the version is not 1.7.0, make sure that you properly set the default Java in the previous task.

2. Move the downloaded GlassFish 2.1.1 zip file `128645-34-3989512128.zip` to a temporary location, such as `/temp/GF`, then unzip the file and launch the installer.

```
cd /temp/GF
unzip 128645-34-3989512128.zip
cd 128645-34
./sges_ee-2_1_1-p20-linux-ml.bin -console
```

3. When prompted, press Enter to continue.
4. Accept the License Agreement by typing **yes** when prompted.
   The installation script prompts for a series of options. The following table shows how to respond to the configuration options:
   Table 6 GlassFish Server Settings

Option	[Default Value]	Enter:
Installation Directory	[/opt/SUNWappserver]	**/opt/sun/appserver**
Create Directory or Choose New	Create Directory	*accept default*
Install Node Agent	[yes]	*accept default*
Install High Availability Database Server	[no]	*accept default*
Install Load Balancing Plugin	[no]	*accept default*
Install Domain Administration Server	[yes]	*accept default*
Install Sample Applications	[yes]	**no**
Java Configuration	[1. Install Java 2 SDK]	**2. Reuse existing Java 2 SDK**
Existing JDK Location	[/usr/java/jdk1.7.0_21]	*accept default*
Admin User	[admin]	*accept default*
Admin User's Password	NA	**adminpass**
Master Password for SSL Certificate	NA	**adminpass**
Admin Port	[4848]	*accept default*
HTTP Port	[8080]	**80**
HTTPS Port	[8181]	**443**
Enable Updatecenter client	[yes]	**no**
Upgrade from previous AS version	[no]	*accept default*

5. Select 1. Install Now.
   The installation proceeds.
6. When the installation completes, press Return to exit.
7. Edit the `/opt/sun/appserver/domains/domain1/config/domain.xml` file to change the Java Message Queue (JMQ) port from 7676 to 37676.
   Look for a line similar to the following:

   ```
   jms-host name="default_JMS_host" host="wireless.comms.beta.com"
   port="7676"
   ```

   Change to port to 37676, save and exit the file.

   > **Note**
   > By default, GlassFish Server starts a bundled instance of JMQ on port 7676. This port assignment conflicts with the instance of JMQ used by Indexing and Search Service. To avoid the conflict, change the port used by the GlassFish JMQ.

8. Start GlassFish Server:

   ```
   cd /opt/sun/appserver/bin
   ./asadmin start-domain domain1
   ```

9. When prompted, type:
   username: **`admin`**
   admin password: **`adminpass`**
   master password: **`adminpass`**
10. Verify that Glassfish Server is running by accessing the following URL:

    ```
    http://wireless.comms.beta.com
    ```

    You should see the Server is Running web page.

11. Perform the following steps to save the `admin` username and password so they don't need to be provided each time GlassFish Server is started. (You must still type the master password.)

    ```
    cd /opt/sun/appserver/bin
    ./asadmin login
    ```

12. Type **`admin`** and **`adminpass`** as the username and password when prompted.
13. Continue with the next section.

> **Tip**
> Be sure to add the GlassFish Server administrative port (4848) to your firewall configuration. Otherwise, you cannot access the GlassFish Server console from a host located outside the firewall.

Configuring Communications Suite Components

This section describes how to run the individual component configuration utilities to perform initial software configuration.

This section contains the following topics:

- Preparing the Directory
- Configuring Delegated Administrator and Communications CLI
- Configuring Messaging Server
- Configuring Calendar Server 7
- To Install MySQL Database
- To Configure Calendar Server
- Configuring Instant Messaging Server
- Configuring Indexing and Search Service
- Configuring Convergence
- Creating Additional User Accounts and Groups

Preparing the Directory

This section explains how to prepare the Directory Server LDAP schema.

To Apply Schema 2 to Your Directory Tree

1. Change the directory where the `comm_dssetup .pl` script is located and run the script, for example:

   ```
   cd /opt/sun/comms/dssetup/sbin/
   ./comm_dssetup.pl
   ```

2. Type **y** to continue.
   The script prompts for a series of options. The following table shows how to respond to the prompts.
   Table 7 Values for comm_dssetup.pl Script

Option	[Default Value]	Enter:
Directory server root	[/var/opt/sun/directory/dsins1]	*accept default*
Directory Manager DN	[cn=Directory Manager]	*accept default*
Directory Manager Password	NA	**adminpass**
Use directory server for users/groups	[yes]	*accept default*
Users/Groups base suffix	[o=isp]	*accept default*
Schema type?	[1]	**2**
Confirm Schema Type?	[n]	**y**
Update the schema files?	[yes]	*accept default*
Configure new indexes?	[yes]	*accept default*
Reindex new indexes?	[yes]	*accept default*

3. Confirm your choices and type **y** to continue.
   The `comm_dssetup.pl` script proceeds.
4. When prompted, type **y** to continue with the script.
5. Continue with the next section after `comm_dssetup.pl` completes and the Successful Completion message is displayed.

Configuring Delegated Administrator and Communications CLI

This section describes configuring Delegated Administrator console and utility, which provide user and group management.

To Configure Delegated Administrator

1. Set the `JAVA_HOME` environment variable.
   For example, if you are running `csh`, type:

```
setenv JAVA_HOME /usr/java/jdk1.7.0_21
```

2. Change to the directory where the configuration script was installed and run the script, for example:

```
cd /opt/sun/comms/da/sbin
./config-commda -nodisplay
```

3. Select Enter in the Welcome window.
4. Accept the default, `/var/opt/sun/comms/da`, for the Directory to store Configuration and Data Files:
   If the directory does not exist, select `Create Directory` to create the directory.
5. Install `Delegated Administrator Utility`, `Console`, and `Server`.
   The installation script prompts for a series of options. The following table shows how to respond to the configuration options:
   Table 8 Values for config-commda Script

Option	[Default Value]	Enter:
DA Web-Container Hostname	[demo.comms.beta.com]	*accept default*
DA Web-Container Port	[8080]	**80**
Default Domain	[comms.beta.com]	*accept default*
Default SSL Port	[443]	*accept default*
Web Container	[Web Server 6.x/WEB]	**APP8**
Install Directory (for DA Console)	[/opt/sun]	**/opt/sun/appserver**
Domain Directory	[/opt/sun/appserver/domains/domain1]	*accept default*
Doc Root Directory	[/opt/sun/appserver/domains/domain1/docroot]	*accept default*
Server Target Name	[server]	*accept default*
Virtual Server Identifier	[server]	*accept default*
Server Instance HTTP Port	[80]	*accept default*
Administration Server Port	[4849]	**4848**
Administrator User ID	[admin]	*accept default*
Administrator Password	NA	**adminpass**
Secure Administration Server Instance?	[yes]	*accept default*
Default Domain Separator	[@]	*accept default*
Directory Server Interface	[DL]	*accept default*
Web Container	[Web Server 6.x/WEB]	**APP8**
Install Directory (for DA Server)	[/opt/sun]	**/opt/sun/appserver**
Domain Directory	[/opt/sun/appserver/domains/domain1]	*accept default*
Doc Root Directory	[/opt/sun/appserver/domains/domain1/docroot]	*accept default*
Server Target Name	[server]	*accept default*
Virtual Server Identifier	[server]	*accept default*
Server Instance HTTP Port	[80]	*accept default*
Administration Server Port	[4849]	**4848**
Administrator User ID	[admin]	*accept default*
Administrator Password	NA	**adminpass**
Secure Administration Server Instance?	[yes]	*accept default*

URL of Directory Server	[ldap://demo.comms.beta.com:389]	*accept default*
Bind As	[cn=Directory Manager]	*accept default*
Password	NA	**adminpass**
Internal LDAP user (daAdmin) Password	NA	**adminpass**
Organization DN	[o=comms.beta.com,o=isp]	*accept default*
Top Level Admin for Default Organization	[admin]	*accept default*
Password	NA	**adminpass**
Load Sample Service Packages	[Y]	*accept default*
Load Sample Organizations	[Y]	**n**

6. Select 1 - Configure Now.
   The script begins to run.
7. When the panel displays "All Tasks Passed," hit enter to continue.
   Two warnings appear: one reminds you to restart the GlassFish Server; the other reminds you to enable the mail, calendar, and instant messaging services in the domain. Steps 9 and 10 restart GlassFish Server and enable the services.
8. Select 2. Done, to exit the Delegated Administrator Configuration wizard.
9. Restart GlassFish Server.

```
cd /opt/sun/appserver/bin
./asadmin stop-domain domain1
./asadmin start-domain domain1
```

10. Modify the default domain to provide mail, calendar and IM services.

```
cd /opt/sun/comms/da/bin/
./commadmin domain modify -D admin -d comms.beta.com -S mail,cal,im
-H demo.comms.beta.com -B demo.comms.beta.com
```

    Enter password `adminpass` when prompted.

11. Create a test user account with a username of `jdoe` and password of `demo` by using the `commadmin` utility.

```
./commadmin user create -D admin -d comms.beta.com -S mail,cal,im
-H demo.comms.beta.com -B demo.comms.beta.com -F John -L Doe -l
jdoe -W demo -E jdoe@comms.beta.com
```

    Enter password `adminpass` when prompted for the admin password and enter password `demo` when prompted for the user password. Continue to create as many users as you like at this point.

> **Note**
> The `jdoe` account is also used later in the Messaging Server configuration phase as the first member of the postmaster group.

12. Continue with the next procedure.

To Log in to Delegated Administrator

1. In your web browser, open a URL for Delegated Administrator. The URL for Delegated Administrator is:
   `http://`*fully-qualified-hostname*`:`*app-server-port*`/da`
   In this example, type:

   ```
   http://demo.comms.beta.com:80/da/
   ```

2. Log in using `admin` and `adminpass` as the user ID and password.
3. After verifying that you can access Delegated Administrator, log out.
4. Continue with the next section.

Configuring Messaging Server

This section describes configuring Messaging Server.

To Configure Messaging Server

1. Change to the directory where the Messaging Server configure script is stored, then run the script, for example:

   ```
   cd /opt/sun/comms/messaging64/bin
   ./configure
   ```

   The Configuration Wizard appears. Read the introductory information and proceed.

2. The installation script prompts for a series of options.
   The following table shows how to respond to the configuration options:
   Table 9 Values for Messaging Server configure Script

Option	[Default Value]	Enter:
Path for Data and Configuration Files	[/var/opt/sun/comms/messaging64]	*accept default*
Messaging Server Unix user	[mailsrv]	*accept default*
Fully qualified local hostname	[demo.comms.beta.com]	*accept default*
Default mail domain name	[comms.beta.com]	*accept default*
Hostname for LDAP Directory Server	NA	**demo.comms.beta.com**
LDAP administrator login	[cn=Directory Manager]	*accept default*
LDAP administrator password	NA	**adminpass**
Mail address for postmaster notices	[admin@comms.beta.com]	**jdoe@comms.beta.com**
IP address info for mail relay systems	NA	*accept default*
Password for server administration	NA	**adminpass**

3. Start Messaging Server.

```
cd /opt/sun/comms/messaging64/bin
./stop-msg
./start-msg
```

4. Continue with the next section.

Configuring Calendar Server 7

Configuring Calendar Server 7 consists of installing a second instance of GlassFish Server and installing MySQL.

Topics in this section:

- To Install a Second Instance of GlassFish Server
- To Install MySQL Database
- To Configure Calendar Server

To Install a Second Instance of GlassFish Server

1. Install a second instance of GlassFish that runs on port 8080.

```
cd /temp/GF
cd 128645-34
./sges_ee-2_1_1-p20-linux-ml.bin -console
```

2. Press Enter to continue when prompted.
3. Accept the License Agreement by typing **yes** when prompted.
   The installation script prompts for a series of options. The following table shows how to respond to the configuration options:
   Table 10 Values for Calendar Server 7 Update 4 configure Script

Option	[Default Value]	Enter
Installation Directory	[/opt/SUNWappserver]	**/opt/sun/appservercs**
Create Directory or Choose New	Create Directory	*accept default*
Install Node Agent	[yes]	**no**
Install High Availability Database Server	[no]	*accept default*
Install Load Balancing Plugin	[no]	*accept default*
Install Domain Administration Server	[yes]	*accept default*
Install Sample Applications	[yes]	*accept default*
Install New or Reuse existing Java 2 SDK	[Install Java 2 SDK]	**Reuse existing Java 2 SDK**
Path to Java 2 SDK Version 1.5.0 or greater	[/usr/jdk/jdk1.7.0_21]	*accept default*
Admin User	[admin]	*accept default*
Admin User's Password	NA	**adminpass**
Master Password (for SSL Certificate)	NA	**adminpass**
Admin Port	[38295]	**8800**
HTTP Port	[38292]	**8080**
HTTPS Port	[38298]	**8181**
Enable Updatecenter client	[yes]	*accept default*
Upgrade from previous AS version	[no]	*accept default*

4. Confirm that you would like to "Install Now" when prompted.
   The installation proceeds.
5. Edit the `domain.xml` file to change the JMQ port from 7676 to 47676.

```
cd /opt/sun/appservercs/domains/domain1
cd config
vi domain.xml
```

6. Change port 7676 to 47676, save and exit the file.
7. Start the GlassFish Server.

```
/opt/sun/appservercs/bin/asadmin start-domain domain1
Starting Domain domain1, please wait.
Default Log location is
/opt/sun/appservercs/domains/domain1/logs/server.log.
Please enter the admin user name>admin
Please enter the admin password>adminpass
Please enter the master password>adminpass
```

8. Perform the following steps to save the `admin` username and password so that you do not need to provide them each time GlassFish Server is started. (You must still type the master password.)

```
cd /opt/sun/appservercs/bin/
./asadmin login --port 8800
```

9. Type **`admin`** and **`adminpass`** as the username and password when prompted.
10. Continue with the next section.

To Install MySQL Database

You should have already downloaded the MySQL Database PKG version for Linux (64-bit) from edelivery.oracle.com and unzipped the image to use it with the following steps. This example uses MySQL Database 5.5.31 RPM for Oracle Linux / RHEL 5 x86 (64bit) 5.5.31. For download instructions, see Get the Software.

