Installation and Migration Guide

Netscape Enterprise Server

Version 4.0

806-2827-10
September 1999

We have changed the name of Netscape Enterprise Server to
iPlanet Web Server, Enterprise Edition.
The name change is not reflected in this document
or in the software which is enclosed.

Contents

About This Guide

The *Netscape Enterprise Sever Installation and Migration Guide* explains how to install Enterprise Server, and how to migrate your data from a previous version of the Enterprise Server to this version.

This preface contains the following sections:

- What You Need to Know
- What's in This Guide
- Document Conventions
- Where to Find This Guide Online
- How to Use Online Help
- Where to Find Related Information

What You Need to Know

The guide assumes that you are a server administrator with a general understanding of the following:

- The Internet and the World Wide Web

- The Netscape Enterprise Server architecture, as explained in the *Netscape Enterprise Server Administrator's Guide*.

What's in This Guide

The *Netscape Enterprise Server Installation and Migration Guide* covers the information you need to install Enterprise Server on your system. If you have a previous version of Enterprise Server installed, this guide also explains how to migrate your data.

If you want to do this:	See this chapter:
Find out what you need to do before installing the server.	Chapter 1, Before You Install.
Get step by step instructions for installing and uninstalling the server.	Chapter 2, "Installing Netscape Enterprise Server."
Troubleshoot your installation.	Chapter 3, "Troubleshooting Your Installation."
Migrate your data and applications from your 3.6 server to the 4.0 server.	Chapter 4, "Migrating from 3.6 to 4.0."
Find information in the guide	Index

Document Conventions

This guide uses the following conventions:

- The `monospace` font is used for sample code and code listings, API and language elements (such as method names and property names), filenames, path names, directory names, HTML tags, and any text that must be typed on the screen.

- The `monospace italic` font is used in code to represent placeholder parameters that should be replaced with an actual value.

- Standard *Italic* type is used for book titles, emphasis, letters as letters (for example, "Spell it with a *T."*), and words as words (for example, "The word *server* is in every product name.*").

- Brackets ([]) are used to enclose parameters that are optional.

- A slash (/) is used to separate directories in a path. (Windows NT supports both the slash and the backslash.)

Where to Find This Guide Online

You can find the *Netscape Enterprise Server Installation and Migration Guide* online in PDF and HTML formats. To find these files, use this URL:

```
http://home.netscape.com/eng/server/webserver/4.0
```

The information in this guide is also part of the help system for Enterprise Server. See "How to Use Online Help."

How to Use Online Help

When you are using Netscape Enterprise Server, you can click Help in any Enterprise Server window to open a web browser window showing explanations of all of the window's user interface fields. You can then navigate to other parts of the help document, as well as the entire documentation set. The installation programs do not have online help, but the migration screens do.

To move to the top of whatever major part of online help you're in and gain access to navigational buttons and to a drop-down Contents list, Index, and "Bookshelf" of resources, click the arrow button to the left of a heading. (If you don't see an arrow button, scroll until you do.)

Note: To view the full drop-down Contents list, you might need to make your browser window larger.

Because you view help in a browser window, you can use the navigational tools of your browser as well as the navigational tools within help. For example, you can use browser commands to print, find information, and copy and paste.

Where to Find Related Information

In addition to this guide, Enterprise Server comes with supplementary information for administrators as well as documentation for end users and developers. These documents are available through your online help system, from the Bookshelf button.

In addition, all documents are available online. Use the following URL to see all the Enterprise Server documentation:

```
http://home.netscape.com/eng/server/webserver/4.0
```

These are the additional documents that are available:

- *Netscape Enterprise Server Administrator's Guide*

- Release Notes

- Developer documentation.

1

Before You Install

The following sections discuss the information you need to know before you install the Enterprise Server.

This chapter contains the following sections:

- Supported Platforms

- Required Patches

- Hardware and Software Requirements

- Other Technical Requirements

Supported Platforms

Netscape Enterprise Server runs on these platforms:

- Windows NT version 4.0 with Service Pack 4.

- Sun Solaris 2.6 or 7 (through binary compatibility)

- HP-UX 11.0

- IBM AIX 4.2.1 and 4.3.2 (through binary compatibility)

- Compaq Tru64 UNIX 4.0d

Required Patches

The following are the patches or Service Packs required for the supported platforms at the time the manual went to press. For the latest patch information, please see the release notes at http://home.netscape.com/eng/server/webserver/4.0.

Windows NT 4.0

You need Service Pack 4. To get service packs, see the Microsoft web site at http://www.microsoft.com.

Sun Solaris

The following patches are recommended for Solaris users of Enterprise Server. In addition, you should have the patches in Sun's recommended patch list.For Sun's recommended patch list, see http://sunsolve.sun.com/pubpatch

For each patch, use the listed revision or a higher revision. For example, if you need patch 111111-01, the later revision1111111-03 will also work.

To get Sun patches, see your Sun service provider. Public patches are available from http://sunsolve.sun.com/pubpatch.

If you are using a JDK, you may need additional patches.

Solaris 2.6

The following patches are the recommended patches for users running Enterprise Server on Solaris 2.6.

- 105181-11

- 105210-17

- 105490-05

- 105568-13 (ask your Sun service provider)

- 105633-21

- 105669-04

- 106040-11

- 106495-01

- 106842-03 (ask your Sun service provider)

- 106841-01 (ask your Sun service provider)

- 106409-01 (for traditional Chinese fonts and the JDK; ask your Sun service provider)

Solaris 7

The following patches are recommended for users running Enterprise Server on Solaris 7.

- 107078-10 (ask your Sun service provider)

- 106980-04 (ask your Sun service provider)

Compiler Patches for Solaris

The following Solaris patches are recommended for people using compilers.

For C, the recommended patch is 104668-09.

For C++, the recommended libC patch is shown in the following table.

Table 1.1 Solaris C++ LibC patches

Solaris	SPARC	SPARC/V9
2.6	105591-05	n/a
7	106327-04	106300-05

For CC 4.2, the recommended patch for 2.6 is 104668-0.

HP-UX

Install the specific HP-UX 11 patches after upgrading to the December 1998 or later version of the HP-UX Extension Pack Software (XSWGR1100 Revision B.11.00.43). To determine the version of the Extension Pack software already installed on your system, use the following command:

```
/usr/sbin/swlist -l bundle
```

More information on Extension Packs is available at `http://us-support.external.hp.com`.

In addition to the Extension Pack, HP-UX 11 requires the following patch set:

- PHCO_17556

- PHCO_19090

- PHKL_17935

- PHKL_18543

- PHNE_18486

- PHNE_19110

- PHSS_16587

You can get patches from http://us-support.external.hp.com. That site also contains instructions on how to create a "patch bundle" so that the all the patches can be installed at the same time (avoiding the need for multiple system reboots).

If you are using IBM DB2, you will need to install several additional patches and modify some kernel parameters. See your IBM documentation and the release notes for more details.

For HP-UX year 2000 patch information, see http://us-support.external.hp.com or www.hp.com/year2000/products/patch.html

For additional information on compilers and other development issues, see the Enterprise Server release notes, at http://home.netscape.com/eng/server/webserver/4.0.

Modifying Kernel Parameters

After installing the patches, you need to modify some configurable parameters for the HP-UX kernel. You must modify these parameters before attempting to run Enterprise Server, otherwise you may receive error messages that appear unrelated to the actual problem.

