Installation Guide

iPlanet™ Meta-Directory

Version 5.0

August 2001

Contents

About This Guide

The *iPlanet Meta-Directory Installation Guide* describes how to install iPlanet™ Meta-Directory and related components. The Meta-Directory software is available for both the Windows NT operating system and Solaris™ operating environment.

This preface contains the following sections:

- What You Are Expected to Know
- The iPlanet Meta-Directory Documentation Set
- Organization Of This Guide
- Documentation Conventions
- Where to Find Additional Information

What You Are Expected to Know

This guide is for system administrators who want to install iPlanet Meta-Directory 5.0 on a single machine system. It is assumed that the administrator has experience working with directory servers and Lightweight Directory Access Protocol (LDAP) as well as knowledge of either or both of the Windows NT operating system and Solaris operating environment.

The iPlanet Meta-Directory Documentation Set

Read through the documentation set for iPlanet Meta-Directory version 5.0 before installing the software. The set, which is available at the Meta-Directory documentation web site, contains the following titles:

- *iPlanet Meta-Directory Deployment Guide* describes how to plan and implement an iPlanet Meta-Directory solution to meet the requirements of your organization.

- *iPlanet Meta-Directory Installation Guide* (this guide) tells how to install iPlanet Meta-Directory software on machines running either the Windows NT operating system or the Solaris operating environment.

- *iPlanet Configuration and Administration Guide* documents how to configure and administer the iPlanet Meta-Directory system from both the Meta-Directory console and the command-line.

- *Release Notes* include information about what is new in this release, last minute installation tips, known software limitations, and how to report problems.

In order to use Meta-Directory, a iPlanet Directory Server needs to be installed and configured. Therefore, it is recommended that you read the iPlanet Directory Server Deployment Guide and iPlanet Directory Server Installation Guide before beginning the installation process for iPlanet Meta-Directory.

NOTE	Be sure to check the Meta-Directory documentation web site for updates to the release notes and for revisions of guides. Updated documents will be marked with the revision date. `http://docs.iplanet.com/docs/manuals/metadir.html`

Organization Of This Guide

iPlanet Meta-Directory Installation Guide (this guide) contains instructions on how to install iPlanet Meta-Directory on servers using either the Windows NT operating system or the Solaris operating environment. It consists of the following chapters:

- **Chapter 1, "Preparing For Installation"** describes what you need prior to beginning installation.

- **Chapter 2, "Installing iPlanet Meta-Directory On Solaris Systems"** describes the installation process on a machine using the Solaris operating system.

- **Chapter 3, "Installing iPlanet Meta-Directory On Windows NT Systems"** describes the installation process on a machine using the Windows NT operating system.

- **Chapter 4, "Silent Installation"** describes the process for installing Meta-Directory on multiple machines or from a remote terminal.

- **Chapter 5, "Removing iPlanet Meta-Directory"** describes the process for removing Meta-Directory software from your system.

Documentation Conventions

In all iPlanet Meta-Directory documentation, certain typographic conventions and terminology are used to simplify discussion and to help better understand the material.

Typographic Conventions

This book uses the following typographic conventions:

- *Italic type* is used within text for book titles, new terminology, emphasis, and words used in the literal sense.

- `Monospace font` is used for sample code and code listings, API and language elements (such as function names and class names), filenames, pathnames, directory names, HTML tags, and any text that must be typed on the screen.

- *Italic serif font* is used within code and code fragments to indicate variable placeholders. For example, the following command uses *filename* as a vairable placeholder for an argument to the gunzip command:

    ```
    gunzip –d filename.tar.gz
    ```

Terminology

Below is a list of the general terms that are used in the iPlanet Meta-Directory documentation set:

- *Meta-Directory* refers to iPlanet Meta-Directory and any installed instances of the iPlanet Meta-Directory software.

- *Meta-Directory components* refers to the collective set of iPlanet Meta-Directory components and software you have installed and running on your system, including the join engine and any external data source connectors.

- E*xternal data source* refers to any user data that originates outside of the core Meta-Directory components, whether the data is coming from another database, directory server, data file, or other source of data.

- *Directory Server* refers to an installed instance of iPlanet Directory Server or Netscape Directory Server.

  iPlanet Meta-Directory can synchronize data using any LDAPv2 and LDAPv3-compliant directory server, as long as the LDAP server supports a change log mechanism similar to the one implemented in Netscape Directory Server 4.1*x*. The term *Directory Server* refers to the instances of iPlanet Directory Server and Netscape Directory Server that you have installed to work with iPlanet Meta-Directory.

- Similarly the term *Administration Server* refers to an installed instance of Netscape Administration Server or iPlanet Administration Server, whether it be used with the Meta-Directory components or another Netscape or iPlanet server.

- *NETSITE_ROOT* is a variable placeholder for the home directory where you have installed iPlanet Meta-Directory and any other iPlanet servers installed into the same server group.

- The term *flow* is used rather loosely to refer to the process of synchronizing data between an external data source and the meta view. You "flow" data through a connector to the connector view and then "flow" it to the meta view. The contrary is also true, you "flow" data from the meta view back to the connector views and out to the external data sources.

Where to Find Additional Information

In addition to iPlanet Meta-Directory documentation set, you should be familiar with the documentation for products that are used in conjunction with it. Of particular interest are the iPlanet Console and iPlanet Directory Server documentation sets. This section lists additional sources of information you may find helpful as you use iPlanet Meta-Directory.

iPlanet Console Documentation

You can find the iPlanet Console documentation at the following site:

```
http://docs.iplanet.com/docs/manuals/console.html
```

iPlanet Directory Server Documentation

You can find the iPlanet Directory Server documentation at the following site:

```
http://docs.iplanet.com/docs/manuals/directory.html
```

Directory Server Developer Information

In addition to the Directory Server documentation, you can find information on Meta-Directory, LDAP, the iPlanet Directory Server, and associated technologies at the following iPlanet developer sites:

```
http://developer.iplanet.com/tech/directory/
```

```
http://www.iplanet.com/downloads/developer/
```

Other iPlanet Product Documentation

Documentation for all iPlanet and Netscape servers and technologies can be found at the following web site:

```
http://docs.iplanet.com/docs/manuals/
```

iPlanet Technical Support

you can contact iPlanet Technical Support through the following location:

```
http://www.iplanet.com/support/
```