1. To avoid any possible confusion, remove any pre-existing MySQL packages from this host.
2. Install the newly downloaded packages.

```
mkdir /temp/MySQL
cp p16755405_55_Linux-x86-64.zip /temp/MySQL
cd /temp/MySQL
unzip p16755405_55_Linux-x86-64.zip
rpm -ivh MySQL-server-advanced-5.5.31-2.rhel5.x86_64.rpm
MySQL-client-advanced-5.5.31-2.rhel5.x86_64.rpm
```

3. Create the `/etc/my.cnf` file with the following content.

```
[mysqld]
basedir = /usr
datadir = /var/lib/mysql
default-storage-engine = InnoDB
character-set-server = utf8
transaction-isolation = READ-COMMITTED
```

4. Set ownership of the `/etc/my.cnf` file.

```
chown mysql:mysql /etc/my.cnf
```

5. Start MySQL.

```
/etc/init.d/mysql start
```

6. Change the MySQL root password and remove test databases.

```
/usr/bin/mysqladmin -u root password adminpass
/usr/bin/mysql_secure_installation
```

7. Answer "y" to all questions except "Change the root password."
   You do not need to change the root password because you have already done so. The `mysql_secure_installation` script:
   - Removes anonymous users
   - Disallows root login remotely
   - Removes test database and access to it
   - Reloads privilege tables

8. Create the MySQL user and caldav database.

```
/usr/bin/mysql -u root -p
Enter password: adminpass
mysql> CREATE DATABASE caldav CHARACTER SET = UTF8;
mysql> CREATE DATABASE ischedule CHARACTER SET = UTF8;
mysql> CREATE USER 'caldav'@'localhost' IDENTIFIED BY 'adminpass';
mysql> GRANT ALL ON caldav.* TO 'caldav'@'localhost';
mysql> GRANT ALL ON ischedule.* TO 'caldav'@'localhost';
mysql> exit
```

9. Configure MySQL to start automatically upon reboot.

```
chkconfig --add mysql
```

10. Continue with the next section.

To Configure Calendar Server

1. Create the `calmaster` account for Calendar Server, with a username of `calmaster` and password of `adminpass`:

```
cd /opt/sun/comms/da/bin/
./commadmin user create -D admin -d comms.beta.com -S mail,cal,im
-H demo.comms.beta.com -B demo.comms.beta.com -F Calendar -L Master
-l calmaster -W adminpass -E calmaster@comms.beta.com
```

   Type the password `adminpass` when prompted for the administrative password.

2. Set the `JAVA_HOME` environment variable.

```
setenv JAVA_HOME /usr/java/jdk1.7.0_21
```

3. Change directories to where the configuration script was installed and run the Calendar Server 7 configuration script:

```
cd /opt/sun/comms/davserver/sbin/
./init-config -nodisplay
```

4. Click Next at the Welcome page.
   The installation script prompts for a series of options. The following table shows how to respond to the configuration options:
   Table 11 Values for Calendar Server 7 Update 4 configure Script

Option	[Default Value]	Enter
Configuration and data files directory	[/var/opt/sun/comms/davserver]	*accept default*
Components to be configured	[Calendar Server]	*accept default*
Host Name	[demo]	*accept default*

DNS Domain Name	[comms.beta.com]	*accept default*
MySQL or Oracle Database	[MySQL]	*accept default*
MySQL Server Host Name	[localhost]	*accept default*
MySQL Server Port Number	[3306]	*accept default*
Database User ID	[caldav]	*accept default*
Database User Password	NA	**adminpass**
Calendar Database Name	[caldav]	*accept default*
iSchedule Database Name	[ischedule]	*accept default*
Document Files Directory	[/var/opt/sun/comms/davserver/db]	*accept default*
Application Server Install Directory	[/opt/sun/appserver]	**/opt/sun/appservercs**
Application Server Domain Directory	[/opt/sun/appservercs/domains/domain1]	*accept default*
Application Server Document Root Directory	[/opt/sun/appservercs/domains/domain1/docroot]	*accept default*
Application Server Instance Name	[server]	*accept default*
Virtual Server Identifier	[server]	*accept default*
Application Server Instance HTTP Port	[8080]	**8080**
Administration Server Port	[4848]	**8800**
Administrator User ID	[admin]	*accept default*
Administrator Password	NA	**adminpass**
Administration Server instance running in the secure mode	[yes]	*accept default*
URI Path for Sun Java Calendar Server 7	[/]	**/davserver**
Ldap URL	[ldap://demo.comms.beta.com:389]	*accept default*
Bind DN	[cn=Directory Manager]	*accept default*

Bind Password	NA	**adminpass**
DC Tree Suffix	[o=isp]	*accept default*
LDAP Unique ID Attribute	[davuniqueid]	*accept default*
Default Domain Name	[comms.beta.com]	*accept default*
Organization DN	[o=comms.beta.com,o=isp]	*accept default*
SMTP Server Host Name	[demo.comms.beta.com]	*accept default*
SMTP Server Port Number	[25]	*accept default*
Administrator User ID	[calmaster]	*accept default*
Administrator Password	NA	**adminpass**

5. Select Configure Now to configure Calendar Server.
6. Select Done when the configuration program completes.
7. Restart GlassFish Server.

```
cd /opt/sun/appservercs/bin
./asadmin stop-domain domain1
./asadmin start-domain domain1
```

8. Configure a Lightning client to use this new server.
   The Calendar Server URL format for your test user is:

```
http://<fully-qualified-server-name>:8080/davserver/dav/home/<usernam
```

   For example:

```
http://wireless.comms.beta.com:8080/davserver/dav/home/jdoe/calendar/
```

   Alternatively, you can configure Apple iCal to access this calendar. The server URI is as follows:

```
http://<fully-qualified-server-name>:8080/davserver/dav/principals/<u
```

   For example:

```
http://wireless.comms.beta.com:8080/davserver/dav/principals/jdoe/
```

9. To enable subscription to other user's calendars in your own domain, create an ACI file with the following contents, making sure that the entry for Access Control Instructions (ACI) is on a single line:

```
dn: o=isp
changetype: modify
add: aci
aci: (target="ldap:///($dn),o=isp")
(targetattr!="userPassword")
(targetfilter=(|(objectClass=icscalendaruser)(objectclass=icscalendarresc
3.0; acl "CS User search access to all users and resources in own domain
- product=davserver,class=install,num=3,version=1";
allow (read,search)
userdn="ldap:///[$dn],o=isp??sub?(objectclass=icscalendaruser)";)
```

10. Run the `ldapmodify` command on this ACI file (named `acifile` in this example).

```
/opt/sun/directory/dsrk/bin/ldapmodify -D "cn=Directory Manager" -w
adminpass -f acifile
```

11. Continue with the next section.

Configuring Instant Messaging Server

This section shows you how to run the Instant Messaging configurator script.

To Configure Instant Messaging Server

1. Change to the directory where the configuration script was installed then run the configurator script, for example:

```
cd /opt/sun/comms/im/sbin
./configure --nodisplay
```

   The Components Selection page appears.

2. Select both `Server` and `Client` components for configuration.
3. Hit Enter whenever prompted whether to go back to the previous panel.
   The configuration wizard prompts for a series of options.
4. Respond to the series of options as follows.
   After each question, you are prompted if you want to go back to previous panel. Always accept the default answer of `no` unless you need to make a change to a previous answer.
   The following table shows how to respond to the configuration options:
   Table 12 Values for Instant Messaging configure Script

Option	[Default Value]	Enter:
Use AM for Single-Sign-On	[no]	*accept default*
Use AM for Policy	[no]	*accept default*
IM User Properties store location	[1. On the file system]	**2. In the directory**
User ID	[inetuser]	*accept default*
Group ID	[inetgroup]	*accept default*
Runtime Directory	[/var/opt/sun/im]	**/var/opt/sun/comms/im**
Create User ID?	[2. Choose New]	**1. Create User ID**
Create Directory?	[2. Choose New]	**1. Create Directory**

Domain Name	[comms.beta.com]	*accept default*
XMPP Port	[5222]	*accept default*
Multiplexed XMPP Port	[45222]	*accept default*
Gateway Connector Port	[55222]	*accept default*
XMPP Server Port	[5269]	*accept default*
Disable Server (enable only multiplexor)	[no]	*accept default*
SSL Enabled	[no]	*accept default*
LDAP Host Name	[demo.comms.beta.com]	*accept default*
LDAP Port Number	[389]	*accept default*
SSL Enabled	[yes]	**no**
Base DN	[dc=comms,dc=beta,dc=com]	**o=isp**
Bind DN	NA	**cn=Directory Manager**
Bind Password	NA	**adminpass**
Enable Email Integration	[yes]	*accept default*
SMTP Server	[demo.comms.beta.com]	*accept default*
Enable Email Archiving	[yes]	*accept default*
Deploy IM HTTP Gateway	[yes]	**no**
Deploy IM IMPS Gateway	[yes]	**no**
Enable Calendar Agent	[no]	**yes**
Enable local component	[no]	**yes**
Select type of notification	[JMQ]	*accept default*
XMPP server Hostname	[demo.comms.beta.com]	*accept default*
XMPP server port	[5269]	*accept default*
JMQ Username	NA	**guest**
JMQ Password	NA	**guest**
Notification Server Hostname	[localhost]	**demo.comms.beta.com**
Notification Server Port	[7676]	**47676**
Topic	[DavNotificationTopic]	*accept default*
Enable SMS Gateway	[no]	*accept default*
Enable local component	[no]	*accept default*
Enable MSN Gateway	[no]	*accept default*
Enable local component	[no]	*accept default*
Enable AIM Gateway	[no]	*accept default*
Enable local component	[no]	*accept default*

Enable YIM Gateway	[no]	*accept default*
Enable local component	[no]	*accept default*
Enable Facebook Gateway	[no]	*accept default*
Start Services After Successful Configuration	[yes]	**no**
Start Services When System starts	[yes]	**no**

The Instant Messaging Server configuration begins.

5. When the Instant Messaging Server configuration is complete, continue with the next step.
6. To configure Instant Messaging Server for integration with Convergence, first save off a copy of the configuration:

```
cd /opt/sun/comms/im/config
cp iim.conf.xml iim.conf.xml.orig
```

7. Next, add the new httpbind and avatar component JIDs to this configuration by executing the following commands:

```
cd /opt/sun/comms/im/sbin
./imconfutil set-prop -c /opt/sun/comms/im/config/iim.conf.xml
iim_agent.enable=true
./imconfutil add-component -c /opt/sun/comms/im/config/iim.conf.xml
id=httpbind jid=demo.httpbind.comms.beta.com password=adminpass
./imconfutil add-component -c /opt/sun/comms/im/config/iim.conf.xml
id=avatar jid=demo.avatar.comms.beta.com password=adminpass
./imconfutil -u set-listener-prop -c
/opt/sun/comms/im/config/iim.conf.xml s2s
protocols=s2s,component,c2s
```

> **Note**
> The `httpbind.jid` and `avatar.jid` strings are in the form *host*.httpbind.*domain* and *host*.avatar.*domain* respectively as this is the value auto-generated during upcoming Convergence configuration stage.

8. Enable Hosted Domain Schema 2 support by making the following change:

```
# ./imconfutil set-prop -c /opt/sun/comms/im/config/iim.conf.xml
iim_ldap.useidentityadmin=false iim_server.usesso="0"
iim.policy.modules=iim_ldap_schema2 iim.userprops.store="ldap"
iim_ldap.schema2.domain_config_root="o=isp"
```

9. Start the Instant Messaging server.

```
./imadmin start
```

10. Continue with the next section.

Configuring Indexing and Search Service

1. Configure the IMQ broker by editing the `imqbrokerd.conf` file.

```
vi /etc/opt/sun/mq/imqbrokerd.conf
```

2. Type in the following configuration. (It is possible that the file already contains some of this information.)

```
AUTOSTART=YES
ARGS=-vmargs -Xmx1024m
RESTART=YES
```

3. Check for the existence of the `/var/opt/sun/mq/instances/imqbroker/props/config.properties` file. If it does not exist, start the IMQ broker to generate it.

```
cd /var/opt/sun/mq/instances/imqbroker/props
/var/opt/sun/mq/instances/imqbroker/props: No such file or
directory
nohup /etc/init.d/imq start
```

4. Edit the following information at the bottom of the `/var/opt/sun/mq/instances/imqbroker/props/config.properties` file.

```
cd /var/opt/sun/mq/instances/imqbroker/props
vi config.properties
```

5. At the bottom of this file, make sure the following lines are included:

```
imq.portmapper.backlog=-1
imq.destination.DMQ.truncateBody=true
imq.autocreate.reaptime=7200
imq.autocreate.destination.maxNumProducers=-1
imq.autocreate.destination.limitBehavior=REMOVE_OLDEST
imq.jms.max_threads=2000
```

   For an explanation of these changes, see Message Queue Broker config.properties Changes for Indexing and Search Service.