Use the System Administration Manager (SAM) to change the kernel parameters listed in Table 1.2.

Table 1.2 HP-UX kernel parameter settings

Parameter	Original Value	New Value
nproc	(20+8*MAXUSERS)	(20+32*MAXUSERS)
max_thread_proc	64	512
maxdsize	0x04000000	0x10000000
maxfiles_lim	1024	2048
maxfiles	60	1024
maxuprc	75	512
nflocks	200	8192
semmns	128	512
semmni	64	256

Table 1.2 HP-UX kernel parameter settings

Parameter	Original Value	New Value
ninode (change to 2x original value)	((NPROC+16+MAXUSERS)+32 +(2*NPTY))	(((NPROC+16+MAXUSERS)+3 2+(2*NPTY))*2)
nfile (change divisor for NPROC term to 2)	(16*(NPROC+16+MAXUSERS)/ 10+32+2*(NPTY+NSTRPTY+N STRTEL))	(16*(NPROC+16+MAXUSERS)/ 2+32+2*(NPTY+NSTRPTY+NS TRTEL))

Important   You must change the parameters in the order listed Table 1.2, even though they appear in alphabetical order in SAM. The settings of later parameters depend upon the settings for earlier parameters.

The nsfc.conf File and Kernel Parameters

You can use the Enterprise Server configuration file `nsfc.conf` to tune the file cache. If you are using `nsfc.conf`, you may need to adjust the HP kernel parameters `maxfiles` and `maxfiles_lim` to support larger caches. If you need to update those parameters to be greater than 2048, you cannot use the SAM utility. Instead, follow these steps:

1. Make sure you are `root`.

2. Edit the values in the file `/stand/system`.

3. Rebuild the kernel with the by typing `mk_kernel -o /stand/vmunix`

4. Reboot the system by typing `/etc/shutdown -r now`

For more information on `nsfc.conf`, see the *Netscape Enterprise Server Administrator's Guide*.

IBM AIX

Install the latest maintenance level, available from the following URL:

`http://techsupport.services.ibm.com/cgi-bin/support/`
`rs6000.support/downloads`

For IBM AIX year 2000 patch information, see:

`http://www.software.ibm.com/year2000/papers/aixy2k.html`

Compaq Tru64 UNIX

Install the latest patch kit, available from the following URL:

`http://www.service.digital.com/patches/index.html`

Hardware and Software Requirements

Netscape Enterprise Server requires specific software and hardware. In addition to the Unix or Windows NT operation system, before you can install the server, your computer must have the following hardware and software:

Unix

- 64 MB of RAM is required for Enterprise Server.

- Depending upon your hardware, make sure you have at least the following minimum amounts of disk space for the installed server:

  — 130 MB (Solaris)

  — 90 MB (HP-UX)

  — 90MB (IBM AIX)

  — 130 MB (Compaq Tru64 UNIX)

  In addition, you will need more space during the installation for the installer files. After installation, you can delete the installer files.

- Swap space at least as large as the amount of RAM on your system (twice the amount of RAM is recommended).

- Netscape Communicator 4.5 (Solaris) or Netscape Communicator 4.5.1 (HP-UX), or Microsoft Internet Explorer 4.01.

- Java, JavaScript, and cookies enabled in your browser.

- If you are using Internet Explorer, you need to set your browser so that it checks for a new version of a page every time you access it. To configure this setting, from the View menu, choose Internet Options. On the General tab, in the Temporary Internet Files section, click Settings. Click the radio button to check for newer versions of stored pages every visit to the page.

- A Unix server user and group that have the appropriate permissions for running Netscape servers. This user is different from the user that runs the Enterprise Administration Server. Often people use the user `nobody` for this purpose, but you can also create a specific user and group.

- A Java Development Kit (JDK) installed on your system if you plan to use Java Server Pages (JSPs). Enterprise Server on Sun Solaris requires JDK1.2 or higher. Enterprise Server on HP-UX requires JDK 1.1. (C.01.17.01 or any higher 1.1 version). Enterprise Server on IBM AIX requires JDK 1.1.6. Enterprise Server on Compaq Tru64 UNIX requires JDK 1.2.1.

  You can download a Solaris JDK at:

  `http://java.sun.com/products/OV_jdkProduct.html`

  You can download an HP-UX JDK at:

  `http://www.hp.com/go/java`

  You can download an IBM AIX JDK at:

  `http://www.ibm.com/java/jdk/download/index.html`

  You can download a Compaq Tru64 UNIX JDK at:

  `http://www.compaq.com/java`

Windows NT

- A minimum of 64 MB RAM (more RAM is recommended for serving large numbers of clients or for high levels of transactions).

- If you plan on running more than two separate instances of the web server on your system, an additional 16 MB RAM for each server instance.

- Paging space at least as large as the amount of RAM on your system (twice the amount of RAM is recommended).

- 100 MB free disk space for the installation.

- 30 MB free disk space for the log files (for approximately 300,000 accesses per day).

- Netscape Communicator 4.5 or Microsoft Internet Explorer 4.01.

- If you are using Internet Explorer, you need to set your browser so that it checks for a new version of a page every time you access it. To configure this setting, from the View menu, choose Internet Options. On the General tab, in the Temporary Internet Files section, click Settings. Click the radio button to check for newer versions of stored pages every visit to the page.

- Java, JavaScript, and cookies enabled in your browser.

- If you intend to use hostnames during the Enterprise Server installation, DNS properly configured with an entry for your server in a DNS server.

- A static IP address on your machine.

- A Java Development Kit (JDK) installed on your system if you plan to use Java Server Pages (JSPs). Enterprise Server for Windows NT requires JDK1.2.2 or higher.

Other Technical Requirements

Once you have the proper hardware and software necessary to install Netscape Enterprise Server, you should make sure that you meet the following requirements:

- You know the host name and IP address of your server computer.

- Your server has a DNS alias. For information on creating a DNS alias for your server, see "Creating a DNS Alias for the Server" on page 20.

- You server has a user account on Unix or NT. See "Unix User Accounts for the Server" on page 20 or "Windows NT User Accounts for the Server" on page 21 for more information.

- You have two port numbers - one for the Enterprise Administration Server and the other for the web server. For information on choosing port numbers for your server, see "Choosing Unique Port Numbers" on page 22.

Creating a DNS Alias for the Server

If your server will run on one machine among many in a network, you or your system administrator should set up a DNS CNAME record or an alias that points to the actual server machine. Later, you can change the actual hostname or IP address of the server machine without having to change all URLs that point to the server machine.

For example, you might call the server *my_server.my_company*.com and then use an alias like www.*my_company*.com. So the URLs to documents on your server would always use the www alias instead of *my_server*.

Unix User Accounts for the Server

If you don't know how to create a new user on your system, you should consult your system manual or a Unix administrator's handbook.

When the web server starts, it runs with a Unix user account that you specify during installation. Any child processes of the server are created with this account as the owner. Netscape recommends that you create a Unix account for the server that has restricted access to your system resources. The account needs read permissions for the configuration files and write permissions for the logs directory. For security reasons, the user account shouldn't have write permissions to some of the configuration files, though some, such as the access control files, should be group writable.

In addition, the user account you create for the server should belong to a group that contains the server users for all Netscape servers so that multiple servers can have access to shared files.