Preparing For Installation

Before beginning the installation process, you should familiarize yourself with the components of the Meta-Directory suite as well as check that your system meets the recommended requirements. This chapter contains the following sections:

- Meta-Directory Components
- System Requirements for Solaris Systems
- System Requirements for Windows NT Systems
- Installation Privileges
- Required Installation Information
- Standard Deployment Sequence

Meta-Directory Components

The Meta-Directory software suite contains, requires, and will install, the following components:

Netscape Server Core Components

Netscape Server Core Components are shared files that help Meta-Directory integrate with existing iPlanet and Netscape systems. The files include:

- Netscape Server Products Common Files
- Core Java Classes
- Java Runtime Environment version 1.2.2_05a

iPlanet Administration Services

iPlanet Administration Services bundles iPlanet Administration Server and iPlanet Console. The Administration Server is the common front-end to all iPlanet servers. There is at least one Administration Server instance for each server root in which an iPlanet server is installed. iPlanet Console allows the administrator to perform functions such as stopping and starting servers, installing server instances, and managing user and group information.

NOTE	iPlanet Console can also be installed as a stand-alone application.

nsPerl

nsPerl is a version of Perl, with enhancements added by iPlanet, required by Meta-Directory. (The standard version of Perl, available at http://www.cpan.org/, is not sufficient.) The following three scripts may be installed:

• nsPerl version 5.004_04 is a required Perl component used by the join engine and universal connectors.

• nsPerl version 5.005-03 is used by iPlanet Console and installed automatically.

• nsPerl version 5.005-02 is used by Meta-Directory version 1.x universal connectors only and need not be installed if this is not an upgrade.

Meta-Directory Join Engine

The join engine is the core service of Meta-Directory. It is the join engine's function to link information from different external data sources (through a connector and connector view) into an LDAP directory server (serving as a meta view). In addition, the join engine is responsible for keeping track of changes to the data and controlling the flow of the information between the connector and meta views.

Meta-Directory Universal Connector

The Universal connector (also known as the Universal Text Connector or UTC) is a generic text parser. It is the building block for a variety of connectors that provide bi-directional flow of data between an external data source and its connector view. The UTC ships with a Perl script and config files that, when manually configured,

work to flow data in three standard file formats: LDAP Data Interchange Format (LDIF), Comma-Separated Values (CSV), and Name/Value Pairs (NVP). The UTC coupled with the Perl script and the config file for one of these file formats is called the Universal Text Parser (UTP).

Meta-Directory Console

The Meta-Directory console provides the user interface for configuring Meta-Directory components and managing the flow of information between the external data source, the connector views and the meta view.

Meta-Directory Windows NT Domain Connector

The Windows NT Domain connector provides two-way flow of user and group data specifically between a Windows NT database and its connector view.

Meta-Directory Active Directory Connector

The Active Directory connector provides two-way flow of user and group data specifically between the Windows Active Directory and its connector view.

NOTE	The Windows NT Domain and Active Directory connectors are not installed components on a machine that uses the Solaris operating environment.

Meta-Directory Database Connector

The Database connector is a direct connector that provides the join engine with two-way SQL access to a relational database. The Database connector currently supports Oracle 8.1.5 databases.

System Requirements for Solaris Systems

Before installing Meta-Directory on a machine running the Solaris operating system, you should verify that it meets the recommended requirements described in this section.

Hardware Requirements

The basic installation of the join engine and connectors requires 100 MB of disk space; however, optimal operation of these components requires much more. (The disk space allocation for Meta-Directory must allow for users supported on the server, changelogs, and other generated files.) A minimum of 1 GB disk space is highly recommended for any Meta-Directory installation.

The minimum RAM requirements are 256 MB for machines dedicated to running Meta-Directory processes. If you install Netscape™ Directory Server or iPlanet Directory Server on the same machine as Meta-Directory, 1 GB of RAM is recommended.

Software Requirements

iPlanet Meta-Directory runs on Sun Microsystems' Solaris operating system, versions 2.6 and 8. Successful installation of Meta-Directory requires that a series of patches be installed. For a list of these patches and installation instructions, see "The Solaris Installation Process" on page 25 of Chapter 2, "Installing iPlanet Meta-Directory On Solaris Systems."

System Requirements for Windows NT Systems

Before installing Meta-Directory on a machine running the Windows NT operating system, you should verify that it meets the recommended requirements described in this section.

Hardware Requirements

An Intel Pentium II-based computer with a 300Mhz or faster CPU and 100 MB of disk space is recommended for the basic installation of the join engine and connectors; however, optimal operation of these components requires much more. (The disk space allocation for Meta-Directory must allow for users supported on the server, changelogs, and other generated files.) A minimum of 1 GB disk space is highly recommended for any Meta-Directory installation.

The minimum RAM requirements is 256 MB for machines dedicated to running Meta-Directory processes. If you install Netscape™ Directory Server or iPlanet Directory Server on the same machine as Meta-Directory, 1 GB of RAM is recommended.

Software Requirements

Installation of Meta-Directory 5.0 requires Microsoft's Windows NT Server 4.0 operating system, updated with Service Pack 6a. (The use of the Active Directory connector component specifically requires downloading and installing ADSI 2.5.) In addition, installation requires administrator or domain administrator privileges. Windows NT should also be configured to include TCP/IP transport and use DNS, LMHOSTS, or WINS to resolve host names.

Installation Privileges

It is best to install Meta-Directory as root (under Solaris) or Administrator (under Windows NT).

Required Installation Information

During installation, you will be prompted for the following configuration information:

- Server root

- User and group for allocation of permissions

- Location of the configuration directory

- Port number of the configuration directory

- Administration domain of the configuration directory

- Administration ID and password of the administrator

- Directory Server configuration information

For more information, see your Directory Server documentation.

Standard Deployment Sequence

The standard deployment sequence for Meta-Directory includes the installation of a directory server and the core Meta-Directory components (including one of each type of connector) on a single machine. This sequence is briefly outlined here:

1. Install and configure an LDAP directory server, creating a directory information tree (DIT) structure.

   For more information, see your Directory Server documentation.

NOTE	Meta-Directory must be configured to work with a Directory Server that has a changelog feature. This includes Netscape Directory Server and iPlanet Directory Server.

2. Verify that the directory server is responding to LDAP by typing any of the following URLs in your browser location window.