6. After making these changes, save and exit the file.
7. Restart the IMQ broker to pick up the changes.

```
/etc/init.d/imq stop
nohup /etc/init.d/imq start
```

8. Create the JMQ user by using the `imqusermgr` command.

```
cd /opt/sun/mq/bin
./imqusermgr add -u jmquser -p adminpass -g user
User repository for broker instance: imqbroker
User jmquser successfully added.
```

9. Reset the default account passwords.

```
cd /opt/sun/mq/bin
./imqusermgr update -u admin -p adminpass
User repository for broker instance: imqbroker
Are you sure you want to update user admin? (y/n)[n] y

User admin successfully updated.
./imqusermgr update -u guest -p adminpass
User repository for broker instance: imqbroker
Are you sure you want to update user guest? (y/n)[n] y
User guest successfully updated.
```

10. Set the `local.store.notifyplugin` `configutil` parameter to include a JMQ notification named `index`.

```
cd /opt/sun/comms/messaging64/bin
./configutil -o local.store.notifyplugin
```

If a response is returned, such as `lib/libibiff$ms-internal$`, prepend the new JMQ notification to existing one, for example:

```
./configutil -o local.store.notifyplugin -v
'lib/libjmqnotify$index$lib/libibiff$ms-internal$'
```

If no response is returned, execute the following command:

```
./configutil -o local.store.notifyplugin -v
'lib/libjmqnotify$index'
```

11. Configure the index JMQ notification plugin by using the `configutil` command.

```
./configutil -o local.store.notifyplugin.index.annotatemsg.enable
-v 0
./configutil -o local.store.notifyplugin.index.changeflag.enable -v
1
./configutil -o local.store.notifyplugin.index.copymsg.enable -v 1
./configutil -o local.store.notifyplugin.index.debuglevel -v 0
./configutil -o local.store.notifyplugin.index.deletemsg.enable -v
0
./configutil -o local.store.notifyplugin.index.destinationtype -v
queue
./configutil -o local.store.notifyplugin.index.expungemsg.enable -v
1
./configutil -o local.store.notifyplugin.index.jmqhost -v 127.0.0.1
./configutil -o local.store.notifyplugin.index.jmqport -v 7676
./configutil -o local.store.notifyplugin.index.jmqpwd -v adminpass
./configutil -o local.store.notifyplugin.index.jmqtopic -v INDEXMS
./configutil -o local.store.notifyplugin.index.jmquser -v jmquser
./configutil -o local.store.notifyplugin.index.loguser.enable -v 0
./configutil -o local.store.notifyplugin.index.maxbodysize -v
262144
./configutil -o local.store.notifyplugin.index.maxheadersize -v
16384
./configutil -o local.store.notifyplugin.index.msgflags.enable -v 0
./configutil -o local.store.notifyplugin.index.msgtypes.enable -v 0
./configutil -o local.store.notifyplugin.index.newmsg.enable -v 1
./configutil -o local.store.notifyplugin.index.noneinbox.enable -v
1
./configutil -o local.store.notifyplugin.index.persistent -v 0
./configutil -o local.store.notifyplugin.index.priority -v 4
./configutil -o local.store.notifyplugin.index.purgemsg.enable -v 0
./configutil -o local.store.notifyplugin.index.readmsg.enable -v 0
./configutil -o local.store.notifyplugin.index.updatemsg.enable -v
1
./configutil -o local.store.notifyplugin.index.ttl -v 3600000
```

12. Restart Messaging Server and verify that the JMQ index plugin is working.

```
./stop-msg
./start-msg

# cat /opt/sun/comms/messaging64/log/imap
```

You should see entries similar to these:

```
[31/May/2013:09:45:05 +0200] demo imapd[11258]: General Notice: JMQ
notifications enabled: index
[31/May/2013:09:45:05 +0200] demo imapd[11258]: General Notice:
jmqNotify JMQ initialization MQCreateConnection [dest : index] [host :
127.0.0.1]
[31/May/2013:09:45:06 +0200] demo imapd[11258]: General Notice:
jmqNotify JMQ initialization MQCreateSession [dest : index] [host :
127.0.0.1]
[31/May/2013:09:45:06 +0200] demo imapd[11258]: General Notice:
jmqNotify JMQ initialization MQCreateDestination [dest : index] [host :
127.0.0.1] [topic : INDEXMS]
[31/May/2013:09:45:06 +0200] demo imapd[11258]: General Notice:
jmqNotify JMQ initialization MQCreateMessageProducerForDestination [dest
: index] [host : 127.0.0.1]
[31/May/2013:09:45:06 +0200] demo imapd[11258]: General Notice:
jmqNotify JMQ initialization MQCreateTextMessage [dest : index] [host :
127.0.0.1]
...
[31/May/2013:09:45:06 +0200] demo imapd[11258]: General Warning: Oracle
Communications Messaging Server IMAP4 7u5-28.21(7.0.5.28.0) 64bit (built
Apr 8 2013) starting up
```

13. Verify that the IMQ broker started up cleanly.

```
cat /var/opt/sun/mq/instances/imqbroker/log/log.txt
```

You should see entries similar to these:

```
[31/May/2013:09:45:06 CEST] [B1065]: Accepting:
jmquser@127.0.0.1:40595->jms:45807. Count: service=1 broker=1
[31/May/2013:09:45:07 CEST] [B1065]: Accepting:
jmquser@127.0.0.1:40597->jms:45807. Count: service=2 broker=2
[31/May/2013:09:45:07 CEST] [B1065]: Accepting:
jmquser@127.0.0.1:40599->jms:45807. Count: service=3 broker=3
```

14. Verify that the Messaging Server has producers connected to `INDEXMS`.

```
/opt/sun/mq/bin/imqcmd list dst
Username: admin
Password: adminpass

Listing all the destinations on the broker specified by:

-------------------------
Host Primary Port
-------------------------
localhost 7676

---------------------------------------------------------------------
Type State Producers Consumers Msgs
Total Wildcard Total Wildcard Count Remote UnAck Avg Size
---------------------------------------------------------------------
Queue RUNNING 9 - 0 - 0 0 0 0.0
mq.sys.dmq Queue RUNNING 0 - 0 - 0 0 0 0.0

Successfully listed destinations.
```

15. Prepare the Messaging Server to forward IMAP SEARCH queries to Indexing and Search Service.

```
cd /opt/sun/comms/messaging64/bin
./configutil -o service.imap.indexer.hostname -v
demo.comms.beta.com
./configutil -o service.imap.indexer.port -v 80
./configutil -o service.imap.indexer.enable -v 0
./configutil -o store.indexeradmins -v indexeradmin
```

16. Restart Messaging Server.

```
./stop-msg
./start-msg
```

17. Change directories to where the configuration script was installed and run the configuration script:

```
cd /opt/sun/comms/jiss/bin
./setup
```

The installation script prompts for a series of options. The following table shows how to respond to the configuration options:

Table 14 Values for Indexing and Search configure Script

Option	[Default Value]	Enter
Enable cluster configuration (iss.cluster.enabled)	[standalone]	*accept default*
Fully qualified domain name of system (hostname)	NA	**demo.comms.beta.com**

Instance name of the installation for an indexing node, ie iss1 (instance.name)	NA	**iss1**
User under which all JISS services will run (iss.user)	[jiss]	*accept default*
Group under which all JISS services will run (iss.group)	[jiss]	*accept default*
Location to store the Lucene indexes (iss.store.dir)	[/var/opt/sun/comms/jiss/index]	*accept default*
Location of attachment data (iss.data.dir)	[/var/opt/sun/comms/jiss/attach]	*accept default*
Location of JISS log files (iss.log.dir)	[/var/opt/sun/comms/jiss/logs]	*accept default*
Location of Java (java.home)	[/usr/jdk/latest]	**/usr/java/jdk1.7.0_21**
User/Group Directory Server format (mail.ldap)	NA	**demo.comms.beta.com:389**
User/Group Default Domain (mail.defaultdomain)	NA	**comms.beta.com**
User/Group Directory Manager DM (mail.searchbind)	[cn=Directory Manager]	*accept default*
User/Group Directory Manager password (mail.searchbind.password)	NA	**adminpass**
Messaging Server store hostname (mail.server)	NA	**demo.comms.beta.com**
Comma-delimited list of mail server IPs (mail.server.ip)	NA	**Enter IP address of demo.comms.beta.com such as 192.168.49.94**
Read-only store admin username (mail.imap.admin.username)	[indexeradmin]	*accept default*
Read-only store admin password (mail.imap.admin.password)	NA	**adminpass**
Messaging Server IMAP port (mail.imap.port)	[143]	*accept default*
Messaging Server JMQ broker (mail.imq)	NA	**demo.comms.beta.com:7676**
JMQ notification user (mail.imq.user)	[jmquser]	*accept default*
JMQ notification user's password (mail.imq.password)	NA	**adminpass**
Directory location of the appserver (appserv.dir)	[/opt/SUNWappserver]	**/opt/sun/appserver**

Appserver web port (appserv.web.port)	[8080]	**80**
Appserver admin port (appserv.admin.port)	[4848]	*accept default*
Appserver domain name for deployment (appserv.domain)	[domain1]	*accept default*
Appserver admin user (appserv.admin.user)	[admin]	*accept default*
Appserver admin user's password (appserv.admin.password)	NA	**adminpass**
Deploy the SearchUI web application used for testing and debugging (appserv.searchui.enabled)	[false]	**true**
JISS JMQ broker hostname(s)list, ie host:7676,host2:7677 (imq.host)	NA	**demo.comms.beta.com:7676**
Username for JISS JMQ broker (iss.imq.user)	[jmquser]	*accept default*
Password for JISS JMQ user (iss.imq.password)	NA	**adminpass**
Password for admin user on JISS JMQ broker (iss.imq.admin.password)	NA	**adminpass**
File based or Directory Server based JNDI lookups, file or ldap (jndi.type)	NA	**ldap**
JISS Directory Server host list host:port,host2:port2 (ldap.host)	NA	**demo.comms.beta.com:389**
JISS Directory Manager DN format (java.naming.security.principal)	[cn=Directory Manager]	*accept default*
JISS Directory Server password (ldap.password)	NA	**adminpass**
Storeui access method (iss.storeui.access.method)	[disk]	*accept default*
Watcher service enabled on this host (iss.watcher.enabled)	[false]	*accept default*

18. Restart GlassFish Server.

```
cd /opt/sun/appserver/bin
./asadmin stop-domain domain1
./asadmin start-domain domain1
```

19. Bootstrap existing users to create their index by using the following command:

```
cd /opt/sun/comms/jiss/bin
./issadmin.sh --bootstrap --user <username> --host
demo.comms.beta.com --runoptimizer true
```

In this example, type the following command:

```
cd /opt/sun/comms/jiss/bin
./issadmin.sh --bootstrap --user jdoe --host demo.comms.beta.com
--runoptimizer true
```

20. Test that search works.
Type the URL of the Search UIs in your browser and log in as a user.
    - The URL for the Restful service is:

      ```
      http://<fully-qualified-server-name>/rest
      ```

      For this example, type:

      ```
      http://demo.comms.beta.com/rest
      ```

    - The URL for the Searchui is:

      ```
      http://<fully-qualified-server-name>/searchui
      ```

      For this example, type:

      ```
      http://demo.comms.beta.com/searchui
      ```

    - In each case, log in as user `jdoe`. The password is `demo`.
21. Configure Messaging Server to send searches to Indexing and Search Service:

```
# cd /opt/sun/comms/messaging64/bin
# ./configutil -o service.imap.indexer.enable -v 1
# ./stop-msg
# ./start-msg
```

22. Increase processor threads to support Convergence and ISS in the same web container:

```
grep processor /proc/cpuinfo | wc -l
cd /opt/sun/appserver/bin
./asadmin set
server.http-service.request-processing.thread-count=(2 x number of
CPUs from prior command)
Please enter the admin user name: admin
Please enter the admin password: adminpass
```

23. Configure ISS to autoprovision, autobootstrap, and autosync users.
    a. Make a backup copy of the `jiss.conf` file then edit it.

```
cd /opt/sun/comms/jiss/etc
cp jiss.conf jiss.conf.orig
vi jiss.conf
```

b. Set the following parameters.

```
iss.autoprovision.enabled = true
iss.indexsvc.periodic.autosync.enabled = true
iss.indexsvc.periodic.autobootstrap.enabled = true
```

> **Note**
> Set the `iss.indexsvc.periodic.autosync.count` parameter to the number of user accounts that should be synced every five minutes. If you want to ensure an autosync every 12 hours for each user in a 288 user deployment, you can set this value as shown.

24. Refresh ISS:

```
/opt/sun/comms/jiss/bin/issadmin.sh --refresh
```

25. Restart GlassFish Server.

```
cd /opt/sun/appserver/bin
./asadmin stop-domain domain1
./asadmin start-domain domain1
```

26. Continue with the next section.

Configuring Convergence

You have already installed and configured all the back-end servers and you are now ready to deploy the Convergence client. This section describes how to configure Convergence by using the `init-config` command.

1. Set the `JAVA_HOME` environment variable.
   For example, to set it for the C shell (`csh`):

```
setenv JAVA_HOME /usr/jdk/jdk1.7.0_21
```

2. Run the Convergence configuration script.

```
cd /opt/sun/comms/iwc/sbin
./init-config -nodisplay
```

3. Select Next/Enter at the Welcome page.
4. Accept the default value for the Directory to store Configuration and Data Files:
   `/var/opt/sun/comms/iwc`
   If the directory does not exist, select Create Directory to create the directory.
5. Configure the `Mail`, `Calendar` and `Instant Messaging` Services.
6. The configuration wizard prompts for a series of options. The following table shows how to

respond to the configuration options:

Table 13 Values for Convergence configure Script

Option	[Default Value]	Enter:
Host Name	[demo]	*accept default*
DNS Domain Name	[comms.beta.com]	*accept default*
Application Server Install Directory	[/opt/sun/appserver]	*accept default*
Domain Directory	[/opt/sun/appserver/domains/domain1]	*accept default*
Document Root Directory	[/opt/sun/appserver/domains/domain1/docroot]	*accept default*
Application Server Instance Name	[server]	*accept default*
Virtual Server Identifier	[server]	*accept default*
Server Instance HTTP Port	[8080]	**80**
Administration Server Port	[4848]	*accept default*
Administrator User ID	[admin]	*accept default*
Administrator Password	NA	**adminpass**
Secure Administration Server Instance	[yes]	*accept default*
URI Path	[/iwc]	*accept default*
Enable Hosted Domain Support	[yes]	*accept default*
Directory Server LDAP URL	[ldap://demo.comms.beta.com:389/]	*accept default*
Bind DN	[cn=Directory Manager]	*accept default*
Bind Password	NA	**adminpass**
DC Tree suffix	[o=isp]	*accept default*
Default Domain Name	[comms.beta.com]	*accept default*
Webmail Server Host Name	[demo.comms.beta.com]	*accept default*
Webmail Server Port Number	[8990]	*accept default*

Webmail Server Running In Secure Mode?	[no]	*accept default*
Webmail Server Admin User ID	[admin]	*accept default*
Webmail Server Admin Password	NA	**adminpass**
Calendar Server Version	[7]	*accept default*
Calendar Server Host Name	[demo.comms.beta.com]	*accept default*
Calendar Server Port Number	[80]	**8080**
Calendar Server Running In Secure Mode?	[no]	*accept default*
Calendar Server Service URI	[/davserver/wcap]	*accept default*
Calendar Server Admin User ID	[calmaster]	*accept default*
Calendar Server Admin Password	NA	**adminpass**
Instant Messaging Server Domain Name	[comms.beta.com]	*accept default*
Instant Messaging Server Host Name	[demo.comms.beta.com]	*accept default*
Server Port	[5269]	*accept default*
httpbind Component JID	[demo.httpbind.comms.beta.com]	*accept default*
Password	NA	**adminpass**
Avatar Component JID	[demo.avatar.comms.beta.com]	*accept default*
Password	NA	**adminpass**
Convergence Administrator Username	[admin]	*accept default*
Password	NA	**adminpass**

7. Select 1. Configure Now, to configure Convergence.
8. Once the configuration is completed, exit the configuration tool.
   Configure Convergence to use Indexing and Search Service:

```
cd /opt/sun/comms/iwc/sbin
./iwcadmin -w adminpass -o ISS.enable -v true
./iwcadmin -w adminpass -o ISS.host -v demo.comms.beta.com
./iwcadmin -w adminpass -o ISS.port -v 80
./iwcadmin -w adminpass -o ISS.proxyadminid -v indexeradmin
./iwcadmin -w adminpass -o ISS.proxyadminpwd -v adminpass
```

9. Restart GlassFish Server.

```
/opt/sun/appserver/bin/asadmin stop-domain domain1
/opt/sun/appserver/bin/asadmin start-domain domain1
```

10. Continue with the next procedure.

To Log in to Convergence

1. In your web browser, open a URL for Convergence and log in as a test user. The URL for Convergence is:
   `http://`*fully-qualified-hostname*`/iwc`
   In this example, type:

   ```
   http://demo.comms.beta.com/iwc
   ```

2. Log in using **jdoe** and **demo** as the user ID and password.
3. After verifying that you can access the Convergence Client, log out.