If you don't create a dedicated user account for Enterprise Server you can use the account with the name nobody, but you might not want to give the user nobody group permissions for all the Netscape servers. In addition, the user nobody might not work on some systems. Some systems assign a user ID of -2

for the user `nobody`. A user ID of less than 0 generates an error during installation. Check the `/etc/passwd` file to see if the uid for `nobody` exists, and make sure it is greater than 0.

Note It's strongly recommended that you use a dedicated account for the server.

The Enterprise Administration Server can also run with a user account that has write permissions to the configuration files for all installed servers. However, it's much easier to run the Enterprise Administration Server as `root` because then the Enterprise Administration Server user can start and stop servers with port numbers less than 1024. (Port numbers greater than 1024 can be started by any user).

Windows NT User Accounts for the Server

If you don't know how to create a new user on your system, consult your system documentation.

You should create a Windows NT user account for your server. It should have restricted access to your system resources and run under a nonprivileged system user account (one that has a limited set of system permissions to your system). When the server starts, it runs with this user account. Any server extension modules the server uses are created with this user account as the owner.

During installation, the server uses the `LocalSystem` account, not the user account you created. Once you start and run the server, you should use the user account you created. You can change the user account for the server after the installation process. You can configure that user account so that is has permissions to get files on another computer, so that your server can serve files that are mounted from another computer.

In addition, the user account you create for the server should belong to a group that contains the server users for all Netscape servers so that multiple servers can have access to shared files.

Note It's strongly recommended that you use a dedicated account for the server.

Choosing Unique Port Numbers

You need multiple port numbers: one for the Enterprise Administration Server and one for each instance of Enterprise Server.

The standard web server port number is 80 and the standard SSL-enabled web server port number is 443, but you can install the server to use any port. If you use a port other than the default port (port 80), the URL used to gain access to your home page changes. For example, if your computer is called `www.mozilla.com` and you choose port 9753, your server's URL will be `http://www.mozilla.com:9753/`.

You should choose a random number for the Enterprise Administration Server to make it harder for anyone to breach your server. When you configure your server, you use the Enterprise Administration Server's port number. For example, for server `mozilla.com`, the server's URL could be `http://www.mozilla.com:2634/`.

Make sure the port you choose isn't already in use. On Unix systems, you can check the file `/etc/services` on the server machine to make sure you don't assign a port number that is reserved for another service. If you choose a port that is being used by another service, the installation program prompts you for another port.

Note If you use Unix, and you choose a server port number lower than 1024, you must be logged in as `root` to start the server. After the server binds to the port, the server changes from the `root` user account to the user account you specify. If you choose a port number higher than 1024, you don't have to be the `root` user to start the server.

Installing Netscape Enterprise Server

This chapter tells you how to install Netscape Enterprise Server. It contains the following sections:

- Installation Overview

- Installing Netscape Communicator

- Installing Netscape Directory Server

- Installing Netscape Console

- Installing a Java Developer's Kit

- Installing Enterprise Server for Unix

- Installing Enterprise Server for Windows NT

- Using Uninstall for Unix

- Using Uninstall for Windows NT

- Installing ValiCert Web Server Validator

Installation Overview

The Netscape Enterprise Server CD-ROM contains installation programs for both Netscape Communicator 4.5 and Netscape Enterprise Server 4.0. In addition, the Enterprise Server comes with a version of Netscape Directory Server on a separate CD.

When you install Netscape Enterprise Server, you follow these basic steps:

1. If you have an existing Enterprise Server or FastTrack Server already installed, shut it down and save a backup copy of the server's files.

2. If you do not already have either Communicator 4.5 or Internet Explorer 4.01 installed, install the version of Communicator provided on your Enterprise Server CD.

3. If you are planning to use users and groups, and you do not have a Directory Server installed, install it from the Netscape Directory Server CD included with your Enterprise Server. When you install Directory Server, you also install Netscape Console.

4. Make a note of the LDAP URL associated with your Directory Server, because you will need it during the installation process.

5. Install and configure Netscape Enterprise Server.

Installing Netscape Communicator

Because you need a web browser such as Netscape Communicator to administer your server, you must install Communicator or another browser onto your machine before installing Enterprise Server.

Installing Communicator on Unix

To install Netscape Communicator you can download the software from http://
home.netscape.com, or follow these steps to install from the CD:

1. Put the Netscape Enterprise Server CD-ROM in the drive and change to the
    directory for the Unix operating system that your computer uses.

    For example, if you are using a Solaris system, type `cd solaris`.

2. Change to the `comm45` directory on the CD-ROM.

3. Copy the `comm45.tar` file from the CD-ROM to a temporary directory on
    your local disk.

4. Change to the staging directory on your local disk and untar the
    `comm45.tar` file by typing `tar -xvf comm45.tar`.

5. At the command line, type `./setup` to start the Communicator
    installation.

6. Follow the onscreen instructions.

Installing Communicator on Windows NT

To install Netscape Communicator you can download the software from http://
home.netscape.com, or follow these steps to install from the CD:

1. Put the Netscape Enterprise Server CD-ROM in the drive and double-click
    the `ntx86` folder.

2. Double-click to the `comm45` folder.

3. Double-click `setup.exe`.

4. Follow the onscreen instructions.

Installing Netscape Directory Server

If you are planning to use users and groups with your Enterprise Server, you need to install Netscape Directory Server or another LDAP server before installing the Enterprise Server.

For information on installing Directory Server, see the Directory Server documentation. If you are installing from the CD, the Directory Server Installation Guide is included in the box. The documentation is also available online at

http://home.netscape.com/eng/server/directory/

Warning (NT) You cannot install Netscape Directory Server 4.x and Netscape Enterprise Server 4.0 on the same Windows NT machine because of system library conflicts. Install Directory Server on a separate machine and use the Enterprise Administration Server's Global Settings tab to configure Enterprise Server to use that Directory Server.

Note Because the copy of Directory Server that is bundled with Enterprise Server contains a limited license, any support contract you purchase for Enterprise Server is limited in Directory Server coverage to usage allowed by the license.

Installing Netscape Console

When you install the Directory Server, you also install Netscape Console. Use Netscape Console to manage your Directory Server. You can also access the Enterprise Administration Server from Netscape Console, if Enterprise Server and Netscape Console are installed in the same directory.

If you are not planning to use Directory Server, you do not need to install Netscape Console.

Installing a Java Developer's Kit

If you are planning to use Java, you must install a Java Runtime Environment (JRE) or a Java Developer's Kit (JDK). Enterprise Server includes a JRE that you can install during the installation process. However, you may prefer to install a JDK.

You need either a JRE or a JDK to use the following features:

- Java servlets

- server-side JavaScript database connectivity (LiveWire)

Warning If you are using HP-UX, you must install the JRE or supply a JDK. Without one or the other, the HP-UX Enterprise Server won't run.

You need a JDK to run the following feature (it will not run with a JRE):

- Java Server Pages (JSPs)

Because you need a JDK to use JSPs, JSPs are only turned on by default if you provide a path to a JDK during installation.

Different platforms require different versions of the JDK:

- Enterprise Server on Sun Solaris requires JDK 1.2 or higher. Download a JDK at:

  `http://java.sun.com/products/OV_jdkProduct.html`

- Enterprise Server on HP-UX requires JDK 1.1. (C.01.17.01 or any higher 1.1 version). Download a JDK at:

  `http://www.hp.com/go/java`

- Enterprise Server on IBM AIX requires JDK 1.1.6. Download a JDK at:

  `http://www.ibm.com/java/jdk/download/index.html`

- Enterprise Server on Compaq Tru64 UNIX requires JDK 1.2.1. Download a JDK at:

  `http://www.compaq.com/java`

- Enterprise Server on Windows NT requires a JDK of 1.2.2 or higher. Download a JDK at:

  `http://java.sun.com/products/OV_jdkProduct.html`

You can install the JDK before you install Enterprise Server, and provide the path to it during installation, or you can wait until after you've installed Enterprise Server to install it.