Table 1-1 LDAP Verification URLs

Type This URL:	To Display:
`ldap://`*hostname*`:`*port*	Information about the LDAP server
`ldap://`*hostname*`:`*port*`/`*your_suffix*	Everything under the given suffix that has anonymous access
`ldap://`*hostname*`:`*port*`/cn=schema`	The directory server's schema
`ldap://`*hostname*`:`*port*`/cn=monitor`	Directory server statistics

3. Start the administration server, accessing the directory server as Directory Manager.

4. Enable the changelog.

For more information, see your Directory Server documentation.

5. Optimize the directory server configuration for estimated directory tree size and load by adjusting the configuration parameters.

For more information, see your Directory Server documentation.

6. Populate the directory server database with user entries. The most common way to do this is by importing an LDIF file.

7. Install Meta-Directory by executing the `setup` binary from the installation folder.

The setup binary will install the necessary components to your system. See Chapter 2, "Installing iPlanet Meta-Directory On Solaris Systems" or Chapter 3, "Installing iPlanet Meta-Directory On Windows NT Systems" for instructions on your particular system.

8. Register the user name and password of the person designated configuration administrator.

The configuration administrator creates and manages the information stored in the server configuration directory. The user name and password will be entered and authenticated during the installation process.

9. Open Meta-Directory and create an instance of the join engine.

The meta view, where the join engine stores entries, is created during this process. For more information, refer to the *iPlanet Meta-Directory Configuration and Administration Guide.*

10. Connector instances are created and configured.

Use Meta-Directory console to configure connectors, define connector tasks, and configure connector view setup in the join engine. Procedures depend on the type of connector being installed. For more information, refer to *iPlanet Meta-Directory Configuration and Administration Guide.*

11. Test the system.

Standard Deployment Sequence

Installing iPlanet Meta-Directory On Solaris Systems

This chapter describes how to install Meta-Directory on a server using the Solaris operating system, version 2.6 or version 8. Please note that system patches must be installed before beginning the installation process. This chapter contains the following sections:

- Patch Installation
- The Solaris Installation Process

Patch Installation

If installing Meta-Directory on a server running the Solaris version 2.6 or version 8 operating systems, you must install the The Recommended Patch Clusters and The Java™ 2 Standard Edition (J2SE™) 1.2.2-05a Localized JRE patch.

The Recommended Patch Cluster for either version can be downloaded from:

`http://sunsolve.sun.com/pub-cgi/show.pl?target=patches/patch-access`

The Java 2 Standard Edition (J2SE) 1.2.2-05a Localized JRE patch set can be downloaded from:

`http://www.sun.com/software/solaris/jre/download.html`

You must be a registered Sun customer to download the J2SE patches. Registration is free and can be completed at the patch download site.

Once the patch sets have been downloaded and decompressed, refer to the `CLUSTER_README` files for installation instructions. Reboot the system after installation is complete.

Recommended Patch Cluster Solaris version 2.6

The following is a list of the recommended patches for Solaris version 2.6:

- 105181-28: SunOS 5.6: Kernel update patch
- 105210-38: SunOS 5.6: libaio, libc & watchmalloc patch
- 105216-04: SunOS 5.6: /usr/sbin/rpcbind patch
- 105284-41: Motif 1.2.7: Runtime library patch
- 105338-27: CDE 1.2: dtmail patch
- 105356-18: SunOS 5.6: /kernel/drv/ssd and /kernel/drv/sd patch
- 105357-04: SunOS 5.6: /kernel/drv/ses patch
- 105375-26: SunOS 5.6: sf & socal driver patch
- 105379-06: SunOS 5.6: /kernel/misc/nfssrv patch
- 105395-06: SunOS 5.6: /usr/lib/sendmail patch
- 105401-34: SunOS 5.6: libnsl and NIS+ commands patch
- 105403-04: SunOS 5.6: ypbind/ypserv patch
- 105407-01: SunOS 5.6: /usr/bin/volrmmount patch
- 105464-02: OpenWindows 3.6: Multiple xterm fixes
- 105472-08: SunOS 5.6: /usr/lib/autofs/automountd patch
- 105486-04: SunOS 5.6: /kernel/fs/hsfs patch
- 105529-11: SunOS 5.6: /kernel/drv/tcp patch
- 105552-03: SunOS 5.6: /usr/sbin/rpc.nisd_resolv patch
- 105558-04: CDE 1.2: dtpad patch
- 105562-03: SunOS 5.6: chkey and keylogin patch
- 105566-11: CDE 1.2: calendar manager patch
- 105568-23: SunOS 5.6: /usr/lib/libthread.so.1 patch
- 105580-18: SunOS 5.6: /kernel/drv/glm patch
- 105591-09: SunOS 5.6: Shared library patch for C++
- 105615-08: SunOS 5.6: /usr/lib/nfs/mountd patch
- 105633-57: OpenWindows 3.6: Xsun patch
- 105642-08: SunOS 5.6: prtdiag patch
- 105665-03: SunOS 5.6: /usr/bin/login patch
- 105667-03: SunOS 5.6: /usr/bin/rdist patch
- 105669-10: CDE 1.2: libDtSvc Patch
- 105703-27: CDE 1.2: dtlogin patch