At this point, you have completed installing and configuring the single host deployment example. You should now try out the system by conducting tasks such as:

- Creating users
- Logging in as various users and using email, calendaring, instant messaging, and address book functions
- Getting familiar with Communications Suite services and architecture

For more information on these topics, see the documentation at the Communications Suite wiki.

Creating Additional User Accounts and Groups

This section describes how to create additional users accounts and groups.

To Create Users and Groups using the CLI

The following example shows how to create two new users (`demo1` and `demo2`) with the password `demo` using the Delegated Administrator command-line utility and also how to create a mailing and calendar group (Demostaff@comms.beta.com) consisting of the newly created users.

```
cd /opt/sun/comms/da/bin
./commadmin user create -D admin -S mail,cal,im -H demo.comms.beta.com -B
demo.comms.beta.com -F Demo -L One -l demo1 -d comms.beta.com -E
Demo.One@comms.beta.com
./commadmin user create -D admin -S mail,cal,im -H demo.comms.beta.com -B
demo.comms.beta.com -F Demo -L Two -l demo2 -d comms.beta.com -E
Demo.Two@comms.beta.com
./commadmin group create -D admin -S mail,cal -H demo.comms.beta.com -j
demo.comms.beta.com -G Demostaff -d comms.beta.com -E
Demostaff@comms.beta.com -o jdoe -m demo1 -m demo2
```

1. Bootstrap the users you just created to create their index by using the following commands:

   ```
   cd /opt/sun/comms/jiss/bin
   ./issadmin.sh --bootstrap --user demo1 --host demo.comms.beta.com
   ./issadmin.sh --bootstrap --user demo2 --host demo.comms.beta.com
   ```

To Use the Delegated Administrator GUI to Create Users

An alternative to using the Delegated Administrator command-line utility to create users is to use the Delegated Administrator web-based GUI. The high-level steps for creating users with Delegated Administrator are:

1. The first time you use the Delegated Administrator GUI, you must add service packs to the organization that contains your users:
   - In your web browser, open the URL for Delegated Administrator.
     In this example, type:

     ```
     http://demo.comms.beta.com:80/da
     ```

   - Log in using **admin** as the Login ID and **adminpass** as the Password.
   - Click the check box next to comms.beta.com organization, then click the `Allocate Service Package` button.
   - The Allocate Service Package window appears with a list of service packages organized within a set of three pages. Near the top of this list is a Compare button.
   - To the right of this button is a button that maps the three pages into a single view. Click the Single Page button.
   - Select the desired service packages then click Next. The `mailcalendarimsample` service package is appropriate for this example, since this package enables the mail, calendar and instant messaging services.
   - Accept the Mail Service defaults, then click `Next`.

     > **Note**
     > If the Preferred Mail Host value is not set to the mail server host name `demo.comms.beta.com` in the Mail Service Details screen, close the window, log out of the Delegated Administrator GUI and return to the start of these steps.

   - If you chose a service package that contains Calendar, type the Calendar Host **`demo.comms.beta.com`** and **`Yes`** for Anonymous Login. Then click `Next`.
   - Select the quantity of each service pack desired then click `Next`. A quantity of 100 is appropriate for this example.
   - Review your choices and click `Finish` to create the service packages.
   - Once the service packs have been allocated for the domain, you can add users to the domain.
2. Click the domain link. That is, click the `comms.beta.com` link
3. Click the `New` button to create a new user within this domain. The New User window should appear.
4. Type a First Name (such as **`Demo`**), a Last Name (such as **`Five`**), a Display Name (such as **`Demo Five`**), then click Next.
5. You do not need to type postal information. Click `Next` again.
6. Select a service pack for this user (as added earlier), for example, `mailcalendarimsample`, then click `Next`.
7. Type the email address, for example, **`Demo.Five@comms.beta.com`**. The Mail Delivery Option should be Local Inbox. Leave the remaining fields blank then click `Next`.
8. For the Calendar Service Details page, select your preferred timezone, then click `Next`.
9. For the IM Service Details page, leave the User Roster field blank and click `Next`.
10. Type the Login ID and Password then click Next. In this example, Login ID is `demo5` and password is `demo`.
11. Verify the user information then click `Finish` to create the user.

Enabling Service Start-up Upon Boot

The following guide steps through the process of enabling Communications Suite 7 Update 4 services to start automatically on boot and stop automatically on shut-down.

Communications Suite 7 Update 4 Start and Stop Scripts (Linux)

Keep in mind that two Glassfish servers were installed, one for Convergence, Delegated Admin, ... and another one for Calendar Server 7. This means you have to start both GF servers in one script, or use two separate scripts.

Also, the Instant Messaging Service uses port 47676, which is defined in the second GF server used with Calendar Server. You should start the IM service after this GF server is started. The start sequence can be altered by editing the chkconfig line inside the Sun_IMSvr init script.

Creating Hosted Domains

A hosted domain, or virtual domain as it is also called, delivers services for users, groups and resources within a unique namespace. Each hosted domain can have different domain-level preferences, different Convergence customizations, and be administered within Delegated Administrator by different user accounts if required.

In a hosted domain installation, each domain shares the same instance of Messaging Server, Instant Messaging Server, Calendar Server, Convergence, and so on. This approach greatly reduces any overhead associated with using multiple hosted domains on a single server.

Creating a New Hosted Domain by Using Delegated Administrator

During the installation and configuration of Communications Suite 7 Update 4, you create an initial default domain of `comms.beta.com`. You can create additional hosted domains either by using the Delegated Administrator CLI `commadmin` utility or the Delegated Administrator console graphical interface.

To Create a Hosted Domain by Using commadmin

- Run the following command sequence to create the new hosted domain, `hosted.domain.com`.

```
cd /opt/sun/comms/da/bin/
./commadmin domain create -D admin -d hosted.domain.com -S
mail,cal,im -H demo.comms.beta.com -B demo.comms.beta.com
```

To Create a Hosted Domain by Using Delegated Administrator Console

Follow these steps to create the new hosted domain, `hosted.domain.com`, using the Delegated Administrator console.

1. In your web browser, open the URL for Delegated Administrator.
   In this example, type:

   ```
   http://demo.comms.beta.com:80/da
   ```

2. Log in using **admin** as the Login ID and **adminpass** as the Password.
3. Click the `New Organization` button.
   The `New Organization` window appears.
4. In the Organization Information step, type the new hosted domain `hosted.domain.com` in the Organization Name field then click the `Next` button.
5. You do not need to type Contact Information. Click `Next` again.

6. In the Account Information step, type the new hosted domain `hosted.domain.com` again then click `Next`.
7. At this point you assign Service Packages to the domain using these steps:
   - To the right of this button is a button that maps the three pages into a single view. Click the Single Page button.
   - Select the desired service packages then click Next. The `mailcalendarimsample` service package is appropriate for this example, because this package enables the mail, calendar and instant messaging services.
   - Accept the Mail Service defaults, then click `Next`.

     > **Note**
     > If the Preferred Mail Host value is not set to the mail server host name `demo.comms.beta.com` in the Mail Service Details screen, close the window, log out of the Delegated Administrator GUI and return to the start of these steps.

   - If you chose a service package that contains Calendar, type the Calendar Host **`demo.comms.beta.com`** and **`Yes`** for Anonymous Login. Then click `Next`.
   - Select the quantity of each service pack desired then click `Next`. A quantity of 100 is appropriate for this example.
   - Review your choices and click `Finish` to create the service packages.
   - Once the service packs have been allocated for the domain, you can continue.
8. Verify the new hosted domain information then click `Finish` to create the domain.

Adding Users to a Hosted Domain

Refer to the Creating Additional User Accounts and Groups steps. Substitute the newly created hosted domain name `hosted.domain.com` for every instance of the `comms.beta.com` domain in the steps.

Users in the newly created hosted domain log in to the Convergence by using the *uid@ hosted-domain-name* format in the user login field.

Single Host Installation Tuning Tips

This section provides performance tuning information for the single host deployment.

- Use memory-mapped `tmpfs` file system for temporary server files

Oracle Linux 5 by default provides the `/dev/shm` memory-mapped temporary file system:

```
[root@comms sbin]# df -k /dev/shm
Filesystem 1K-blocks Used Available Use% Mounted on
tmpfs 387596 121488 266108 32% /dev/shm
```

Messaging Server, Directory Server, and Instant Messaging server can all be configured to relocate temporary files to a memory-mapped file-system to reduce the number of I/O operations that are recorded to permanent storage.

Messaging Server

1. Relocate the `mboxlist` temporary database files to the temporary file-system.

```
cd /opt/sun/comms/messaging64/bin
./configutil -o store.dbtmpdir -v
/dev/shm/.mailsrv_opt_sun_comms_messaging64/store/
./configutil -o local.lockdir -v
/dev/shm/.mailsrv_opt_sun_comms_messaging64/lock/
```

2. Restart Messaging Server.

```
cd /opt/sun/comms/messaging64/bin
./stop-msg
./start-msg
```

Directory Server

Relocate the Directory Server temporary database files to the temporary file-system.

1. Stop Directory Server.

```
cd /opt/sun/directory/bin
./dsadm stop /var/opt/sun/directory/dsins1/
```

2. Edit the `/var/opt/sun/directory/dsins1/config/dse.ldif` file.

```
replace:
nsslapd-db-home-directory: /var/opt/sun/directory/dsins1/db

with:
nsslapd-db-home-directory: /dev/shm/slapd-demo/
```

3. Start Directory Server.

```
cd /opt/sun/directory/bin
./dsadm start /var/opt/sun/directory/dsins1/
```

Instant Messaging Server

Relocate the Instant Messaging Server temporary "scratch" files to the temporary file-system.

1. Stop Instant Messaging Server.

```
cd /opt/sun/comms/im/sbin
./imadmin stop
```

2. Change the scratch directory to `/dev/shm/iim-demo`.

```
mkdir /dev/shm/iim-demo
chown inetuser:inetgroup /dev/shm/iim-demo
cd /opt/sun/comms/im/sbin
./imconfutil set-prop -c /opt/sun/comms/im/config/iim.conf.xml
iim_server.scratch_directory=/dev/shm/iim-demo
```

3. Start Instant Messaging Server.

```
cd /opt/sun/comms/im/sbin
./imadmin start
```

Known Issues and Limitations

For more information about known issues, see Communications Suite 7 Update 4 Release Notes.

Start and Stop Scripts for Communications Suite (Linux)

Start and Stop Scripts for Oracle Communications Unified Communications Suite Version 7 Update 4 (Linux)

- Background
- Service Scripts

Background

The products that make up Oracle Communications Unified Communications Suite need to be started in a specific order to ensure that any pre-requisite services are enabled prior to the product starting. This ordering is especially important when starting the products when booting the server.

The ordering of the product start-up is as follows:

1a. Directory Server (relies on network interface availability)
1b. MySQL Server (relies on network interface availability)
2. JMQ (for Messaging Server notifications)
3. Indexing and Search Service processes:
3a. utilSvc (provides utility services to Index Service)
3b. indexSvc (bootstraps new users and indexes incoming content)
3c. serarchSvc (searches index and returns results)
3d. jmqconsumer (listens to the JMQ on the message store and notifies indexSvc if new content requires indexing)
4. Messaging Server (relies on Directory Server for user-group information)
5. Instant Messaging Server (relies on Directory Server for user-group information, and Messaging Server for SMTP)
6. GlassFish Server (relies on Messaging, MySQL, Instant Messaging services availability)

When the server is shut-down, the ordering is reversed.

Oracle Linux and Red Hat Enterprise Linux provide the `chkconfig` utility to control the ordering of the product start-up and shut-down. A good explanation of the Red Hat Linux `chkconfig` functionality is available here:

http://www.linuxjournal.com/article/4445

The logs of each product being started/stopped during of the boot-up and shut-down is stored in `/var/log/boot.log` file on the server.

Service Scripts

Each product requires a service script to start and stop the processes correctly. The following service scripts are designed to be used with a Communication Suite 7 system that has been installed and configured as per the Communications Suite on a Single Host (Linux) guide.

> **Note**
> The scripts will need to be modified as appropriate if the products were not installed in the default locations.

Directory Server

The following is the service script for Directory Server.