After installation you can change the JRE or JDK Enterprise Server uses. In the Server Manager, on the Servlets tab, use the Configure JRE/JDK Paths page. You can also change the path to the JRE/JDK in this page.

Note   Though you can use the JRE with servlets on Solaris, using the JDK instead improves performance.

Installing Enterprise Server for Unix

The following sections describe the installation of the Netscape Enterprise Server.

Warning   You must install your version 4.0 servers in a server root directory separate from the server root directory that contains your 3.6 servers. Do not install Enterprise Server on an NFS-mounted drive due to potential security and file locking restrictions on remote partitions.

Logging In as the Correct User

Before you install the server, you must log in as `root`, unless you meet both of these conditions:

- You plan to install the server on a port greater than 1024.

- The location where you plan to install the server (the server root directory) is writable with you non-root login.

If you meet both conditions, you do not need to log in as `root` to install the server; instead log in as the user account that the Enterprise Administration Server will use. However, you may still prefer to log in as `root`, even though you meet the conditions.

Warning   You must log in as `root` if you are planning to use express installation.

Unpacking the Files

To get the Netscape Enterprise Server files and unpack them, follow these steps:

Installing from a CD-ROM

1. Put the CD-ROM in the drive.

2. Change to the Enterprise Server CD in the CD-ROM directory.

3. Change to the directory on the CD-ROM labeled with the Unix operating system that your computer uses (for example, type `cd solaris`)

4. Type `cd entprise` to change to the installation directory.

5. Copy the `entprise.tar` file from the CD-ROM directory to your home directory or a temporary directory.

    Copying the file may take a little time.

6. Change to the directory on your Unix machine where you copied the file.

7. Untar the file by typing `tar -xvf entprise.tar`.

    This command unpacks the server files and creates a temporary directory structure under the current directory. Unpacking the file may take a little time. When the files are unpacked, you see an Enterprise directory, and three files LICENSE.TXT, setup, and setup.inf.

Installing a Downloaded Server

1. Download the file from the Netscape web site http://home.netscape.com and save it in a temporary directory.

2. Change to the directory on your Unix machine where you copied the file.

    Unpack the .gz file by typing `gunzip ` *`filename`*`.tar.gz`. The file name is in the format:

```
enterprise-4.0-security-internationalization.platform.tar.gz
```

For example:

```
enterprise-4.0-export-us.hppa1.1-hp-hpux11.00.tar.gz.
```

3. Untar the unzipped file by typing `tar -xvf filename.tar`.

This command unpacks the server files and creates a temporary directory structure under the current directory. Unpacking the file may take a little time. When the files are unpacked, you see an Enterprise directory, and three files LICENSE.TXT, `setup`, and `setup.inf`.

Running Setup

You run the setup program to install Enterprise Server.

During the installation process, you have the choice of three kinds of installation: express, typical, or custom. Most users should choose typical or custom (they are identical). Typical or custom gives you more flexibility in the components you can install and the settings you can configure.

Express installation is for users who have little experience or are evaluating the product. It makes assumptions about such things as port number and which components to install.

When running the installer, you can use the following commands:

- Press the Enter key to accept defaults specified in brackets (for example [All]).

- Press CTRL+b to return to a previous screen (note that this sequence does not work on all screens).

- Press CTRL+c to cancel the installation program.

- Enter comma-separated lists of numbers when you want to select multiple items (for example, 1, 2, 3).

Note For express installation, you must be logged in as root when running setup.

Typical or Custom Installation

Most users should install the typical or custom installation.

To run setup, follow these steps:

1. If you are not in the directory already, change to the directory where you unpacked the file.

2. Type `./setup` to start the server installation.

   If you aren't logged in as the `root` user (superuser), or if you don't have sufficient write permissions, you'll get one or more error messages.

   A welcome screen appears.

3. Press Enter to continue with the installation.

4. Choose whether you accepts the software license agreement by typing Yes to accept, or No to decline.

5. Choose Typical or Custom.

   Press Enter.

6. Type a server root directory or accept the default (`/usr/netscape/server4`).

   This directory is where the server files and directory structure will be installed.

   You need to run the server as a user that has write access to this directory, for example, the directory owner.

   If you already have other Netscape 4.x servers installed, and you want to register Enterprise Server with Netscape Console, install all 4.x servers into the same directory.

7. Choose Netscape Enterprise Server.

   Press Enter.

8. Choose the Enterprise Server components to install.

If you do not install a component and later decide you want to use it, you can run the installer again to install just the missing component. However, you cannot uninstall individual components once they are installed.

By default, all components except WAI support are installed.

1. Netscape Enterprise Server Core

Installs Enterprise Administration Server and the first instance of Enterprise Server.

The seven components you can choose to install are described in the following numbered sections.

Warning   You must install the Netscape Enterprise Server Core component the first time you install Enterprise Server. If you install additional components later, you are not required to reinstall the Core component.

2. Java Runtime Environment

If you are planning to use Java, you must have a Java Runtime Environment (JRE) or a Java Developer's Kit (JDK). You can install the provided JRE, or supply your own JDK. For more information, see "Installing a Java Developer's Kit" on page 27.

Warning   If you are using HP-UX, you must install the JRE or supply a JDK. Without one or the other, the HP-UX Enterprise Server won't run.

3. Netscape Enterprise Server Java Support

Install this component if you are planning to use Java servlets.

You also need a JRE or JDK to use Enterprise Server's Java support. Install the JRE provided with Enterprise Server (see the previous component) or install a JDK.

4. Netscape Enterprise Server SSJS Database Support

Install this component if you are planning to use server-side JavaScript database connectivity (LiveWire). If you plan to use this feature, you also need to install Netscape Enterprise Server Java Support (item 3), and either install the JRE (item 2) or supply a JDK.

5. Netscape Enterprise Server WebPub Support

Install this component if you are planning to use the Web Publishing, Netshare, or search features.

6. Netscape Enterprise Server SNMP Support

Install this component if you are planning to use SNMP.

7. Netscape Enterprise Server WAI Support

Install this component if you are planning to run Web Application Interface programs. If you are using WAI, you must also have an ORB. You will have to provide the installation program with the path to the ORB on your system later in the installation process.

9. Enter the machine name or accept the default.

10. Enter the Unix user and group names to use when running the default instance of Enterprise Server.

The default user is nobody.

11. Enter the Unix user name to use when running the Enterprise Administration Server.

In most cases this user is `root`.

12. Enter the Enterprise Administration Server user name and password to use for authentication. You are asked to enter your password twice.

This user is not a Unix user, but a user name and password in the Directory Server. You must make sure that the Enterprise Administration Server user exists in the Directory Server, and that it has access permissions to the Directory Server to perform user and group management tasks.

13. Type the Enterprise Administration Server port number or accept the default of 8888.

Make sure you remember the port number for the Enterprise Administration Server.

For the most flexibility, choose a port number above 1024. If you want to use a port number lower than 1024 for your Enterprise Administration Server, you must be logged on as `root` to start the server.