- 105720-14: SunOS 5.6: /kernel/fs/nfs patch
- 105722-07: SunOS 5.6: /usr/lib/fs/ufs/ufsdump and ufsrestore patch
- 105741-09: SunOS 5.6: /kernel/drv/ecpp patch
- 105755-10: SunOS 5.6: libresolv, in.named, named-xfer, nslookup, nstest patch
- 105780-05: SunOS 5.6: /kernel/fs/fifofs patch
- 105786-14: SunOS 5.6: /kernel/drv/ip driver patch
- 105792-06: SunOS 5.6: /usr/sbin/tar patch
- 105800-07: SunOS 5.6: /usr/bin/admintool, y2000 patch
- 105802-15: OpenWindows 3.6: ToolTalk patch
- 105837-03: CDE 1.2: dtappgather Patch, including SDE 1.0 installations
- 105847-09: SunOS 5.6: /kernel/drv/st.conf and /kernel/drv/st patch
- 106027-09: CDE 1.2 / SDE 1.0: dtsession patch
- 106040-16: SunOS 5.6: X Input & Output Method patch
- 106049-02: SunOS 5.6: /usr/sbin/in.telnetd patch
- 106112-06: CDE 1.2: dtfile patch
- 106123-05: SunOS 5.6: sgml patch
- 106125-11: SunOS 5.6: Patch for patchadd and patchrm
- 106193-06: SunOS 5.6: Patch for Taiwan timezone
- 106222-01: OpenWindows 3.6: filemgr (ff.core) fixes
- 106226-01: SunOS 5.6: /usr/sbin/format patch
- 106235-08: SunOS 5.6: lp patch
- 106242-02: CDE 1.2: libDtHelp.so.1 fixes
- 106257-05: SunOS 5.6: /usr/lib/libpam.so.1 patch
- 106271-06: SunOS 5.6: /usr/lib/security/pam_unix.so.1 patch
- 106285-03: SunOS 5.6: /kernel/sys/msgsys patch
- 106292-11: SunOS 5.6: pkgadd/pkginstall & related utilities
- 106301-03: SunOS 5.6: /usr/sbin/in.ftpd patch
- 106361-11: SunOS 5.6: csh/jsh/ksh/rksh/rsh/sh patch
- 106409-01: SunOS 5.6: Fixes the Traditional Chinese TrueType fonts
- 106415-04: OpenWindows 3.6: xdm patch
- 106429-02: SunOS 5.6: /kernel/drv/mm patch
- 106437-03: CDE 1.2: Print Manager Patch
- 106439-07: SunOS 5.6: /usr/sbin/syslogd patch
- 106448-01: SunOS 5.6: /usr/sbin/ping patch

- 106468-04: SunOS 5.6: /usr/bin/cu and usr/bin/uustat patch
- 106495-01: SunOS 5.6: truss & truss support library patch
- 106522-04: SunOS 5.6: /usr/bin/ftp patch
- 106569-01: SunOS 5.6: libauth.a & libauth.so.1 patch
- 106592-03: SunOS 5.6: /usr/lib/nfs/statd patch
- 106625-11: SunOS 5.6: libsec.a, libsec.so.1 and /kernel/fs/ufs patch
- 106639-05: SunOS 5.6: /kernel/strmod/rpcmod patch
- 106648-01: OpenWindows 3.6: libce suid/sgid security fix
- 106649-01: OpenWindows 3.6: libdeskset patch
- 106650-04: OpenWindows 3.6: mailtool attachment security patch
- 106828-01: SunOS 5.6: /usr/bin/date patch
- 106834-02: SunOS 5.6: cp/ln/mv patch
- 106882-02: SunOS 5.6: /usr/lib/nfs/nfsd patch
- 107336-01: OpenWindows 3.6: KCMS configure tool has a security vulnerability
- 107434-01: CDE 1.2: Spell checking occasionally kills mail
- 107490-01: SunOS 5.6: savecore doesn't work if swap slice is over 2G
- 107565-02: SunOS 5.6: /usr/sbin/in.tftpd patch
- 107618-02: SunOS 5.6: patch /usr/sbin/vold
- 107733-09: SunOS 5.6: Linker patch
- 107758-01: SunOS 5.6: Pax incorrectly change mode of symlink target file
- 107766-01: SunOS 5.6: ASET cklist reports unchanged 6month older files as new
- 107774-01: SunOS 5.6: inetd denial-of-service attack
- 107991-02: SunOS 5.6: /usr/sbin/static/rcp patch
- 108091-03: SunOS 5.6: ssJDK1.2.1_03 fails with fatal error in ISO8859-01 Locales
- 108199-01: CDE 1.2: dtspcd Patch
- 108201-01: CDE 1.2: dtaction Patch
- 108307-02: SunOS 5.6: keyserv fixes
- 108333-02: SunOS 5.6: jserver buffer overflow
- 108346-03: SunOS 5.6: patch usr/sbin/rpc.nispasswdd
- 108468-02: SunOS 5.6: ldterm streams module fixes
- 108492-01: SunOS 5.6: Snoop may be exploited to gain root access
- 108499-01: SunOS 5.6: ASET sets the gid on /tmp, /var/tmp when setting med high
- 108660-01: SunOS 5.6: Patch for sadmind
- 108804-02: SunOS 5.6: /usr/bin/tip patch

- 108890-01: SunOS 5.6: patch /usr/lib/netsvc/yp/ypxfrd
- 108893-01: SunOS 5.6: patch /usr/lib/netsvc/yp/rpc.ypupdated
- 108895-01: SunOS 5.6: patch /usr/sbin/rpc.bootparamd
- 109266-01: SunOS 5.6: security: /bin/mail has buffer overflow
- 109339-02: SunOS 5.6: nscd's size grows -0TTL values not implemented
- 109388-01: SunOS 5.6: patch /usr/vmsys/bin/chkperm
- 109719-01: SunOS 5.6: arp should lose set-gid bid
- 110990-01: SunOS 5.6: Patch for ttymon
- 111029-01: SunOS 5.6: /kernel/sys/semsys patch
- 111109-01: SunOS 5.6: Patch to /usr/bin/nawk
- 111240-01: SunOS 5.6: Patch to /usr/bin/finger
- 111560-01: SunOS 5.6: dmesg security problem
- 111664-01: SunOS 5.6: bzip patch

| **NOTE** | Patches 106409-01 and 108091-03, recommended for Solaris version 2.6, are not included in the Recommended Patch Cluster but can be obtained from the J2SE 1.2.2 Localized JRE patch set. |

Recommended Patch Cluster Solaris version 8

The following are the recommended patches for Solaris version 8:

- 108528-09: SunOS 5.8: kernel update patch
- 108652-35: X11 6.4.1 Xsun patch
- 108725-05: SunOS 5.8: st driver patch
- 108827-10: SunOS 5.8: libthread patch
- 108869-06: SunOS 5.8: snmpdx/mibiisa/libssasnmp/snmplib patch
- 108875-09: SunOS 5.8: c2audit patch
- 108968-05: SunOS 5.8: vol/vold/rmmount patch
- 108974-11: SunOS 5.8: dada, uata, dad, sd and scsi drivers patch
- 108975-04: SunOS 5.8: /usr/bin/rmformat and /usr/sbin/format patch
- 108977-01: SunOS 5.8: libsmedia patch
- 108985-03: SunOS 5.8: /usr/sbin/in.rshd patch
- 108987-04: SunOS 5.8: Patch for patchadd and patchrm
- 108989-02: SunOS 5.8: /usr/kernel/sys/acctctl and /usr/kernel/sys/exacctsys patch