/etc/init.d/Sun_DirSvr

```
#!/bin/sh
#
# Sun_DirSvr - boot script to start/stop Directory Server
#
#
# Following stuff is necessary for chkconfig (Red Hat 6.x)
#
# chkconfig: 345 51 20
# description: starts and stops Directory Server instances
# in /var/opt/sun/directory/dsins1 and /opt/sun/directory/var/dcc/ads
#

# Set the maximum number of file-descriptors to a more appropriate value
ulimit -n 16384

me=`basename $0`
me=`echo $me |sed -e "s/^[SK][0-9][0-9]//"`

instance_ldap_path="/var/opt/sun/directory/dsins1"
instance_dscc_path="/opt/sun/directory/var/dcc/ads"
cacao_path="/opt/sun/directory/ext/cacao_2"
deploy_path="/opt/sun/directory/"
# See how we were called.
case "$1" in
    start)
        echo "Starting Directory Server instance in $instance_ldap_path
:"
        $deploy_path/bin/dsadm start $instance_ldap_path
        echo "Starting Directory Server instance in $instance_dscc_path
:"
        $deploy_path/bin/dsadm start $instance_dscc_path
        echo "Starting Directory Server cacao agent :"
        $cacao_path/cacao/bin/cacaoadm start

        # this line necessary for Red Hat 6.x
        touch /var/lock/subsys/$me
        echo
        ;;

    stop)
        echo "Stopping Directory Server instance in $instance_ldap_path
:"
        $deploy_path/bin/dsadm stop $instance_ldap_path
        echo "Stopping Directory Server instance in $instance_dscc_path
:"
        $deploy_path/bin/dsadm stop $instance_dscc_path
        echo "Stopping Directory Server cacao agent :"
        $cacao_path/cacao/bin/cacaoadm stop
```

```
        # this line necessary for Red Hat 6.x
        rm -f /var/lock/subsys/$me
        echo
        ;;

    *)
        echo "Usage: $me { start | stop }"
        exit 1
        ;;
```

```
esac

exit 0
```

Once you have created the above service script, set the file and user permissions as follows to ensure that the script can be started on boot.

```
chown root:sys /etc/init.d/Sun_DirSvr
chmod 0744 /etc/init.d/Sun_DirSvr
```

Enable the script using `chkconfig` so that it is run on boot and shut-down.

```
chkconfig --add Sun_DirSvr
```

MySQL Server

Enable the script using `chkconfig` so that it is run on boot and shut-down.

```
chkconfig --add mysql
```

Messaging Server

Messaging Server provides a suitable script that can be put into place by running the following commands:

```
cp /var/opt/sun/comms/messaging64/install/Sun_MsgSvr /etc/init.d/

chown root:sys /etc/init.d/Sun_MsgSvr
chmod 0744 /etc/init.d/Sun_MsgSvr
```

Do not forget to edit the Sun_MsgSvr script to :

- make it contain the right path to the bin directory,
- get the lines with /var/lock/subsys out of comment
- change the line :

  ```
  me=`basename $0`
  ```

  to two lines :

  ```
  me=`basename $0`
  me=`echo $me \|sed \-e "s/^\[SK\]\[0-9\]\[0-9\]//"`
  ```

Enable the script using `chkconfig` so that it is run on boot and shut-down.

```
chkconfig --add Sun_MsgSvr
```

Instant Messaging Server

When Instant Messaging Server is configured, the configuration process places a script in `/etc/init.d` . In this case this script isn't appropriate and we will disable it use the script defined in this guide.

```
rm /etc/rc?.d/???soim
```

The following is the replacement service script for Instant Messaging Server.

/etc/init.d/Sun_IMSvr

```
#!/bin/sh
#
# Sun_IMSvr - boot script to start/stop Instant Messaging Server
#
#
# Following stuff is necessary for chkconfig (Red Hat 6.x)
#
# chkconfig: 345 93 10
# description: starts and stops Instant Messaging Server
# in /opt/sun/comms/im
#

# Set the maximum number of file-descriptors to a more appropriate value
ulimit -n 16384

me=`basename $0`
me=`echo $me |sed -e "s/^[SK][0-9][0-9]//"`

deploy_path="/opt/sun/comms/im"

# See how we were called.
case "$1" in
    start)
        echo "Starting Instant Messaging Server in $deploy_path :"
        $deploy_path/sbin/imadmin start 2>/dev/null

        # this line necessary for Red Hat 6.x
        touch /var/lock/subsys/$me
        echo
        ;;

    stop)
        echo "Stopping Instant Messaging Server in $deploy_path :"
        $deploy_path/sbin/imadmin stop 2>/dev/null

        # this line necessary for Red Hat 6.x
        rm -f /var/lock/subsys/$me
        echo
        ;;

    *)
        echo "Usage: $me { start | stop }"
        exit 1
        ;;
esac

exit 0
```

Once you have created the above service script, set the file and user permissions as follows to ensure that the script can be started on boot.

```
chown root:sys /etc/init.d/Sun_IMSvr
chmod 0744 /etc/init.d/Sun_IMSvr
```

Enable the script using `chkconfig` so that it is run on boot and shut-down.

```
chkconfig --add Sun_IMSvr
```

GlassFish Server

GlassFish Server will by default prompt the user for a `master password` when it is started. This prevents automated start-up on boot. GlassFish Server provides a mechanism to hard-code the `master password` in a password file.

For this guide, create the following password file. The `adminpass` value in the file should match the master password which is usually provided when starting GlassFish Server.

/opt/sun/appserver/config/.aspasswd

```
AS_ADMIN_MASTERPASSWORD=adminpass
```

Change the permissions on the password file to be read-only by the root user for security.

```
chown root:sys /opt/sun/appserver/config/.aspasswd
chmod 400 /opt/sun/appserver/config/.aspasswd
```

The following is the service script for GlassFish Server.

/etc/init.d/Sun_AppSvr

```
#!/bin/sh
#
# Sun_AppSvr - boot script to start/stop GlassFish Server
#
#
# Following stuff is necessary for chkconfig (Red Hat 6.x)
#
# chkconfig: 345 95 15
# description: starts and stops GlassFish Server in
# in /opt/sun/appserver/
#

# Set the maximum number of file-descriptors to a more appropriate value
ulimit -n 16384

me=`basename $0`
me=`echo $me | sed -e "s/^[SK][0-9][0-9]//"`

deploy_path="/opt/sun/appserver/"
passwd_file="/opt/sun/appserver/config/.aspasswd"

# See how we were called.
case "$1" in
    start)
        echo "Starting GlassFish Server in $deploy_path :"
        $deploy_path/bin/asadmin start-domain --passwordfile
$passwd_file

        # this line necessary for Red Hat 6.x
        touch /var/lock/subsys/$me
        echo
        ;;

    stop)
        echo "Stopping GlassFish Server in $deploy_path :"
        $deploy_path/bin/asadmin stop-domain

        # this line necessary for Red Hat 6.x
        rm -f /var/lock/subsys/$me
        echo
        ;;

    *)
        echo "Usage: $me { start | stop }"
        exit 1
        ;;
esac

exit 0
```

Once you have created the above service script, set the file and user permissions as follows to ensure that the script can be started on boot.

```
chown root:sys /etc/init.d/Sun_AppSvr
chmod 0744 /etc/init.d/Sun_AppSvr
```

Enable the script using `chkconfig` so that it is run on boot and shut-down.

```
chkconfig --add Sun_AppSvr
```

Chapter 23. Indexing and Search Service Initial Configuration

< Back to Communications Suite 7 Update 4 Installation Scenario - Indexing and Search Service

What You Need to Do Before Performing Indexing and Search Service 1 Update 4 Initial Configuration
In Communications Suite terminology, initial configuration is not the same as initial installation. Thus, before using the information on this page, make sure that you have completed all the prerequisite steps. If you have come to this page to start your ISS 1 Update 4 installation, instead start with the instructions in Installation Scenario - Indexing and Search Service.

Indexing and Search Service for Oracle Communications Unified Communications Suite Installation Initial Configuration Version 1 Update 4

After you install the Indexing and Search Search software by using the Communications Suite installer, you must configure the components to complete the installation. You perform this initial runtime configuration by running the Indexing and Search Service configuration program, `setup`.

Topics:

- Running setup
- Using setup in a Multi-host Environment

Running setup

Topics in this section:

- Generating a Configuration File
- Examples

Generating a Configuration File

The `setup` configuration program generates configuration files required to run the indexing services. The utility uses the *iss-base*`/etc/jiss.conf.template` file for default values but you are prompted for answers to various configuration questions about the Messaging Server messaging store install and the local system services. See setup Usage for more information. Use the following parameter tables to help answer the configuration questions that appear when you run `setup`.

Install Type Parameters

These parameters determine the instance name and installation type.

Local Parameters

Parameter	Description	Example Setting
instance.name	Specifies ISS instance name for the node	iss1
iss.cluster.install	Specifies ISS installation type	standalone

Local Parameters

These parameters are used to configure local system settings.

Local Parameters

Parameter	Description	Example Setting
hostname	Specifies the host name for this Indexing and Search Service system (must be a fully qualified domain name)	isshost.example.com
iss.user	Specifies the user under which all ISS services run	jiss
iss.group	Specifies the group under which all ISS services run	jiss
iss.store.dir	Specifies the location in which to store the Lucene indexes	/var/opt/sun/comms/jiss/index
iss.data.dir	Specifies the location of attachment data	/var/opt/sun/comms/jiss/attach
iss.log.dir	Specifies the location of the ISS log files	/var/opt/sun/comms/jiss/logs
java.home	Specifies the location of Java software	/usr/jdk/latest

Message Store Parameters

These parameters are used to contact and operate with the Messaging Server message store.

Message Store Parameters

Parameter	Description	Example Setting
mail.ldap	Specifies User/Group Directory Server	host.example.com:389
mail.basedn	Specifies User/Group base DN (autodetected, otherwise you are prompted for value)	dc=example,dc=com
mail.schemalevel	Specifies User/Group Schema Level (autodetected, otherwise you are prompted for value)	2
mail.defaultdomain	Specifies User/Group default domain	example.com
mail.searchbind	Specifies User/Group Directory Manager DN	cn=Directory manager
mail.searchbind.password	Specifies User/Group Directory Manager password	dmpassword
mail.server	Specifies the fully qualified domain name of the default Messaging Server that is indexed	mailhost.example.com
mail.server.ip	Specifies comma-delimited list of back-end IP addresses corresponding to mail.server	10.0.0.1,10.0.0.2
mail.imap.admin.username	Specifies Messaging Server read-only store administrator user name (defined with the store.indexeradmins option)	indexeradmin
mail.imap.admin.password	Specifies Messaging Server read-only store administrator password	changeme
mail.imq	Specifies Message Queue broker *hostname:port* for Messaging Server JMQ notifications	mailhost.example.com:7676
mail.imq.user	Specifies user name for Messaging Server JMQ notifications (must match local.store.notifyplugin.index.jmquser in configutil or notifytarget:index.jmquser in msconfig)	jmquser
mail.imq.password	Specifies password for Messaging Server JMQ notifications (must match local.store.notifyplugin.index.jmqpwd in configutil or notifytarget:index.jmqpwd in msconfig)	changeme

GlassFish Server Parameters

These parameters are used to configure and deploy the `.war` file to GlassFish Server.

GlassFish Server Parameters

Parameter	Description	Example Setting
`appserv.dir`	Specifies the location of the `appserver` directory	`/opt/SUNWappserver`
`appserv.admin.port`	Specifies the GlassFish administrative port	`4848`
`appserv.web.port`	Specifies the GlassFish web port	`8080`
`appserv.admin.user`	Specifies the GlassFish administrative user	`admin`
`appserv.admin.password`	Specifies the GlassFish administrative user's password	`changeme`
`appserv.searchui.enabled`	Specifies whether to deploy the SearchUI web application used for testing and debugging	`false`

GlassFish Server Message Queue (JMQ) Service Parameters

These parameters contain information about accessing the GlassFish Server Message Queue.

GlassFish Server Message Queue (JMQ) Server Parameters

Parameter	Description	Example
`imq.host`	Specifies ISS JMQ broker host name and port	`jmq1.example.com:7676;jmq2.example.com`
`iss.imq.user`	Specifies user name for ISS JMQ broker	`misoadmin`
`iss.imq.password`	Specifies password for ISS JMQ user	`changeme`
`iss.imq.admin.password`	Specifies password for administrative user on ISS JMQ broker	`admin`

Directory Service Parameters

These parameters contain information about connecting to directory services that hold the Java Naming and Directory Interface (JNDI) lookup.

Directory Service Parameters

Parameter	Description	Example Setting
`ldap.enabled`	Specifies ISS Directory Server host enabled	`true`
`ldap.host`	Specifies ISS Directory Server host and port	`ldap.example.com:389`
`java.naming.security.principal`	Specifies ISS Directory Manager DN	`cn=Directory Manager`
`ldap.password`	Specifies ISS Directory Server password	`changeme`
`java.naming.security.authentication` (`jndi.type`)	Specifies ISS Directory Server authentication type	`simple`

Watcher Parameters

This section contains the ISS watcher configuration.

Watcher Parameters

Parameter	Description	Example Setting
iss.watcher.enabled	Enables watcher service	false
java.args.watcher	Specifies JVM options to the watcher process	-Xmx128m
iss.watcher.interval	Specifies interval in seconds of how often the watcher service performs its checks	60
iss.watcher.timeout	Specifies amount of time in seconds service should wait for a response from a service before generating an alert	30
iss.watcher.notification.type	Type of watcher notification to use (log-only or email)	log-only

iss.watcher.notification.destination	Specifies destination email address for watcher notifications	
iss.watcher.notification.source	Specifies source (from) email address for watcher notifications	
iss.watcher.notification.mail.host	Specifies mail host and port to send messages (*host*: *port*)	
iss.watcher.notification.protocol	Specifies protocol to use when sending email notifications (ssl, tls, plain, or sendmail)	plain
iss.watcher.email.interval	If an alert is detected, send an email with updated alert level every *n* seconds	900
iss.watcher.email.user	Specifies user name if required to send email	
iss.watcher.log.level	Specifies watcher Service log level (from lowest to highest OFF, SEVERE, WARNING, INFO, CONFIG, FINE, FINER, FINEST, ALL	WARNING
iss.watcher.logfile.name	Specifies the Watcher Service log file name	iss-watcher.log
iss.watcher.logfile.limit	Specifies the Watcher Service log file size limit	20000000
iss.watcher.logfile.count	Specifies the Watcher Service number of log files to preserve	20
iss.watcher.logfile.formatter	Specifies the Watcher Service log file formatter	com.sun.comms.iss.common.SingleLineFormatter

ISS Services Parameters

This section contains ISS services configuration.