This Enterprise Administration Server is not the same as the Netscape Console.

14. Type the port number of Enterprise Server. The default is 80. This port should be different than the Enterprise Administration Server port. The suggested range of ports (1024 to 65535) only applies if you are not installing as `root`.

If you use a port other than the default port (port 80), the URL used to gain access to your home page will change. For example, if your computer is called `www.mozilla.com` and you choose port 9753, your server's URL will be
`http://www.mozilla.com:9753/`

15. Specify whether you are using an LDAP-based directory server (enter Yes or No).

You must use an LDAP directory server if you want to use user and group functionality in Enterprise Server.

If you use an LDAP directory server, enter following:

- The LDAP URL in the format ldap://*hotname*:*port*/*base DN*. For example, ldap://mozilla.com:389/o=airius.com.

- The bind DN (for example, cn=Directory Manager) and the directory server password.

16. Type the root directory where your server's content files will reside. The default is *server_root*/docs.

17. If you want to use your own JDK, enter Yes.

If you are installing Java support, you must have a JRE or a JDK. You can install the supplied JRE component or use a JDK already installed on your system. For more information, see "Installing a Java Developer's Kit" on page 27.

18. If you are installing Java support, and you either did not choose to install the provided JRE, or you chose to use your own JDK, enter the absolute path to the directory where you installed the JDK on your system.

The JDK must already exist in the specified directory.

19. If you chose to install WAI, you must give the path to the directory where your Object Request Broker (ORB) is stored. To get the Visibroker 3.3 ORB, contact Inprise at http://www.inprise.com.

20. After the installation program extracts and installs the Enterprise Server components, press Enter.

21. Go to the `https-admserv` directory under your server root directory and start the Enterprise Administration Server by typing `./start`. You can also type `./startconsole` in the server root directory.

If you have a Netscape console installed, `startconsole` starts the console. If you do not have a console installed, it starts Enterprise Administration Server and launches a browser to the Enterprise Administration Server administration pages.

22. To configure your Enterprise Server, use the Enterprise Administration URL:
`http://server_name:administration_port`

For example: `http://mozilla:8888`

Enter your administration user name and password.

You can now configure your Enterprise Server. For more information, see the *Netscape Enterprise Server Administrator's Guide.*

Express Installation

Express installation is for users who have little experience or are evaluating the product. It makes assumptions about such things as port number and which components to install.

The following table lists the assumptions made by the Express installation. If you would like to use different installation settings, use Typical or Custom installation.

Table 2.1 Express installation settings

Installation Setting	Value
administration port	8888
administration URL	http://*machine name*:*adminisration port*
HTTP port number	80
document root	*server_root*/doc
Unix user to run server	root
LDAP users and groups	not using
JDK	none
JRE	default JRE shipped with Enterprise Server

After installing, you can configure the server to use LDAP users and groups, and to use a JDK. For more information on how to make these changes, see the *Netscape Enterprise Server Administrator's Guide*.

Warning   You must log in as `root` to use express installation.

To run setup, follow these steps:

1. If you are not in the directory already, change to the directory where you unpacked the file.

2. Type `./setup` to start the server installation.

    A welcome screen appears.

3. Press Enter to continue with the installation.

4. Choose whether you accepts the software license agreement by entering Yes to accept, or No to decline.

5. Choose Express and press Enter.

6. Type a server root directory or accept the default (`/usr/netscape/ server4`).

This directory is where the server files and directory structure will be installed.

You need to run the server as a user that has write access to this directory, for example, the directory owner.

If you already have other Netscape 4.x servers installed, and you want to register Enterprise Server with Netscape Console, install all 4.x servers into the same directory.

7. Choose Netscape Enterprise Server.

   Press Enter.

8. Enter the Unix user and group names to use when running the default instance of Enterprise Server.

   For Express installation, this user must be `root`. The group must be the group to which `root` belongs.

9. Enter the Unix user name to use when running the Enterprise Administration Server.

   In most cases, this user is `root`.

10. Enter the Enterprise Administration Server user name and password to use for authentication. You are asked to enter your password twice.

   This user is not a Unix user, but a user name and password set up in the Netscape environment.

11. After the installation program extracts and installs the Enterprise Server components, press Enter.

12. Go to the `https-adminserv` directory under your server root directory and start Enterprise Administration Server by typing `./start`. You can also type `./startconsole` in the server root directory.

13. To configure your Enterprise Server, use the Enterprise Administration URL: `http://server_name:administration_port`

   For example: `http://mozilla:8888`

   Enter your administration user name and password.

You can now configure your Enterprise Server. For more information, see the *Netscape Enterprise Server Administrator's Guide*.

Installing Enterprise Server for Windows NT

The following sections describe the installation of the Netscape Enterprise Server.

Any errors that occur when the server starts are logged in the Event Viewer. Once started, the server logs errors to the normal error log file.

Warning Please keep the following warnings in mind:

- You must install your Netscape version 4.0 servers in a separate server root directory from the server root that contains your 3.x servers.

- If you have beta versions of Netscape 4.0 servers installed, uninstall them before installing the final version.

- Because of DLL conflicts, if you install Enterprise Server 4.0 and Enterprise Server 3.6 on the same machine, Netscape recommends that you uninstall Enterprise Server 3.6 after you migrate it.

- Do not install Enterprise Server on an NFS-mounted drive due to potential security and file locking restrictions on remote partitions.

Unpacking the Files

To get the Netscape Enterprise Server files and unpack them, follow these steps:

Installing from a CD-ROM

1. Put the CD-ROM in the drive. Click the icon representing your CD-ROM drive.

2. Double-click the `ntx86` folder.

3. Double-click the `entprise` folder.

   The `setup.exe` file is inside this folder.

Installing a Downloaded Server

1. Download the file `e40diu.exe` (U.S. domestic) or `e40eiu.exe` (export) and save it in a temporary directory.

2. Unzip the file to extract the files.

   The `setup.exe` file is inside this folder.

Running setup.exe

You run the `setup.exe` program to install Enterprise Server.

1. Double-click the `setup.exe` file.

2. The Welcome screen appears. After reading the Welcome screen, click Next.

3. The Software License Agreement appears. Click Yes to accept the license.

4. The Select Installation Type screen appears. Choose the kind of installation you want: Express, Typical or Custom.

   Express installation is for users who have little experience or are evaluating the product. It makes assumptions about such things as port number and which components to install. This option is not recommended if you are using your server in a production environment.

   Typical and Custom installation give you more options, and for this release do the same thing.

   If you chose Express installation, the following settings are set automatically for you. If you want to have different values for these settings, choose Typical or Custom installation.

Table 2.2 Express installation settings

Installation Setting	Vales
administration port	8888
administration URL	http://*machine name*:*adminisration port*
HTTP port number	80
document root	*server_root*/doc
LDAP users and groups	not using
JDK	none
JRE	default JRE shipped with Enterprise Server

Click Next.

5. The Choose Installation Directory dialog box appears. The default location for the server files is `C:\Netscape\Server4`, where *C:* is the letter of the drive on which you are installing the server. Click Next.

   If you want to install Enterprise Server in a non-default location, use Browse to navigate to the folder you want.

   If you have other Netscape 4.x servers installed, and you want to register Enterprise Server with Netscape Console, install all 4.x servers into the same directory.

Warning   You cannot install Enterprise Server on the same machine as Directory Server.