- 108991-13: SunOS 5.8: /usr/lib/libc.so.1 patch
- 108993-03: SunOS 5.8: nss and ldap patch
- 109091-04: SunOS 5.8: /usr/lib/fs/ufs/ufsrestore patch
- 109137-01: SunOS 5.8: /usr/sadm/install/bin/pkginstall patch
- 109181-03: SunOS 5.8: /kernel/fs/cachefs patch
- 109277-01: SunOS 5.8: /usr/bin/iostat patch
- 109279-13: SunOS 5.8: /kernel/drv/ip patch
- 109318-12: SunOS 5.8: suninstall patch
- 109320-03: SunOS 5.8: LP patch
- 109322-07: SunOS 5.8: libnsl patch
- 109324-02: SunOS 5.8: sh/jsh/rsh/pfsh patch
- 109326-05: SunOS 5.8: libresolv.so.2, in.named patch
- 109470-02: CDE 1.4: Actions Patch
- 109587-03: SunOS 5.8: libspmistore patch
- 109742-04: SunOS 5.8: /kernel/drv/icmp patch
- 109783-01: SunOS 5.8: /usr/lib/nfs/nfsd patch
- 109805-03: SunOS 5.8: pam_krb5.so.1 patch
- 109898-02: SunOS 5.8: /kernel/drv/arp patch
- 109951-01: SunOS 5.8: jserver buffer overflow
- 110075-01: SunOS 5.8: /kernel/drv/devinfo and /kernel/drv/sparcv9/devinfo patch
- 110283-03: SunOS 5.8: mkfs and newfs patch
- 110286-02: OpenWindows 3.6.2: Tooltalk patch
- 110322-01: SunOS 5.8: /usr/lib/netsvc/yp/ypbind patch
- 110383-01: SunOS 5.8: libnvpair patch
- 110387-03: SunOS 5.8: ufssnapshots support, ufsdump patch
- 110453-01: SunOS 5.8: admintool patch
- 110458-02: SunOS 5.8: libcurses patch
- 110662-02: SunOS 5.8: ksh patch
- 110700-01: SunOS 5.8: automount patch
- 110898-02: SunOS 5.8: csh/pfcsh patch
- 110901-01: SunOS 5.8: /kernel/drv/sgen and /kernel/drv/sparcv9/sgen patch
- 110934-01: SunOS 5.8: pkgtrans, pkgadd, pkgchk and libpkg.a patch
- 110939-01: SunOS 5.8: /usr/lib/acct/closewtmp patch
- 110943-01: SunOS 5.8: /usr/bin/tcsh patch

- 110945-01: SunOS 5.8: /usr/sbin/syslogd patch
- 110951-01: SunOS 5.8: /usr/sbin/tar and /usr/sbin/static/tar patch
- 111071-01: SunOS 5.8: cu patch
- 111111-01: SunOS 5.8: nawk line length limit corrupts patch dependency checking
- 111232-01: SunOS 5.8: patch in.fingerd
- 111234-01: SunOS 5.8: patch finger
- 111293-03: SunOS 5.8: /usr/lib/libdevinfo.so.1 patch
- 111325-01: SunOS 5.8: /usr/lib/saf/ttymon patch
- 111327-02: SunOS 5.8: libsocket patch
- 111363-01: SunOS 5.8: /usr/sbin/installf patch
- 111548-01: SunOS 5.8: catman, man, whatis, apropos and makewhatis patch
- 111570-01: SunOS 5.8: uucp patch

Verifying Patch Installation

Entering the command `showrev -p` after patch installation will print a complete list of installed patches to your monitor. A comparison of this list and the patch listing in this documentation can verify that the correct patches have been installed.

The Solaris Installation Process

This section describes the process for installing Meta-Directory on a server running the Solaris operating system.

NOTE	It is recommended that you have your Directory Server documentation on hand to help with the installation process. It can be found on the iPlanet web site at `http://docs.iplanet.com/docs/manuals/`.

1. Log in to your system as superuser (root).

2. Download the Meta-Directory for Solaris binary.

   The binary is a file compressed with gzip, a compression utility that can be downloaded at http://www.gzip.org.

3. Decompress the binary with the following command:

   ```
   # gzip -dc filename.tar.gz | tar xvf -
   ```

4. Run the setup program using the command `./setup`.

5. Press Return when asked if you'd like to continue with the installation.

6. Read the Software License Agreement, type `y` for Yes and press Return if you accept this agreement and agree to be bound by its terms.

7. Select the default iPlanet Servers installation and click `Next` to continue.

   The iPlanet Console option can be used to re-install iPlanet Console.

8. Enter a full path to the location (server root) where you want Meta-Directory to be installed.

   The directory location that you enter must be different from the one in which you are running the setup program; it cannot be installed into the same directory into which it is extracted. If the installation directory does not currently exist, the setup program will create it although you may have to verify write access after installation.

9. Press Enter to enable the installation of all iPlanet Server Product components.

   For a list and description of the components, see Chapter 1, "Preparing For Installation.

10. Press Enter to install all server core components, core Java classes and Java runtime environment.

11. Press Enter to install iPlanet Administration Server and Administration Server Console.

12. Press Enter to install nsPerl 5.004_04.

13. Press Enter to install Meta-Directory join engine.

14. Press Enter to install Meta-Directory Universal connector.

15. Press Enter to install Meta-Directory console.

16. Press Enter to install Meta-Directory Database connector.

17. Enter the fully-qualified domain name of the computer on which you are installing Meta-Directory and press Enter.

18. Enter the user and group you want to represent the iPlanet server in the user directory.

Ideally this user should not have privileges in the computer network system. The Administration Server will give this group the permissions to perform server-specific operations.

19. Enter the URL of the Directory Server that will contain the Configuration Directory and the non-secure port address. (The default port address is 389.) Click `Next` to continue.

This function requires the use of iPlanet Directory Server. Ensure that the Directory Server is currently running so that the setup program can verify the information entered.

20. Enter the domain name (for example, `iPlanet.com`) to specify the administration domain in the Configuration Directory. Click Next to continue.

21. Enter the user ID or distinguished name (DN) and password of the configuration administrator authorized to access the Configuration Directory. The domain name specified above and the configuration administrator specified here will be verified when you click Next to continue.