ISS Services Parameters

Parameter	Description	Example Setting
`iss.storeui.access.method`	Specifies storeui access method (`disk` for a single host environment, or `http` for a multi-host environment)	`disk`

Examples

```
# cd <iss-base>/bin
# ./setup -b /opt/sun/comms/jiss/
# ./setup -b /opt/sun/comms/jiss/ -c my.conf (for silent mode
configuration)
```

Using setup in a Multi-host Environment

For more information on ISS multi-host deployment planning, see ISS Logical Architecture.

Topics in this section:

- Using a Default Configuration File
- The iss.storeui.access.method Parameter
- Install Order
- Example 1
- Example 2
- Example 3
- Additional Indexing Node Configuration
- Multiple Messaging Server Message Stores

Using a Default Configuration File

All machines in the environment should have the same configuration. You should create your configuration ahead of time by using a copy of the *iss-base*`/etc/jiss.conf.example` file. If you concatenate the `jiss.conf` and `jiss_passwd.conf` files to generate the configuration that you will use on all hosts, then before doing so, you must update all the passwords in the configuration to plain text.

The iss.storeui.access.method Parameter

In a multi-machine deployment, if the application server and the index reside on different hosts, you must set up an Apache server on the indexing host to provide access to the attachment store to the application server. This Apache server runs under the `iss.user` and `iss.group` credentials. If `iss.storeui.access.method` is set to `http`, the `setup` utility calls `configure_apache.sh`, which configures the Apache server to use `iss.user` and `iss.group` running on `apache.port`.

```
Storeui access method, disk for single machine, http for multi-machine
[disk]: http
```

Install Order

Run the `setup` utility in the following order for multi-machine installs:

1. `ldap` - Holds JNDI lookups

2. `ms` - Message store configuration
3. `jmq` - Requires JNDI lookups
4. `index` - Requires JNDI lookup and GlassFish Message Queue
5. `web` - Requires index services to be started
6. `watcher` - Provides local host monitoring of ISS services

When using an ISS host to perform the Directory Server function for JNDI lookups, you run the `setup ldap` command on the ISS host, *not* on the Directory Server host (which typically serves your entire deployment). This enables the external Directory Server to host JISS's JDNI lookups. The ISS host that you use to run the command must have access to the `ldapmodify` and `ldapsearch` binaries.

Example 1

This example describes a three-machine setup:

- `web.example.com` - Application server (`web`)
- `middle.example.com` - Directory service and GlassFish Message Queue (`ldap`, `jmq`)
- `index.example.com` - JISS Indexing services (`index`)

The first time that `setup` is run on each machine, you must provide the `-c <CONF_FILE>` and `-i <FQDN>` options. Once `jiss.conf` and `jiss_passwd.conf` are configured, these options can be omitted.

Run the following commands on `middle.example.com`:

```
# <iss-base>/bin/setup -t ldap -c my.conf -i middle.example.com
# <iss-base>/bin/setup -t ms
# <iss-base>/bin/setup -t jmq
```

Run the following commands on `index.example.com`:

```
# <iss-base>/bin/setup -t index -c my.conf -i index.example.com
```

Run the following commands on `web.example.com`:

```
# <iss-base>/setup -t web -c my.conf -i web.example.com
```

Example 2

This example describes a two-machine setup:

- `web.example.com` - Application server (`web`)
- `index.example.com` - JISS Indexing services, Directory service, and GlassFish Message Queue (`index`, `ldap`, `jmq`)

The first time `setup` is run on each machine, you must provide the `-c <CONF_FILE>` and `-i <FQDN>` options. Once `jiss.conf` and `jiss_passwd.conf` are configured, these options can be omitted.

Run the following commands on `index.example.com`:

```
# <iss-base>/bin/setup -t ldap -c my.conf -i index.example.com
# <iss-base>/bin/setup -t ms
# <iss-base>/bin/setup -t jmq
# <iss-base>/bin/setup -t index
```

Run the following commands on `web.example.com`:

```
# <iss-base>/setup -t web -c my.conf -i web.example.com
```

Example 3

This example describes another three-machine:

- `web.example.com` - Application server (`web`)
- `index1.example.com` - JISS Indexing services (`index`), Directory service, and GlassFish Message Queue (`ldap`, `jmq`)
- `index2.example.com` - JISS Indexing services (`index`)

The first time `setup` is run on each machine, you must provide the `-c <CONF_FILE>` and `-i <FQDN>` options. Once `jiss.conf` and `jiss_passwd.conf` are configured, these options can be omitted.

Run the following commands on `index1.example.com`:

```
# <iss-base>/bin/setup -t ldap -c my.conf -i index1.example.com
# <iss-base>/bin/setup -t ms
# <iss-base>/bin/setup -t jmq
# <iss-base>/bin/setup -t index
```

Run the following commands on `index2.example.com`:

```
# <iss-base>/bin/setup -t index -c my.conf -i index2.example.com
```

Run the following commands on `web.example.com`:

```
# <iss-base>/setup -t web -c my.conf -i web.example.com
```

Additional Indexing Node Configuration

The Apache server must be configured to respond to requests from the web nodes' IP addresses. The default is `deny`. You can add and remove additional hosts by using the `configure_web_node` utility. The IP address(es) should be the IP address(es) of the hosts running the application server(s).

Add an IP address:

```
# <iss-base>/bin/configure_web_node -a 10.10.10.10
```

Remove an IP address:

```
# <iss-base>/bin/configure_web_node -d 10.10.10.10
```

Add multiple IP addresses:

```
# <iss-base>/bin/configure_web_node -a 10.10.10.10 10.10.10.11
10.10.10.12
```

Multiple Messaging Server Message Stores

If you want to index multiple Messaging Server message stores on a single ISS host, make sure that you perform the following steps:

1. Choose one of the message store hosts to be the default mail store for purposes of the Indexing and Search Service installation.
   By setting up a default mail server hostname in the index, you do not need to specify it with every `issadmin.sh` command. For example, when the default hostname is `ms1.example.com`, then the following two commands are equivalent:

   ```
   issadmin.sh --bootstrap --user user1
   issadmin.sh --bootstrap --user user1 --host ms1.example.com
   ```

   For users on the non-default message store host, you do have to specify the hostname when running the `issadmin.sh` command, for example:

   ```
   issadmin.sh --bootstrap --user user1 --host ms2.example.com
   ```

2. For the `mail.server.ip` parameter, which you specify when running the `setup` command, type the IP addresses for all the mail store hosts (use commas to separate the IP addresses).
3. Configure the message store hosts to publish JMQ notifications to a single INDEXMS destination. You can either have all message store hosts publish to the broker running on the ISS system, or choose one of the message store hosts as the JMQ broker, then have that server connect to `localhost` for publishing notifications, and have the others connect to that server for publishing notifications.

Chapter 24. Instant Messaging Initial Configuration

Completing the Oracle Communications Instant Messaging Server Initial Configuration Version 9

After you install the Instant Messaging software by using the Communications Suite installer, you must configure the Instant Messaging server to complete the installation. You perform this initial runtime configuration by running the Instant Messaging configuration program, `configure`. See Completing the Instant Messaging 9 Initial Configuration for more information.

Chapter 25. Messaging Server Initial Configuration

Oracle Communications Messaging Server Initial Configuration Version 7 Update 5

After you install the Messaging Server software by using the Communications Suite installer, you must configure Messaging Server to complete the installation. You perform this initial runtime configuration by using the Messaging Server configuration program, `configure`.

This information assumes that you have read the Communications Suite Deployment Planning Guide and installed Messaging Server software. Performing the following tasks results in a functioning Messaging Server. You still want to customize your deployment as well as provision and perhaps migrate users and groups. Provisioning is described in the Delegated Administrator Administration Guide.

Topics:

- About Messaging Server Unified Configuration
- Prerequisites for Configuring Messaging Server
- Messaging Server Configuration Checklist
- High-level Overview of Configuring Messaging Server
- Creating UNIX System Users and Groups
- Checking the DNS Configuration
- Preparing Directory Server for Messaging Server Configuration
- Creating the Initial Messaging Server Runtime Configuration
- Configuring Messaging Server Against a Directory Server Replica
- Installing Messaging Server Provisioning Tools
- Configuring SMTP Relay Blocking
- Enabling Startup After a Reboot
- Performance and Tuning
- Post-Installation Directory Layout
- Post-Installation Port Numbers
- JMQ Notification
- Configuring Certificate Based Authentication

About Messaging Server Unified Configuration

Messaging Server 7 Update 5 introduces the capability to create a Unified Configuration. Unified Configuration provides an improved, streamlined process to configure and administer Messaging Server. Unlike in legacy configurations (Messaging Server 7 Update 4 and prior releases), Unified Configuration uses validation to verify configuration accuracy, and employs a single tool to configure the entire Messaging Server configuration (with a few exceptions). Thus, using Unified Configuration simplifies administration and reduces configuration mistakes.

When you perform a fresh Messaging Server 7 Update 5 installation, you can decide to configure it for Unified Configuration. It is not a requirement to use Unified Configuration with Messaging Server 7 Update 5, however, Unified Configuration provides a number of benefits over legacy configuration. If you decide to not use Unified Configuration, rerun the `configure` command without `--xml` option to create a legacy configuration, then recreate any configuration changes you made while running under Unified Configuration.

To learn more about Unified Configuration, see Overview of Messaging Server Unified Configuration.

Prerequisites for Configuring Messaging Server

Before running the `configure` progam, you must:

- Install and configure the Directory Server.
- Run the `comm_dssetup.pl` program. See Communications Suite Directory Server Setup Script (comm_dssetup.pl).
- Record your Directory installation and configuration parameters in the checklists supplied in Installation Worksheets - Directory Server.

Messaging Server Configuration Checklist

Before you run the `configure program`, record your parameter choices in Configuration Worksheets - Messaging Server. To answer certain questions, refer to your Directory Server installation checklists in Installation Worksheets - Directory Server.

High-level Overview of Configuring Messaging Server

Performing an initial run-time configuration of Messaging Server involves the following high-level steps:

1. Creating a Unix system user and group for Messaging Server
2. Checking that DNS is properly configured
3. Preparing Directory Server for Messaging Server configuration by running the `comm_dssetup.pl` script
4. Creating the initial Messaging Server runtime configuration by running the `configure` command

Additionally, other steps to perform include the following:

1. Installing tools to provision Messaging Server
2. Modifying SMTP relay blocking configuration
3. Enabling Messaging Server startup after a reboot
4. Becoming familiar with best practices for performance tuning

The following sections describe in detail how to configure Messaging Server.

Creating UNIX System Users and Groups

System users run specific server processes, and privileges need to be given to these users so that they have appropriate permissions for the processes they are running.

Set up a system user account and group for all Communications Suite servers, and set permissions for the directories and files owned by that user.

> **Note**
> For security reasons, in some deployments it might be desirable to have different system administrators for different servers. This is done by creating different system users and groups per server. For example, the system user for Messaging Server would be different from the system user for Web Server, and system administrators administering Messaging Server would not be able to administer the Web Server.

To Create UNIX System Users and Groups

Creating UNIX system users and groups is optional. The `configure` initial configuration script does this if necessary.

1. Log in as `root`.
2. Create a group name for server processes to which your system users belong.
   For example:

   ```
   groupadd mail
   ```

3. Create a user name for system processes and associate it with the group name you just created. In addition, set the password for that user.
   For example:

   ```
   useradd -g mail mailsrv
   ```

   The `useradd` and `usermod` commands are located in the `/usr/sbin` directory. See UNIX man pages for more information.

4. You might also need to check the `/etc/group` and `/etc/passwd` files to be sure that the user has been added to the system group that you created.

> **Note**
> Should you decide not to set up UNIX system users and groups prior to installing Messaging Server, you are able to specify them when you run the configuration script. However, if the user name for server processes already exists, then the primary group for that user name is used, and the configuration script does not prompt for the option.

Checking the DNS Configuration

Check that DNS is running and configured properly for the Messaging Server host.

1. Ensure that DNS is properly configured and that it is clearly specified how to route to hosts that are not on the local subnet.
   - The `/etc/defaultrouter` file should contain the IP address of the gateway system. This address must be on a local subnet.
   - The `/etc/resolv.conf` file exists and contains the proper entries for reachable DNS servers and domain suffixes.
   - In the `/etc/nsswitch.conf` file, the `hosts:` and `ipnodes:` line has the `files`, `dns` and `nis` keywords added. The keyword `files` must precede `dns` and `nis`. So if the lines look like this:

     ```
     hosts:  nis dns files
     ipnodes:  nis dns files
     ```

     They should be changed to this:

     ```
     hosts:  files nis dns
     ipnodes:  files nis dns
     ```

2. Make sure that the FQDN is the first host name specified after the IP address in the `/etc/hosts` file.

If your Internet host table in your `/etc/hosts` file looks like this:

```
123.456.78.910 budgie.west.sesta.com
123.456.78.910 budgie loghost mailhost
```

Change it so that there is only one line for the IP address of the host. Be sure the first host name is a fully qualified domain name. For example:

```
123.456.78.910 budgie.west.sesta.com budgie loghost mailhost
```

- You can verify that the lines are read correctly by running the following commands:

  ```
  # getent hosts <ip_address>
  # getent ipnodes <ip_address>
  ```

  If the lines are read correctly, you should see the IP address followed by the FQDN and then the other values.
  For example:

  ```
  # getent hosts 192.18.126.103
  192.18.126.103  budgie.west.sesta.com budgie loghost mailhost
  ```

Preparing Directory Server for Messaging Server Configuration

For more information on directory preparation and the directory preparation script `comm_dssetup.pl`, see Communications Suite Directory Server Setup Script (comm_dssetup.pl). The `comm_dssetup.pl` script prepares the Directory Server by setting up new schema, index, and data in your Directory Server. Run `comm_dssetup.pl` before installing or upgrading any Communications Suite product that is dependent on the Directory Server (such as Messaging Server, Calendar Server, Convergence, and so on).

> **Note**
> Always run the latest version of `comm_dssetup.pl` if you are upgrading any of the component products that depend on Directory Server.

Creating the Initial Messaging Server Runtime Configuration

The `configure` program provides a configuration to get your Messaging Server up and running. It is meant to create an initial runtime configuration to set up a generic functional Messaging Server configuration. Thus it gives you a base working configuration from which you can make your specific customizations. The program is only meant to be run once. Subsequent running of this program overwrites the existing configuration. To modify your initial runtime configuration, use the configuration utilities described here and in the CommSuite:Messaging Server Administration Reference.