6. The Select Products dialog box appears. Select Enterprise Server from the list. Note that because the administration server is now an Enterprise Server instance, it is installed automatically when you install Enterprise Server, and is not a choice on this product list.

   By default, the installer installs a default set of components. If you want to change the components you install, click Change and continue to Step 7.

   If you did not change components, continue to Step 8.

7. The Select Sub-Components dialog box appears. You can select a component for installation by checking the box next to it. You can decline to install it by unchecking the box. If you later decide you want to install components you did not check, you can run the installer again and choose to install only the missing components. However, you cannot uninstall separate components once they are installed.

By default, all components *except* WAI are installed.

Netscape Enterprise Server Core. Install this component to install Enterprise Administration Server and the first instance of Enterprise Server.

Warning   You must install the Netscape Enterprise Server Core component the first time you install Enterprise Server. If you install additional components later, you are not required to reinstall the Core component.

Java Runtime Environment. If you are installing Java and servlets support, you must have a JRE or a JDK. You can install the supplied JRE component or use a JDK already installed on your system. If you want to use your own JDK, enter Yes. For more information, see "Installing a Java Developer's Kit" on page 27.

Java and Servlets. Install this component if you are planning to use Java servlets.

You need a JRE or JDK to use Enterprise Server's Java support. If you do not have one installed on your system, you should install the JRE provided with Enterprise Server (see the previous component) or install a JDK.

Server Side JavaScript Database Connectors. Install this component if you are planning to use server-side JavaScript database connectivity (LiveWire). If you plan to use this feature, you also need to install Java and Servlets (see the previous component) as well. You also need to install the JRE or supply a JDK.

Web Publishing. Install this component if you are planning to use the Web Publishing, Netshare, or search features.

WAI. Install this component if you are planning to run Web Application Interface programs. If you are using WAI, you must also have an ORB. You will have to provide the installation program with the path to the ORB on your system later in the installation process.

SNMP. Install this component if you are planning to use SNMP.

8. The Enterprise Administration Server Authentication dialog box appears. Type the user name for Enterprise Administration Server access; the default is `admin`. Type the administration server access password; type it again for verification. Click Next.

   If you are using LDAP-based authentication, you must make sure that this user has access permissions to the LDAP server to perform user/group management tasks.

   If you chose Express Installation, skip to Step 14.

9. The Enterprise Administration Server Port Selection dialog box appears. Type the port number the Enterprise Administration Server runs on. This can be any number from 1 to 65535. The URL for administration access is displayed. You might want to make a note of this URL. The default port is 8888.

   If Enterprise Server 3.6 is installed on your system, do not use the same Enterprise Administration Server port number for Enterprise Server 4.0 as you used for Enterprise Server 3.6.

   Click Next.

10. The Default HTTP Server dialog box appears. A default instance of Enterprise Server is installed automatically.

    Type a port number for the default instance of your Enterprise Server. This port should be different than the Enterprise Administration Server port. If you use a port other than the default port (port 80), the URL used to gain access to your home page will change. For example, if your computer is called `www.mozilla.com` and you choose port 9753, your server's URL will be
    `http://www.mozilla.com:9753/`

    Type the path for the default server's primary document directory, where the server's content files will be stored. The default is `C:\Netscape\Server4\docs`. Click Browse to navigate your file system.

11. The Using LDAP for Users and Group Administration dialog box appears. If you want to use LDAP, click the checkbox and specify the LDAP URL in the format ldap://*hostname:port/base DN*. For example, ldap://mozilla.com:389/o=airius.com.

You must also enter the bind DN (for example, cn=Directory Manager) and the directory server password.

If you do not want to use LDAP, leave the checkbox unchecked.

Click Next.

12. If you are installing Java and Servlets, the JRE Selection dialog box appears.If you are using Java on your Enterprise Server, you must have a Java Runtime Environment (JRE) or a Java Development Kit (JDK). You can use the JRE included with Enterprise Server (for more information see Step 7) or you can use a custom JDK that already resides on your system.

To use your own JDK, click the Use Custom Java Development Kit checkbox and enter the path to the folder where you installed the JDK on your system.

13. If you are installing WAI, the ORB Selection dialog box appears. Enter the path to the directory where your Object Request Broker (ORB) is installed. To get the Visibroker 3.3 ORB, contact Inprise at http://www.inprise.com.

14. The Configuration Summary dialog box appears. This dialog box contains information about the settings for your Netscape Enterprise Server and Enterprise Administration Server. It also contains a list of the Enterprise Server components you selected for installation.

This dialog box gives you the opportunity to review your settings before the installation is complete. If they are correct, click Next.

The server files are installed. The Setup Complete dialog box appears. You must reboot your computer to complete the installation before you can use the server.

Note You should not cancel the installation process while the files are being copied. If you do, you will have a partial installation you need to clean up. If an uninstaller for Enterprise Server exists, use it to uninstall the portion of Enterprise Server you installed. If the uninstaller does not exist, manually delete all the files that in the server root.

15. Click Finish.

16. To configure your Enterprise Server, use the Enterprise Administration URL: http://server_name:administration_port

For example: http://mozilla:8888

Enter your administration user name and password to administer the server.

You can now configure your server. For more information, see the *Netscape Enterprise Server Administrator's Guide.*

Using Uninstall for Unix

You can remove Netscape Enterprise Server from your computer by using the Uninstall application.

Warning Though you can select individual components to uninstall, Netscape does not recommend it. The uninstaller only removes the parts of the code pertaining to the selected component, but does not update configuration files. Your server may not run if you uninstall individual components.

To remove your Netscape Enterprise Server:

1. Go to your server root and type `./uninstall`.

   A list of Netscape servers currently installed in this location appears.

2. Find Netscape Enterprise Server in the list and type the number next to it at the prompt.

   Note that uninstalling Enterprise Server automatically uninstalls the administration server, since it is an instance of Enterprise Server.

   A list of installed Enterprise Server components appears.

3. Select all components and press Return.

   The components are uninstalled and you return to the command prompt.

Note The uninstall program does not remove every server file. For example, it does not remove keys and certificates, configuration files, logs, ACL files or the document root.

Using Uninstall for Windows NT

You can remove the Netscape Enterprise Server from your computer by using the Uninstall application. The Uninstall application determines which Netscape servers are installed on your machine and allows you to choose which of those servers you want to delete.

Warning   Though you can select individual components to uninstall, Netscape does not recommend it. The uninstaller only removes the parts of the code pertaining to the selected component, but does not update configuration files. Your server may not run if you uninstall individual components.

To remove your Netscape Enterprise Server:

1.   Go to your server root and double-click on the program unist.exe.

2.   The Netscape Uninstall window appears. This window lists all the Netscape Servers installed in this directory. Click the checkbox next to Netscape Enterprise Server and click Uninstall. Note that uninstalling Enterprise Server automatically uninstalls the administration server, since it is an instance of Enterprise Server.

3.   The uninstall program uninstalls the server. You see a window showing the progress of the uninstall.

4.   When the uninstall is complete, a message appears saying that the config files have not been deleted, and that you should rename them before reinstalling the server. Click OK to continue.

   If you have special settings in your configuration files, renaming the files is one way you can still access them after reinstalling the server. If you don't rename the files, you cannot reinstall the server.

5.   A dialog box appears informing you that you need to restart your system in order to remove the files marked for deletion. Click Yes to reboot immediately. You must reboot before reinstalling Enterprise Server.