The configuration administrator creates and manages information stored in the Configuration Directory. The user must exist on the server before entering it on this screen.

22. Choose an administration port number and click Next to continue.

By default, the setup application chooses an administration port number. If you decide to use the default, make sure that this is a port number that is not already in use. Be sure to record the port number you have chosen.

23. The Meta-Directory files and components are installed to your system.

Installing iPlanet Meta-Directory On Windows NT Systems

This chapter describes how to install Meta-Directory on a server running the Windows NT operating system.

Windows NT Installation Process

To install Meta-Directory on a computer running the Windows NT operating system:

1. Log in to Windows NT as a user with administrator privileges.

2. Download compressed Meta-Directory for Windows NT binaries to the hard drive of the installation computer:

The compressed binary needs to be decompressed before moving to Step 3. WinZip can be obtained through http://www.winzip.com.

3. Double-click the `setup.exe` program.

`setup.exe` is in the folder into which you decompressed the binary.

NOTE	To alleviate the possibility of sharing violations or file overwrites, it is best to install Meta-Directory into a different directory tree than the one in which your Directory Server resides.

4. Click `View ReadMe` to check for any last-minute instructions, installation updates or news or click `Next` to continue.

5. Read the Software License Agreement, type `y` for Yes and press Return if you accept this agreement and agree to be bound by its terms.

6. Select installation of the default iPlanet Servers and click `Next` to continue.

The iPlanet Console option can be used to re-install iPlanet Console.

NOTE	Even if no component is selected, 5 MB will be used for the installation of `uninst.exe`, `srvcore` and other related files.

7. Click `Next` to choose the installation folder displayed.

You can change the installation folder by clicking `Browse` and navigating to another folder.

8. Select or deselect the components and subcomponents for installation and click `Next` to continue. Note the "Special nsPerl Install Instructions" in Table 3-1.

By default, all Meta-Directory components are selected for installation. You can deselect the components that you do not wish to install. To choose which subcomponents of a particular component to install, select the component and click `Change`. For a list and description of the components, see Chapter 1, "Preparing For Installation."

Table 3-1 Special nsPerl Install Instructions

nsPerl version 5.004_04 is a required component used by the join engine and connectors. Follow these special instructions to install it on a system running Windows NT:

1. Select nsPerl on the Components To Install screen and click `Change`.

2. Select nsPerl 5.004_04 on the Subcomponents To Install screen.

3. Select nsPerl version 5.005-02 *only* if this is an upgrade.

4. Click `Continue` and proceed with the installation.

NOTE	Certain components have dependencies on other components. If you select a component that has a dependency on a component that you do not select, an error message will appear instructing you to select the required component.

9. Enter the URL of the Directory Server and the non-SSL port address. (The default port address is 389.) Click Next to continue.

    iPlanet Meta-Directory requires the use of iPlanet Directory Server 4.1x or 5.0. Ensure that the Directory Server is currently running so that the setup program can verify the information entered.

10. Enter the domain name (for example, iPlanet.com) to specify the administration domain in the server configuration directory. Click Next to continue.

11. Enter the user ID or distinguished name (DN) and password of the configuration administrator authorized to access the Configuration Directory. The domain name specified above and the configuration administrator specified here will be verified when you click Next to continue.

    The configuration administrator creates and manages information stored in the server configuration directory. The user must exist on the server before entering it on this screen.

12. Choose an administration port number and click Next to continue.

    By default, the setup application chooses an administration port number. If you decide to use the default, make sure that this is a port number that is not already in use. Be sure to record the port number you have chosen.

13. Ensure that the displayed configuration summary information is correct and click Install.

14. The Meta-Directory files and components are installed on your system. After installation is successful, you will be prompted to restart Windows NT.

Silent Installation

iPlanet Meta-Directory gives the system administrator the option of installing Meta-Directory using a prepared instruction file. This "silent" installation allows the administrator to define the configuration information beforehand and use the file to remotely install the software or duplicate the installation process on a number of machines. This chapter contains the following sections:

- The install.inf File

- Directives

- Creating an install.inf File

- Using the install.inf File

- Examples of install.inf Files

The install.inf File

The `install.inf` file is used for the silent installation of Meta-Directory. It is generated during the initial installation of Meta-Directory and can be modified for use during unattended installations. The basic format of the file is this:

```
[General]
directive= value
directive= value
directive= value
...
[base]
directive= value
directive= value
directive= value
...
[admin]
directive= value
directive= value
directive= value
....
```

The keywords `[General]`, `[base]`, and `[admin]` are required. These keywords identify a specific aspect of the installation process. The directives are more specific specifications of each keyword.

Directives

The directives used in `install.inf` are divided into four types identified by the keywords: `[General]`, `[Base]`, `[admin]` and `[component]`.

General Directives

General installation directives specify information that will be common to all installations performed.

Table 4-1 [General] Installation Directives

Directive	Description
Components	This required directive specifies which of the following components will be installed: • srvrcore—uninstallation binaries • base—the base installation package • admin—the Administration Server binaries
ServerRoot	This required directive specifies the full path to where the selected Meta-Directory components are installed.
FullMachineName	This directive specifies the fully qualified domain name of the machine on which you are performing the silent installation. If this directive is not present, the Common Install Shell will query the machine for its name.
SuiteSpotUserID	For UNIX® only, this directive specifies the name of the user under which Meta-Directory will run. The value is set to nobody on Windows NT systems.
SuiteSpotGroup	For UNIX® only, this directive specifies the name of the group to which the SuiteSpotUserID belongs. The value is set to nobody on Windows NT systems.
ConfigDirectoryLdapURL	This required directive specifies the URL of the directory server used to manage the information and data. The URL is specified in the following format: ldap://<machinename>:<port>/<base DN>
AdminDomain	This directive specifies the administration domain under which this server will be registered.
ConfigDirectoryAdminID	This required directive specifies the user ID that has permission to access the configuration directory and the specified administration domain.
ConfigDirectoryAdminPwd	This required directive specifies the password for the user that has permission to access the configuration directory and the specified administration domain.
UserDirectoryLdapURL	This directive specifies the URL of the directory server in this installation which requires write access to the user directory.
UserDirectoryAdminID	This directive specifies the user ID of the user that has administration privileges to the user directory.

Table 4-1 [General] Installation Directives *(Continued)*

Directive	Description
UserDirectoryAdminPwd	This directive specifies the password for the user that has administration privileges to the user directory.