To Run the Configure Program

1. Invoke the Messaging Server initial runtime `configure` command.
   - To configure a legacy configuration, run *msg-svr-base*`/sbin/configure`.
   - To configure a Unified Configuration, run *msg-svr-base*`/sbin/configure --xml`.
     For more information on deciding to use Unified Configuration, see Overview of Messaging

Server Unified Configuration.
The following table describes options you can set with the `configure` program:

Option	Description
`--debug`	Provides general debug information primarily for LDAP operations.
`--help`	Displays help
`--ignoreSendmail`	Keeps sendmail enabled after configuration. In other words, does not disable sendmail after configuration.
`--ldapport` [*ldapport*]	Specifies an LDAP port other than the default port 389.
`--ldif`	Causes configure to run without modifying the directory and instead generate an ldif file (*msg-svr-base* `/data/install/configure.ldif`) which the admin can apply to the directory after initial configuration. This is needed if the person doing the installation does not have directory admin rights.
`--noldap`	Runs without LDAP present (statefile only)
`--novalidate`	Skips most validation of user input.
`--noxml`	Generates legacy configuration (does not use XML-based Unified Configuration); can also be used to replace a Unified Configuration with a freshly generated legacy configuration (fresh installation of Messaging Server, not an upgrade where the `configtoxml` command was run).
`--saveState` [*statefile*]	Specifies a location other than the default location (mentioned below) to save a state file.
`--ssl` [*ssl*]	Requires SSL when configuring LDAP.
`--state` [*statefile*]	Uses a silent installation file. See To Perform a Silent Installation.
`--version, --V`	Displays product version.
`--xml`	Generates Unified Configuration (XML).

After running the command, the welcome text appears.

2. Select the directory where you want to store the Messaging Server configuration and data files. Symbolic links are created under the *msg-svr-base* directory to the configuration and data directory. For more information on these symbolic links, see Post-Installation Directory Layout. Make sure you have large enough disk space set aside for these files.
   The "Overwrite the existing configuration" prompt appears if you have an existing configuration.
   a. If you do receive the "Overwrite" message, to accept the default of yes, press Enter.
   b. Otherwise, type **n** to enter a different directory path.
3. Select the user name for server processes.
   To accept the default user name `mailsrv`, press Enter. Otherwise, type the user name for the server processes.
4. Select the group name for server processes.
   To accept the default group name `mail`, press Enter. Otherwise, type the group name for the server processes. This question appears only if the UNIX user name has not yet been created.
5. Select the fully-qualified local host name.
   This is the machine on which Messaging Server runs. When you installed the server, you might have specified the physical host name. However, if you are installing a cluster environment, use

the logical host name. Here is the chance to change what you originally specified.

6. Type the default mail domain.
7. Select the host name for the LDAP Directory Server.
8. Select the LDAP administrator login.
   The Directory Manager has overall administrator privileges on the Directory Server and all Communications Suite servers that make use of the Directory Server (for example, the Messaging Server) and has full administration access to all entries in the Directory Server. The default and recommended Distinguished Name (DN) is `cn=Directory Manager` and is set during Directory Server configuration
   If you are installing against a replicated Directory Server instance, you must specify the credentials of the replica, not the master directory.
9. Type the LDAP administrator password.
   Messages similar to the following appear:

```
==Checking Directory Server Setup from comm_dssetup
Domain Suffix: o=isp
User/Group Suffix: o=isp
Mail List User Suffix: o=mlusers
Schema Type: 2
```

10. Type a mail address for postmaster notices.
    Select an address that your administrator actively monitors. For example, `pma@siroe.com` for a postmaster on the `siroe` domain. This address cannot begin with "Postmaster."

    Note
    The user of the email address is not automatically created (although the default "admin" user is automatically created). Therefore, you need create it later by using a provisioning tool.

11. Type the IP addresses of hosts that are permitted to relay mail without authentication.
    You can use the `$(IP-pattern/significant-prefix-bits)` syntax. This information creates the appropriate mapping entries. It is important that you modify your configuration to match the needs of your site. Specifically, your Messaging Server should recognize its own internal systems and subnets from which SMTP relaying should always be accepted. If you do not update this configuration, you might encounter problems when testing your MTA configuration. For more information, see Configuring SMTP Relay Blocking.
12. Type the password for administrator accounts.
    Type an initial password to be used for service administrator, server, user/group administrator, end user administrator privileges as well as PAB administrator and SSL passwords.
    After creating the initial runtime configuration, you might change this password for individual administrator accounts. For more information, see To Modify Your Passwords.
13. Verify the password for administration.
    Retype the administration password.
14. The program displays the changes that it makes as well post-configuration changes that you might want to make.
    See configure Sample for Legacy Configuration and configure Sample for Unified Configuration for more information.

To Start Messaging Server

- To start Messaging Server, use the following command:

```
cd <msg-svr-base>/bin
./start-msg
```

To Perform a Silent Installation

The Messaging Server initial runtime configuration program automatically creates a silent installation *state* file (called `saveState`) that can be used to quickly configure additional Messaging Server instances in your deployment where the Messaging Server packages have been installed. All of your responses to the configuration prompts are recorded in that file.

By running the silent installation, you instruct the `configure` program to read the silent installation state file. The `configure` program uses the responses in this file rather than ask the same installation questions again for subsequent initial runtime configurations of Messaging Server. When you use the state file in a new installation, you are not asked any questions. Instead, all of the state file responses are automatically applied as the new installation parameters.

The silent installation `saveState` file is stored in the *msg-svr-base*`/data/setup/` directory.

To use the silent installation file to configure another Messaging Server instance on another machine in the deployment, follow these steps:

1. Copy the `saveState` file to a temporary area on the machine where you are performing the new installation.
2. Review and edit the `saveState` file as necessary.
   The `saveState` file contains *parameter* = *value* pairs. Change parameters and values as needed. For example, the default email domain for the new installation might be different than the default email domain recorded in the `saveState` file. Remember that the parameters listed are automatically applied to this installation. Almost always, you need to change the host name (`Fqdn.TextField`). The `UGDIR_BINDPW` and `admin.password` fields are obfuscated but still need to be kept private.
3. Run the following command to configure other machines with the silent installation file:

   ```
   cd <msg-svr-base>/bin
   ./configure -state <statefile>
   ```

   where *statefile* is file name of the `saveState` file, including the full path to the file. (See Step 1 of this section).

   > **Note**
   > After running the silent installation program, a new state file is created from the silent installation in the *msg-svr-base*`/data/setup/` directory.

Configuring Messaging Server Against a Directory Server Replica

The following conditions might prevent you from configuring Messaging Server against a Directory Server host:

- You do not have Directory Server credentials.
- Messaging Server cannot communicate directly with the Directory Server master.

To Configure Messaging Server Against a Directory Server Replica

This task describes how to configure your deployment to be able to run Messaging Server against a Directory Server replica. You need to update the Directory Server master, which then feeds the replica with the necessary changes. You cannot update the Directory Server replica directly because the master Directory Server overwrites it.

1. Run the Messaging `configure` program using the replicated Directory Server credentials as described in Creating the Initial Messaging Server Runtime Configuration.
   Use the `--ldif` option to produce the *msg-svr-base*`/data/install/configure.ldif` file that is needed to allow proper privileges to the Directory Server.
2. Move the `configure.ldif` file to the Directory Server master.
3. Run the `ldapmodify` command on the `configure.ldif` file.
   Once the changes are replicated to the Directory Server replica, it is now configured to work with your Messaging Server.

Installing Messaging Server Provisioning Tools

To learn more about the schema and provisioning options for Messaging Server and Communications Suite, see Understanding Schema and Provisioning Options.

Configuring SMTP Relay Blocking

Starting with Messaging Server 7 Update 5, the `configure` program prompts you to enter host IP addresses that are allowed as SMTP relay hosts. The `configure` program uses this information to construct the appropriate mapping entries.

By default, Messaging Server is configured to block attempted SMTP relays. That is, Messaging Server rejects attempted message submissions to external addresses from unauthenticated external sources (external systems are any other system than the host on which the server itself resides). This default configuration is quite aggressive in blocking SMTP relaying in that it considers all other systems to be external systems.

IMAP and POP clients that attempt to submit messages by using Messaging Server system's SMTP server destined for external addresses, and which do not authenticate using SMTP AUTH (SASL), find their submission attempts rejected. Which systems and subnets are recognized as internal is typically controlled by the `INTERNAL_IP` mapping table. In Unified Configuration, this mapping table is part of the overall configuration, and is viewed or edited by using the `msconfig` command. In legacy configuration, this mapping table is found in the *msg-svr-base*`/config/mappings` file.

For instance, on a Messaging Server system whose IP address is `192.45.67.89`, the default `INTERNAL_IP` mapping table would appear as follows:

```
INTERNAL_IP
  $(192.45.67.89/32)  $Y
  127.0.0.1  $Y
  *  $N
```

The initial entry, using the `$(IP-pattern/significant-prefix-bits)` syntax, is specifying that any IP address that matches the full 32 bits of `192.45.67.89` should match and be considered internal. The second entry recognizes the loopback IP address `127.0.0.1` as internal. The final entry specifies that all other IP addresses should not be considered internal.

You can add additional entries by specifying additional IP addresses or subnets before the final `$N` entry. These entries must specify an IP address or subnet (using the `$(.../...)` syntax to specify a subnet) on the left side and `$Y` on the right side. Or you can modify the existing `$(.../...)` entry to accept a more general subnet.

For instance, if this same sample site has a class C network, that is, it owns all of the `192.45.67.0` subnet, then the site would want to modify the initial entry so that the mapping table appears as follows:

```
INTERNAL_IP
  $(192.45.67.0/24)  $Y
  127.0.0.1  $Y
  *  $N
```

Or if the site owns only those IP addresses in the range `192.45.67.80-192.45.67.99`, then the site would want to use:

```
INTERNAL_IP
! Match IP addresses in the range 192.45.67.80-192.45.67.95
  $(192.45.67.80/28)  $Y
! Match IP addresses in the range 192.45.67.96-192.45.67.99
  $(192.45.67.96/30)  $Y
  127.0.0.1  $Y
  *  $N
```

The *msg-svr-base*`/bin/imsimta -test-match` utility can be useful for checking whether an IP address matches a particular `$(.../...)` test condition. The `imsimta test -mapping` utility can be more generally useful in checking that your `INTERNAL_IP` mapping table returns the desired results for various IP address inputs.

After modifying your `INTERNAL_IP` mapping table, be sure to issue the *msg-svr-base*`/bin/imsimta cnbuild` (if you are using a compiled configuration) and the *msg-svr-base*`/bin/imsimta restart` utilities so that the changes take effect.

Further information on the mapping file and general mapping table format, as well as information on `imsimta` command line utilities, can be found in Message Transfer Agent Command-line Utilities. In addition, information on the `INTERNAL_IP` mapping table can be found in To Add SMTP Relaying.

Enabling Startup After a Reboot

You can enable Messaging Server startup after system reboots by using the bootup script. On Linux, this script is *msg-svr-base*`/data/install/Sun_MsgSvr`. For Solaris OS 10, you should use the Service Management Framework. That is, by default, Messaging Server is not restarted after a system reboot unless you run this script. In addition, this script can also start up your MMP, if enabled.

To Enable Messaging Server After a Reboot

1. Copy the *msg-svr-base*`/data/install/Sun_MsgSvr` script into the `/etc/init.d` directory.
2. Change the following ownerships and access modes of the `Sun_MsgSvr` script:

Ownership (chown(1M))	Group Ownership (chgrp(1M))	Access Mode (chmod(1M))
`root` (superuser)	`sys`	0744

3. Change directories to the `/etc/rc2.d` directory and create the following link:

```
ln /etc/init.d/Sun_MsgSvr S92Sun_MsgSvr
```

4. Change directories to the `/etc/rc0.d` directory and create the following link:

```
ln /etc/init.d/Sun_MsgSvr K08Sun_MsgSvr
```

Performance and Tuning

Refer to Performance Tuning Considerations for a Messaging Server Architecture and Communications Suite Tuning and Best Practices.

Post-Installation Directory Layout

After installing Messaging Server, its directories and files are arranged in the organization described in the following table. The table shows only those directories and files of most interest for typical server administration tasks.

Post-Installation Directories and Files

Directory	Default Location and Description
Messaging Server Base (*msg-svr-base*)	`/opt/sun/comms/messaging/` or `/opt/sun/comms/messaging64/` (default location) The directory on the Messaging Server machine dedicated to holding the server program, configuration, maintenance, and information files. To configure more than one Messaging Server base directory per machine, see Using the ALTROOT Command-Line Argument.
Configuration `config`	*msg-svr-base*`/config/` Contains all of the Messaging Server configuration files, such as `config.xml` for Unified Configuration, or the `imta.cnf` and the `msg.conf` files, for legacy configuration. This directory is symbolically linked to the `config` subdirectory of the data and configuration directory (default: `/var/opt/sun/comms/messaging64/`) that you specified in the initial runtime configuration.
Log `log`	*msg-svr-base*`/log/` A convenience symbolic link to *msg-svr-base*`/data/log`, which contains the Messaging Server log files like the `mail.log_current` file.
Data `data`	*msg-svr-base*`/data/` Contains databases, configuration, log files, site-programs, queues, store and message files. The `data` directory includes the `config` and `log` directories. This directory is by default symbolically linked (on UNIX platforms) to the data and configuration directory (default: `/var/opt/sun/comms/messaging64`) that you specified in the initial runtime configuration.
System Administrator Programs `bin`	*msg-svr-base*`/bin/` Contains the Messaging Server system administrator executable programs and scripts such as `imsimta`, `configutil`, `stop-msg`, `start-msg`, and `uninstaller`.
Library `lib`	*msg-svr-base*`/lib/` Contains shared libraries, private executable programs and scripts, daemons, and non-customizable content data files. For example: `imapd` and `qm_maint.hlp.`
SDK Include Files `include`	*msg-svr-base*`/include/` Contains Messaging header files for Software Development Kits (SDK).
Examples `examples`	*msg-svr-base*`/examples/` Contains the examples for various SDKs.
Installation Data `install`	*msg-svr-base*`/data/install/` and *msg-svr-base*`/data/setup/` Contains installation-related data files such as installation log files, silent installation files, factory default configuration files, and the initial runtime configuration log files.