During the uninstall, you may see an error "There was an internal error and one of the windows you were using has been closed. It is recommended that you save your work and close all your programs and then restart your computer."

This message is not serious. If you receive this message, continue with the uninstall. Since you restart as part of the uninstall process, you do not need to do a separate restart.

Note The uninstall program does not remove every server file. For example, it does not remove keys and certificates, configuration files, logs, ACL files or the document root.

Installing ValiCert Web Server Validator

Also included on the Enterprise Server 4.0 CD is the ValiCert Web Server Validator plugin, which provides certificate validation, including certificate revocation list checking, through Enterprise Server. This product is only provided on the Windows NT and Solaris platforms.

If you want to use this product, install it after you've installed Enterprise Server. Product information and installation instructions are in the Readme.txt file, which you can find on the CD in the ValiCert/platform/Doc folder.

If you downloaded Enterprise Server, you can obtain the plugin by following the ValiCert link on the download page.

For more information about the ValiCert Web Server Validator see the Enterprise Server Release Notes at `http://home.netscape.com/eng/server/webserver/4.0`.

3

Troubleshooting Your Installation

This chapter contains information on troubleshooting NT and Unix installations of Enterprise Server. It contains the following sections:

- Troubleshooting All Platforms

- Troubleshooting Windows NT

- Troubleshooting Unix

Troubleshooting All Platforms

This section describes the most common installation problems that occur across multiple platforms and explains how to solve them.

Clients can't locate the server. First, try using the hostname. If that doesn't work, use the fully qualified name (such as www.domain.com), and make sure the server is listed in DNS. If that doesn't work, use the IP address.

The port is in use. Most likely, you didn't shut down a server before you migrated the settings from a previous version. Shut down the old server, then manually start the new one.

The port might also be used by another installed server. Make sure the port you've chosen isn't already being used by another server.

I've forgotten the administration user name and password. In the `https-adminserv/config` directory in your server root directory, edit the `admpw` text file, which contains a line of text similar to the following:

```
admin:lnOVeixulqkmU
```

The text before the colon is the administration user name (in this case, `admin`); the text following the colon is the password, which is encrypted.

Delete everything after the colon and save the file. Shut down the Enterprise Administration Server, and restart it. When prompted for the administration password, leave the password field blank. You should be able to access the Enterprise Administration Server now. Be sure to create a new password for the Enterprise Administration Server.

I've installed Enterprise Server, but the configuration pages do not have all the tabs and configuration pages shown in the documentation. If you did not choose to install an Enterprise Server component, it will not appear in your Server Manger forms. For example, if you did not choose to install the Web Publishing component, the Web Publishing tab will not appear on the Server Manager page. If you did not install all the components you wanted during your initial installation, you can rerun the installer, choosing any components you didn't install already.

After installing Enterprise Server, I tried to create a new Netscape Enterprise Server instance but got the following error message: "File System Error: InitTree /conf_bk/backups.conf failed (unknown early startup error)". The problem may be caused by an attempt to create an instance of Enterprise Server in an NFS (Network File System) mounted partition. Try a new installation in a non NFS mounted partition.

I installed Java Server Support, but I do not have a JDK or JRE installed.

In order for Java support to work, you must have a JRE or JDK installed. If not, your server may not start, or may start but generate errors when you try to run Java. To correct this problem, run the Enterprise Server installation program again, and choose to install the JRE, or install a JDK and point your server to it using the Configure JRE/JDK Paths page on the Servlets tab. For more information on JRE and JDK, see "Installing a Java Developer's Kit" on page 27.

Troubleshooting Windows NT

This section describes troubleshooting problems that are Windows NT specific.

The installation could not proceed.
Error: Can't open file for writing.
Can't write to file *filename*. The error was error code 32. Make sure you don't already have a web server running on your system.

This error message might also appear if you partially completed the installation so that the executable was running and you're trying to install the server again. In the Control Panel Services dialog box, shut down all the web server services and reinstall the server.

The following message appeared when installing Enterprise Server: confhttp: LODCTR returned error code 112. The LODCTR utility is used to set up performance monitoring-related keys in your Windows NT registry. Error 112 means that it ran out of space either on your hard disk or in the registry. You should first make sure you have plenty of free space on your hard disk; if you do, then Windows NT may have filled up its registry. You can check this by going to your control panels, opening System, clicking the Performance tab, and clicking Change in the Virtual Memory section. The window that comes up shows the current registry size and the maximum registry size; if current is near maximum, then raise the maximum setting, reboot, and try installing Enterprise Server again.

If that doesn't help, then you can usually solve the problem by removing entries from your Windows NT registry. Run the program `REGEDT32.EXE` (which comes with Windows NT), and delete these two keys and anything below them:

```
\HKEY_LOCAL_MACHINE\SYSTEM\ControlSet001\Services\Netscape Web Servers
\HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Netscape Web
Servers
```

Then close REGEDT32.EXE and start the installation over; it should work fine this time.

I couldn't access the server after installing it and restarting. You need to have a static IP address for Enterprise Server to work properly. If you are using DHCP, the installation process writes the IP address used by your system at the time of installation to `magnus.conf`. If your IP address changes, you will not be able to access your server. To get your server to work temporarily, edit

`magnus.conf` so that the address specified is your current IP address. To find your IP address, type `ipconfig` at the command line. The permanent fix is to get a static IP address.

I couldn't enable Web Publishing or create search collections after migrating from Enterprise Server 3.x to 4.x. Check if there is a `vdk200.dll` file in your `winnt/system32` directory. If there is, rename it or delete it.

Troubleshooting Unix

This section describes troubleshooting problems that are Unix specific.

The server is slow and transfers take too long. If you log accesses through `SYSLOG`, you might encounter reduced performance. Switch to using the server's error log files instead.

The server machine might need more RAM. Also, other applications running on the computer might be using CPU cycles, degrading server performance.

I have Enterprise Server and Netscape Application Server installed. After I migrated my Enterprise Server, my new Enterprise Server instance wouldn't start. Because migration does not migrate changes made to the start script, you will need to edit your start script to restore the Application Server information. Edit the LD_LIBRARY_PATH in your migrated server's start script to correctly to pick up all the Application Server libraries.

Migrating from 3.6 to 4.0

This chapter contains information on migrating your configuration settings and data from Enterprise Server 3.6 to Enterprise Server 4.0.

This chapter contains the following sections:

- Migrating from Earlier Versions

- Migration Overview

- Migrating Settings and Data

- Migrating Applications

Migrating from Earlier Versions

The migration program handles migrating your server's configuration settings and data from a 3.6 server to a 4.0 server. If you have an earlier version of Netscape Enterprise or if you have Netscape FastTrack server installed, you must first migrate from that version to Enterprise 3.6. You can get a copy of Enterprise Server 3.6 at the following URL:

```
http://home.netscape.com/testdrive/download/index.html
```

Instructions for migrating from an earlier release to 3.6 are at the following URL:

```
http://home.netscape.com/eng/server/webserver/3.0/
es36upg.htm
```

Migration Overview

The Enterprise Server 4.0 migration process migrates the following information from earlier versions of the server:

- All user and group information stored in a local database

- Document roots and any other directory mappings

- Configuration styles information

- Software and hardware virtual server settings

- Search collections

- Clusters

Note   In general, when this document refers to Enterprise Server 3.6, the information applies not only to Enterprise 3.6 but to service pack releases as well, for example, Enterprise Server 3.6 SP2.