Base Directives

The [base] installation directive determines which of the components needed for the iPlanet consoles will be installed.

Table 4-2 [base] Installation Directive

Directive	Description
Components	The values for this directive are one, two or all three of:
	• base—the shared libraries used by the iPlanet consoles
	• base-client—the Java runtime environment used by server consoles
	• base-jre—the Java runtime environment used by all other consoles

Admin Directives

The [admin] installation directives specify information needed by your administration server to manage the instance that is being installed.

Table 4-3 [admin] Installation Directives

Directive	Description
Components	This directive specifies which of the following admin components will be installed:
	• admin—installs the Administration Server. You must install the Administration Server in order to install and use other iPlanet servers.
	• admin-client—installs iPlanet Console. Do not install if you will remotely manage your servers from an instance of iPlanet Console elsewhere on your network.

Table 4-3 [admin] Installation Directives *(Continued)*

Directive	Description
SysUser	For UNIX® only, this directive specifies the user for which the Administration Server will run. For default installations, this user must be root.
Port	This directive specifies the port that the Administration Server will use. Note that the Administration Server's host name is given by `FullMachineName`, one of the general directives.
ServerAdminID	This directive specifies the administration ID that is used to access the Administration Server when the configuration directory is not responding.
ServerAdminPwd	This directive specifies the password for ServerAdminID.
ServerIPAddress	This directive specifies the IP address that the Administration Server will listen to. Use this directive if you are installing on a system with more than one IP address and you do not want to use the first IP address for your Administration Server.

Component Directives

The [*component*] installation directives determine which, if any, of Meta-Directory's components will be installed. Each component is its own directive. They can include all or some of the components in Table 4-4. (For an understanding of how component directives are laid out, see "Examples of install.inf Files" on page 40.)

Table 4-4 [*component*] Installation Directives

Directive	Description
Components	These keywords specify the Meta-Directory component to be installed and have a value equal to themselves: • [nsperl]nsPerl (value includes a version number) • [join]Join engine • [utc]Universal connector • [metaconsole]Meta-Directory console • [ntdc]Windows NT domain connector • [adc]Active Directory connector • [dbc]Database connector

Table 4-4 [*component*] Installation Directives *(Continued)*

Directive	Description
InstallType	This directive specifies the type of installation. The choices are New, Upgrade, Migrate, Extraction or Remove.
InstallUnitAction	This directive specifies the type of installation. The choices are None, Create, Migrate, Repair or Remove.
HaveReached	This directive always has the value True.

NOTE	Disregard the sf. prefix in front of all component directives.

Creating an install.inf File

In order to create an install.inf file on a machine running the Solaris operating system, the installation setup must be executed using the -k command-line option:

```
setup -k
```

This installation will create the install.inf file which can be found at:

```
NETSITE_ROOT/setup/install.inf
```

Creating an install.inf file on Windows NT

There is only one way to create an install.inf file on Windows NT. You must start with the zipped binary Meta-Directory download. The install.inf file can not be created using the executable binary download.

1. Download the zipped version of the software.

2. Decompress the download.

3. Access the Command Prompt window under Start > Programs.

4. Execute the setup.exe file by typing setup -k.

| NOTE | Only this procedure will create the `install.inf` file on Windows NT; starting the installation from the bundled executable binaries does not allow you to run `setup -k` in the Command Prompt and thus can not create the file. |

Using the install.inf File

In order to use the `install.inf` file to perform installations on a number of machines, you need to make some changes to the file. This section describes these changes and tells you how to use the file for silent installation.

Changes On The install.inf File

1. Change the `FullMachineName` directive to the fully-qualified domain name of the new machine on which Meta-Directory will be installed.

| NOTE | Be aware that `FullMachineName` will default to the local host name. |

2. Enter the path to the local machine in the `ServerIPAddress` directive.

| NOTE | iPlanet recommends the use of the `ServerIPAddress` directive only if you are installing Meta-Directory on a machine with multiple IP addresses. |

3. Check that the installation path being used on the `ServerRoot` directive is system-appropriate. If you are installing on both Windows NT and UNIX machines, make sure the correct path delimiter is used. You might need to add or remove the Windows NT drive letter designation as appropriate.

4. **UNIX Only:** If you are installing more than one instance of Meta-Directory on the same host, check that the `ServerRoot` directive contains a unique value for each instance.

5. If you create your `install.inf` file on a Windows NT machine, then the `SuiteSpotUserID` and `SuiteSpotGroup` directives should be set to `user nobody`. If you subsequently use this file on a UNIX machine, ensure the user and group names chosen are appropriate for the machine. The `SuiteSpotUserID` and `SuiteSpotGroup` directives determine what user and group Meta-Directory will run under when installed on a UNIX system.

CAUTION   Be aware that the `install.inf` files contain server passwords and should be protected.

Installing with the install.inf File

To install using the `install.inf` file, run `setup` with the `-s` and `-f` command line options:

```
setup -sf install.inf
```

Examples of install.inf Files

This section provides examples of the `install.inf` files generated after an installation has been performed, one for Solaris and one for Windows NT.

Solaris install.inf File Example

The following is an example of an `install.inf` file generated during installation of Meta-Directory on a computer running the Solaris operating system.

Code Example 4-1   Solaris `install.inf` File

```
[General]
FullMachineName=    lostland.red.iplanet.com
SuiteSpotUserID=    etsai
SuitespotGroup=    staff
ConfigDirectoryAdminID=    admin
ConfigDirectoryAdminPwd=    admin
ServerRoot=    /usr/iPlanet/servers
AdminDomain=    iplanet.com
MachineName=    lostland
InstallTimeStamp=    20010404204346Z
```

Code Example 4-1   Solaris `install.inf` File *(Continued)*

```
Components=   svrcore,base,admin,nsperl,join,utc,metaconsole,dbc
ConfigDirectoryLdapURL=   ldap://lostland.red.iplanet.com:389/
LDAPPort= 389
LDAPHost=   lostland.red.iplanet.com
AdminGroupDN=   cn=Server Group, cn=lostland.red.iplanet.com, ou=iplanet.com,
    o=NetscapeRoot

[admin]
SysUser=   root
Port=   6714
ServerIpAddress=
ServerAdminID=   admin
ServerAdminPwd=   admin
Components=   admin,admin-client

[nsperl]
sf.InstallUnitAction=   Create
sf.HaveReached=   True
sf.InstallType=   New
Components=   nsperl544,nsperl553

[join]
sf.InstallUnitAction=   Create
sf.HaveReached=   True
sf.InstallType=   New
Components=   join

[utc]
sf.InstallUnitAction=   Create
sf.HaveReached=   True
sf.InstallType=   New
Components=   utc

[metaconsole]
sf.InstallUnitAction=   Create
sf.HaveReached=   True
sf.InstallType=   New
Components=   metaconsole

[dbc]
sf.InstallUnitAction=   Create
sf.HaveReached=   True
sf.InstallType=   New
Components=   dbc

[base]
Components=   base,base-client,base-jre
```

Windows NT install.inf File Sample

The following is an example of an install.inf file generated during installation of Meta-Directory on a computer running the Windows NT operating system.