Post-Installation Port Numbers

In the installation and initial runtime configuration programs, port numbers are chosen for various services. These port numbers can range from 1 to 65535. Select numbers that do not conflict with port

numbers used by enabled system services or other third-party software. The authoritative list of registered port numbers is available at http://www.iana.org. The `/etc/services` also lists a subset of these numbers.

The following table lists the port numbers that are designated after installation.

Port Numbers Designated During Installation

Service	Port	Unified Configuration Option to Change Port	Legacy Configuration Parameter to Change Port
Message Store			
IMAP Server	143	`imap.port`	`service.imap.port`
POP Server	110	`pop.port`	`service.pop.port`
IMAPS Server	993	`imap.sslport`	`service.imap.sslport`
POPS Server	995	`pop.sslport`	`service.pop.sslport`
LMTP Server	225	`dispatcher.service:LMTP.tcp_ports`	`dispatcher.cnf`
MTA			
SMTP Relay	25	`dispatcher.service:SMTP.tcp_ports`	`dispatcher.cnf`
SMTP Submit	587	`dispatcher.service:SMTP_SUBMIT.tcp_ports`	`dispatcher.cnf`
SMTPS Submit	465	`dispatcher.service:SMTP_SUBMIT.tcp_ports`	`dispatcher.cnf`
http mail proxy	8990	`http.port`	`service.http.port`
https mail proxy	8991	`http.sslport`	`service.http.sslport`
MMP			
IMAP Proxy	143	`imapproxy.tcp_listen:imapproxy1.tcp_ports`	`Aservice.cfg`
POP Proxy	110	`popproxy.tcp_listen:popproxy1.tcp_ports`	`Aservice.cfg`
Submit Proxy	587	`submitproxy.tcp_listen:popproxy1.tcp_ports`	`Aservice.cfg`
IMAPS Proxy	993	`proxyimapssl`	`Aservice.cfg` and `ImapProxyAService.cfg`
POPS Proxy	995	`popproxy.tcp_listen:ssl_ports`	`Aservice.cfg` and `PopProxyAService.cfg`
Submits Proxy	465	`submitproxy.tcplisten:ssl_ports`	`Aservice.cfg` and `SmtpProxyAService.cfg`
Internal Servers			
watcher	49994	`watcher.port`	`local.watcher.port`
job_controller	27442	`job_controller.tcp_ports`	`job_controller.cnf`
ENS	7997	`ens.port`	`local.ens.port`

JMQ Notification

Messaging Server can use Oracle GlassFish Message Queue, a standards-based messaging service, to send event notifications. Message Queue is provided as a shared component when you install

Messaging Server or other Communications Suite products.

For More Information
See JMQ Notification Overview for information on integrating JMQ and Messaging Server.

Configuring Certificate Based Authentication

Messaging Server supports client certificate authentication. Support for dynamic CRL updates was introduced in Messaging Server 7 Update 4 and was "back-ported" to Messaging Server 7 Update 3.

For More Information
See Certificate Based Authentication for Oracle Communications Unified Communications Suite.

configure Sample for Legacy Configuration

configure Sample for Legacy Configuration

The following shows a sample Messaging Server `configure` session for a legacy configuration.

```
# bin/configure
Welcome to Oracle Communications Messaging Server 7.5-28.17 20130107

This utility will perform the following actions:
 * Select or create the Unix user identity used for server processes.
 * Check comm_dssetup version used to prepare your Directory Server
 * Initialize your Directory Server with a mail domain, admin user,
   administrative groups and access control.
 * Initialize configuration and data files so the product is ready to
start.
This will overwrite any existing configuration so if your server is
already
configured, press ctrl-C to exit now.

Path for Data and Configuration Files [/var/opt/sun/comms/messaging64]:
Overwrite existing configuration files [y]: n
Path for Data and Configuration Files [/var/opt/sun/comms/messaging64]:
Overwrite existing configuration files [y]: y
User Name for Server Processes [mailsrv]: mail
==Creating directories for server data and configuration files
Fully qualified local hostname [host1.us.example.com]:
Default mail domain name [us.example.com]: company33.com
Hostname for LDAP Directory Server []:
LDAP administrator login [cn=Directory Manager]:
LDAP administrator password: netscape

==Checking Directory Server Setup from comm_dssetup
Domain Suffix: o=usergroup
User/Group Suffix: o=usergroup
Mail List User Suffix: o=mlusers
Schema Type: 2
Mail address for postmaster notices [admin@company33.com]:
john.smith@example.com
john.smith@example.com
The address 'john.smith@example.com' is not in this mail domain.
The system can not function unless that address is fully functional.
Enter IP address information for systems permitted to relay mail without
authentication. Press return when you've completed the list.
IP address or address prefix []:

Password for server administration:
Verify password for administration: <password>

==Creating LDAP domain, group and admin accounts
==Creating Configuration Files
==Writing install/VERSION file
```

```
==Compiling MTA character set tables (chbuild)
==Checking for Common Configuration Warnings
==Writing Save State File
 /var/opt/sun/comms/messaging64/setup/saveState
==Disabling sendmail
  sendmail is already disabled.
Next Steps:
* Disable any other active mail servers on this host
* Configure sendmail client (see documentation for details)
* Make sure nsswitch.conf uses DNS for host lookups (details in
documentation)
* Make sure DNS MX/A record is present for 'company33.com'
* Make sure DNS A record for 'host1.us.example.com' points to this
machine
* Generate/Install SSL Certificate if SSL services desired
* Enable/Disable required services:
 Service          Port  Change Port          Enable/Disable Service
 -------          ----  -----------          ----------------------
 Message Store                               local.store.enable (1)
  IMAP Server     143   service.imap.port     service.imap.enable (1)
  POP Server      110   service.pop.port      service.pop.enable (1)
  IMAPS Server    993   service.imap.sslport  service.imap.enablesslport
(0)
  POPS Server     995   service.pop.sslport   service.pop.enablesslport
(0)
  LMTP Server     225   dispatcher.cnf       dispatcher.cnf (disabled)
 MTA                                         local.imta.enable (1)
  SMTP Relay      25    dispatcher.cnf        dispatcher.cnf (enabled)
  SMTP Submit     587   dispatcher.cnf        dispatcher.cnf (enabled)
  SMTPS Submit    465   dispatcher.cnf        dispatcher.cnf (disabled)
 http mail proxy  8990  service.http.port    service.http.enable (1)
 https mail proxy 8991  service.http.sslport service.http.enablesslport
(0)
 MMP                                         local.mmp.enable (0)
  IMAP Proxy      143   AService.cfg          AService.cfg (0)
  POP Proxy       110   AService.cfg          AService.cfg (0)
  Submit Proxy    587   AService.cfg          AService.cfg (disabled)
  IMAPS Proxy     993   AService.cfg & ImapProxyAService.cfg (disabled)
  POPS Proxy      995   AService.cfg & PopProxyAService.cfg (disabled)
  Submits Proxy   465   AService.cfg & SmtpProxyAService.cfg (disabled)
Internal Servers
 watcher          49994 local.watcher.port   local.watcher.enable (1)
 job_controller   27442 job_controller.cnf   local.imta.enable (1)
 ENS              7997  local.ens.port       local.ens.enable (1)
 metermaid        63837 metermaid.config.port local.metermaid.enable (0)
* Configure your network firewall to allow/block above services as
appropriate
* Make sure postmaster 'john.smith@example.com' is provisioned and
functional
* Enable RBAC non-root support for improved security
* Use 'start-msg' to start servers
  or Enable SMF for Messaging Server (see documentation for details)
Configuration Completed successfully
```

```
See log file for details:
 /var/opt/sun/comms/messaging64/log/configure_20130131133101.log
```

configure Sample for Unified Configuration

configure Sample for Unified Configuration

The following shows a sample Messaging Server `configure` session for Unified Configuration.

```
# bin/configure --xml
Welcome to Oracle Communications Messaging Server 7.5-28.17 20130107

This utility will perform the following actions:
 * Select or create the Unix user identity used for server processes.
 * Check comm_dssetup version used to prepare your Directory Server
 * Initialize your Directory Server with a mail domain, admin user,
   administrative groups and access control.
 * Initialize configuration and data files so the product is ready to
start.
This will overwrite any existing configuration so if your server is
already
configured, press ctrl-C to exit now.

Path for Data and Configuration Files [/var/opt/sun/comms/messaging64]:
Overwrite existing configuration files [y]:
User Name for Server Processes [mailsrv]: mail
==Creating directories for server data and configuration files
Fully qualified local hostname [host1.us.example.com]:
Default mail domain name [us.example.com]: company33.com
Hostname for LDAP Directory Server []:
LDAP administrator login [cn=Directory Manager]:
LDAP administrator password: <password>

==Checking Directory Server Setup from comm_dssetup
Domain Suffix: o=usergroup
User/Group Suffix: o=usergroup
Mail List User Suffix: o=mlusers
Schema Type: 2
Mail address for postmaster notices [admin@company33.com]:
john.smith@example.com
john.smith@example.com
The address 'john.smith@example.com' is not in this mail domain.
The system can not function unless that address is fully functional.
Enter IP address information for systems permitted to relay mail without
authentication. Press return when you've completed the list.
IP address or address prefix []:

Password for server administration:
Verify password for administration: <password>

==Creating LDAP domain, group and admin accounts
==Creating Configuration Files
==Writing install/VERSION file
==Compiling MTA character set tables (chbuild)
==Checking for Common Configuration Warnings
```

```
==Writing Save State File
 /var/opt/sun/comms/messaging64/setup/saveState
==Disabling sendmail
  sendmail is already disabled.
Next Steps:
* Disable any other active mail servers on this host
* Configure sendmail client (see documentation for details)
* Make sure nsswitch.conf uses DNS for host lookups (details in
documentation)
* Make sure DNS MX/A record is present for 'company33.com'
* Make sure DNS A record for 'host1.us.example.com' points to this
machine
* Generate/Install SSL Certificate if SSL services desired
* Enable/Disable required services:
 Service          Option (default)
 -------          ----------------
 Message Store    store.enable (1)
  IMAP Server     imap.port (143)
                  imap.enable (1)
  POP Server      pop.port (110)
                  pop.enable (1)
  IMAPS Server    imap.sslport (993)
                  imap.enablesslport (0)
  POPS Server     pop.sslport (995)
                  pop.enablesslport (0)
 MTA              mta.enable (1)
  SMTP Relay      dispatcher.service:SMTP.tcp_ports (25)
  SMTP Submit     dispatcher.service:SMTP_SUBMIT.tcp_ports (587)
 http mail proxy  http.port (8990)
                  http.enable (1)
 https mail proxy http.sslport (8991)
                  http.enablesslport (0)
 MMP              mmp.enable (0)
  IMAP Proxy      imapproxy.tcp_listen:imapproxy1.tcp_ports (143)
  POP Proxy       popproxy.tcp_listen:popproxy1.tcp_ports (110)
  Submit Proxy    submitproxy.tcp_listen:submitproxy.tcp_ports (not set)
  IMAPS Proxy     imapproxy.tcp_listen:imapproxy1.ssl_ports (not set)
  POPS Proxy      popproxy.tcp_listen:popproxy1.ssl_ports (not set)
  Submits Proxy   submitproxy.tcp_listen:submitproxy.ssl_ports (not set)
Internal Servers
 watcher          watcher.port (49994)
                  watcher.enable (1)
 job_controller   job_controller.tcp_ports (27442)
 ENS              ens.port (7997)
                  ens.enable (1)
 metermaid        metermaid.port (63837)
                  metermaid.enable (0)
* Configure your network firewall to allow/block above services as
appropriate
* Make sure postmaster 'john.smith@example.com' is provisioned and
functional
* Enable RBAC non-root support for improved security
* Use 'start-msg' to start servers
  or Enable SMF for Messaging Server (see documentation for details)
A new unified configuration has been created. You can manage your
configuration with the "msconfig" command and use it to view changes
```

```
or roll back to previous revisions. See the documentation for more
information. Unified configuration is automatically active when you
have a "config.xml" file in your configuration directory.

If you have already been using the legacy configuration files such as
"imta.cnf" and are not yet ready to upgrade to unified configuration,
you may re-run this tool as follows to generate a legacy configuration:
 /opt/sun/comms/messaging64/bin/configure --noxml
--state=/var/opt/sun/comms/messaging64/setup/saveState
Configuration Completed successfully
```

```
See log file for details:
 /var/opt/sun/comms/messaging64/log/configure_20130131133301.log
```

The following shows the state file created from this running of the `configue` program. The `XMLCONFIG = 1` setting determines that this is a Unified Configuration.

```
# cat /var/opt/sun/comms/messaging64/setup/saveState
# Save State File created 20130131133301 for
# Oracle Communications Messaging Server 7.5-28.17 20130107
#
Fqdn.TextField = host1.us.example.com
msg.DataPath = /var/opt/sun/comms/messaging64
iMS.UserId = mail
iMS.GroupId = mail
UGDIR_URL = ldap://:389
UGDIR_BINDDN = cn=Directory Manager
UGDIR_BINDPW = a~8WRw:2w@{5^Pv}q4HoUj^MJrgfpncr
Postmaster.TextField = john.smith@example.com
admin.password = bmV0c2NhcGU=
EmailDomain.TextField = company33.com
OrgName.TextField = o=company33.com,o=usergroup
InternalIPlist =
XMLCONFIG = 1
```

Messaging Server Sun Cluster HA Agent Initial Configuration

Oracle Communications Messaging Server Sun Cluster HA Agent Initial Configuration
Version 7.0

After installing the Messaging Server Sun Cluster HA Agent software, you need to perform an initial configuration by running the following command:

```
<msg-scha-base>/bin/init-config
```

This command registers the HA agent with the Sun Cluster HA software. You must have the Sun Cluster HA software installed prior to issuing this command.

For Messaging Server 7 Update 2 Only
After configuring Messaging Server 7 Update 2 for HA or upgrading to Messaging Server 7 Update 2 in HA, if you are using a compiled configuration, you must recompile the configuration by issuing the command:

```
imsimta cnbuild
```

Otherwise, the Messaging Server fails to start in the HA environment.