Code Example 4-2   Windows NT install.inf File

```
[General]
AdminDomain=    iplanet.com
Components=svrcore,base,admin,nsperl,join,utc,metaconsole,ntdc,adc, dbc
ServerRoot=    c:\iPlanet\Servers
ConfigDirectoryLdapURL=    ldap://lostland.red.iplanet.com:389/o=NetscapeRoot
ConfigDirectoryAdminID=    uid=admin, ou=Administrators, ou=TopologyManagement,
    o=NetscapeRoot
ConfigDirectoryAdminPwd=    admin
FullMachineName=    bugsland.red.iplanet.com
SuiteSpotUserID=    None
SuitespotGroup=    None
SelectedComponents=svrcore,base,base-client,base-jre,admin,admin-client,nsperl
    544,nsperl553,join,utc,metaconsole,ntdc,adc,dbc
MachineName=    bugsland
InstallTimeStamp=    20010405205612Z

[base]
Components=    base,base-client,base-jre

[admin]
Components=    admin,admin-client
Port=    6714
SysUser=    root
ServerAdminID=    uid=admin, ou=Administrators, ou=TopologyManagement,
    o=NetscapeRoot
ServerAdminPwd=    admin

[nsperl]
Components=    nsperl544,nsperl553
sf.InstallUnitAction=    Create
sf.HaveReached=    True
sf.InstallType=    New

[join]
Components=    join
sf.InstallUnitAction=    Create
sf.HaveReached=    True
sf.InstallType=    New

[utc]
Components=    utc
sf.InstallUnitAction=    Create
sf.HaveReached=    True
sf.InstallType=    New
```

Code Example 4-2 Windows NT `install.inf` File *(Continued)*

```
[metaconsole]
Components=   metaconsole
sf.InstallUnitAction=   Create
sf.HaveReached=   True
sf.InstallType=   New

[ntdc]
Components=   ntdc
sf.InstallUnitAction=   Create
sf.HaveReached=   True
sf.InstallType=   New

[adc]
Components=   adc
sf.InstallUnitAction=   Create
sf.HaveReached=   True
sf.InstallType=   New

[dbc]
Components=   dbc
sf.InstallUnitAction=   Create
sf.HaveReached=   True
sf.InstallType=   New
```

Removing iPlanet Meta-Directory

iPlanet Meta-Directory provides a utility that enables you to uninstall the software as a whole or to remove selected components. On Solaris, you use the `Uninstall` utility and on Windows NT, you use `uninst.exe`. This chapter contains the following sections:

- Removal Procedure for Solaris Systems
- Removal Procedure for Windows NT Systems

Removal Procedure for Solaris Systems

NOTE	Before starting the uninstall process, make sure that the Directory Server holding the Configuration Directory is running.

To uninstall Meta-Directory from a computer running the Solaris operating system:

1. Log in to your system as super user (root).
2. Navigate to the folder where iPlanet Meta-Directory is installed.
3. Run `./uninstall` from the folder.
4. Select the default `All` to remove all components of iPlanet Meta-Directory.

   Alternately, you may choose to remove individual components by selecting them from the list that appears on the screen:

   ❏ Netscape Server Products Core Components

   ❏ Administration Server and Management Console

   ❏ nsPerl

❍ Meta-Directory Join Engine

❍ Meta-Directory Universal Connector (includes Universal Text Parser)

❍ Meta-Directory Console

❍ Meta-Directory Database Connector

5. Enter the configuration administrator ID and password to authorize removal of the data that has been written to the server.

The `uninstall` utility will now remove most of the files.

6. Manually remove any remaining files to complete the uninstall process.

See `c:\tmp\install.log` for the details of the installation and uninstallation process.

Removal Procedure for Windows NT Systems

NOTE	Before starting the uninstall process, make sure that the Directory Server holding the Configuration Directory is running.

There are two ways to remove Meta-Directory software on a computer running the Windows NT operating system. You can use either:

• Meta-Directory's `uninstall` utility

• Windows NT Add/Remove Control Panel

Meta-Directory's Uninstall Utility

To remove Meta-Directory from your Windows NT system using the `uninstall` utility:

1. Open Windows NT Explorer, and find the folder where iPlanet Meta-Directory is installed.

2. Locate and double-click the uninstallation utility, `uninst.exe`.

3. Choose the components you want to remove and click `Uninstall`.

To remove specific components only, individually deselect those you would like to keep, and click `Uninstall`.

To remove specific subcomponents, select the component and click Sub Component. This will open a list of subcomponents of the selected component. Select the desired subcomponents and press `Continue`. Press `Uninstall` to continue the removal process.

NOTE	Certain components have dependencies on other components and can not be removed without selecting both components. If you select a component that has a dependency on another that was not selected, an error message will appear instructing you to select that component.

4. Enter the configuration administrator ID and password and click OK to authorize removal of the data that has been written to the server.

5. Manually remove any remaining Meta-Directory files.

After the uninstall utility is finished, a message is displayed noting that some files have not been removed from your system. You must manually remove these files to complete the removal process. See `c:\Temp\Install.log` for the details of the uninstallation process that has just been run.

Windows NT Add/Remove Control Panel

To remove Meta Directory using the Windows NT Add/Remove control panel:

1. Choose Settings > Control Panel from the Start menu.

2. Double-click Add/Remove Programs.

3. Find and select the iPlanet product or component you would like to remove.

4. Click `Add/Remove`.

5. Click `Yes` when asked if you are sure you would like to remove this item.