Obsolete Features

The following 3.6 features are not supported for 4.0:

- Agents

- Auto-catalog

- HTTP Java applets

- Version control and link management in web publishing

Data and settings are not migrated for these features.

Obsolete obj.conf Directives

The following directives are not used with Enterprise Server 4.0. If the migration program finds them in your 3.6 server's `obj.conf` file, it does not carry them forward to the 4.0 server.

- `Init` directives:
    - `SJavaBootInit`
    - `java-init`
    - `java-run`
    - `java-find-applet`
    - `java-run-applet`
    - `ns_agent`
    - `agent_name_trans`
    - `rdm-init`
    - `rdm-type`
    - `rdm-service`
    - `rdm-log`
    - `es-search`
    - `CM_Init`
- `NameTrans` directives for everything listed above, plus the following:
    - `es-search-nametrans`
    - `publisher`
    - `search-ui`
    - `webpub-ui`

- `Service` directives for everything listed in the previous two bullets, plus the following:

    - `shtml-send`

    - all `CM_*` functions

- Objects for the following:

    - servlet-applets

    - servlets

    - agents

    - web publishing

Start and Stop Script

If you've made modifications to your start or stop scripts in your 3.6 server, those changes will not be carried forward by the migration program.

Symbolic Links in Configuration Files (Unix)

Symbolic or relative links in server configuration files may cause problems when upgrading. Make sure that server configuration files that contain absolute references to files under the server root always reference the path to the server root in the same way, and preferably without traversing any symbolic links.

Post-Migration on Windows NT

Because Enterprise Server 3.6 and Enterprise Server 4.0 cannot coexist on the same system, once you have migrated Enterprise Server 3.6 you should remove it from any system that also contains Enterprise Server 4.0.

Migrating Settings and Data

To migrate settings and data from a 3.6 server to the 4.0 server, follow these steps:

1. In the Enterprise Administration Server page, click the Servers tab.

2. Click Migrate Server.

3. Enter the server root of the server from which you want to migrate and click Search.

   Enterprise Server detects whether there are servers installed in the directory you specified and displays the servers you can migrate in a section of the page called "Installed Servers."

4. Choose a server from the drop-down list and click Migrate.

   A new window appears showing the migration parameters.

5. Fill in the form.

   The sections on the form that you see depend upon which features your 3.6 Enterprise Server is using and which 4.0 components you installed. The following sections of parameters are possible:

   • General Migration Parameters

   • Users and Groups

   • Document Root

   • Web Publishing

   • Search Collections

   • Keys and Certificates

   For more information, see "The Migration Parameters Page" in the online help

6. Click Migrate.

   The Migrate *Server_name* page appears. It shows the results of the migration, including the parameters successfully migrated and the parameters that you need to migrate manually. It also shows any features of your 3.6 server that are not supported in 4.0.

7. Click Configure Migrated Server to configure your migrated server instance in the Server Manger, or click Close to close the migration window.

The Migrate Server Page

When you migrate, you see a page (Migrate *Server_name*) that logs all the migration information, including all errors encountered. The following is an example of this page.

Figure 4.1   Migration information
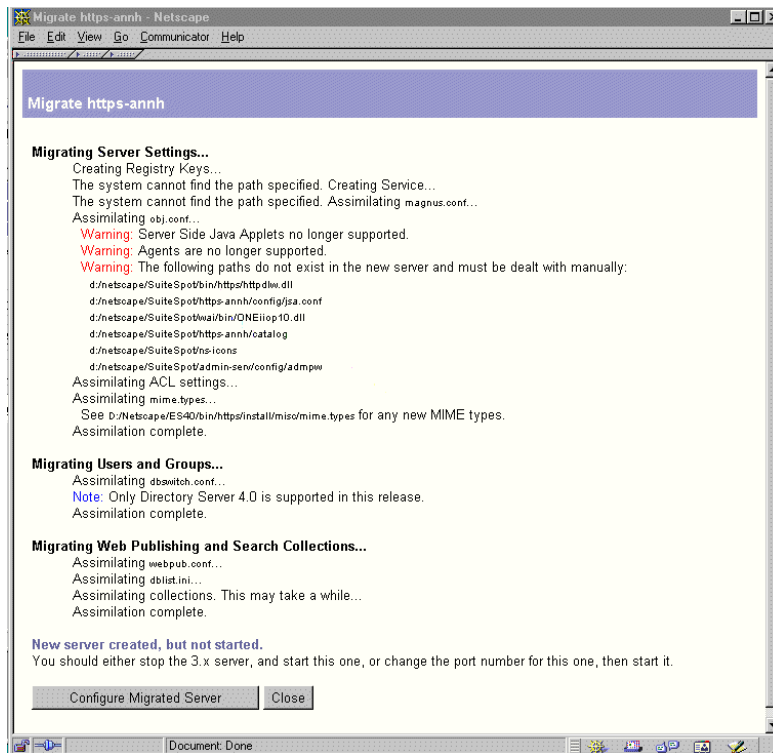
As shown in this example, you receive warnings for the features you used in 3.6 that are not supported in 4.0. The migration program does not migrate entries in `obj.conf` that are for obsolete features.

If you get fatal errors while migrating, the migration continues. The results page shows what errors occurred an you can use this information to troubleshoot.

Migrating the Administration Server

You can only migrate individual server instances. You cannot migrate your administration server. After you have migrated your Enterprise Server instances, you need to set up features such as distributed administration and clusters again in your 4.0 Enterprise Administration Server.

When you migrate an Enterprise Server instance, you have the option of migrating user and group information, which spans multiple server instances. Once you have migrated user and group information or set up your 4.0 environment, you do not need to migrate users and groups again.

You can also migrate keys and certificates.

Migrating User and Group Information

In Enterprise Server 3.6, you had the option of maintaining user and group information in or in a local database or in a Directory Server.

Migrating from a Local Database

If you used a local database for your user and group information, follow these steps:

1. During the migration process, choose to export your local database to an LDIF file.

2. In your 4.x Directory Server, use the file `ldif2ldap` to add DN information to your exported file. The `ldif2ldap` file is in your Directory Server instance folder. To run it on Windows NT, type:

   `ldif2ldap.bat` *filename*

   where *filename* is the name of the exported LDIF file.

   On Unix, type:

   `./ldif2ldap` *filename*

3. Open Directory Server in Netscape Console. From the Configuration tab, right-click on the Database item and choose Import. Browse to your converted file.

4. In Enterprise Administration Server, on the Global Settings tab, use the Configure Directory Service page to point to the Directory Server where you imported your database information.

Migrating from Directory Server

If you used the Directory Server, you do not need to do anything during the migration process to migrate users and groups. After migrating, in the Enterprise Administration Server, on the Global Settings tab, use the Configure Directory Service page to point to a Directory Server. You must use a 4.x Directory Server.

Migrating ACLs

Enterprise Server 4.0 has a new default ACL called es-internal. It controls who can change files internal to Enterprise Server, for example, help files, onscreen icons, and so on. This new default ACL is added when you migrate.

If you had ACLs set up in your administration server 3.6 for distributed administration, these ACLs are not migrated. You must add them manually to your new Enterprise Administration Server.

Migrating Certificates

Keys and certificates are migrated as part of the migration process only if your server has security enabled. You can also migrate keys and certificates by themselves using the Security tabs in the Enterprise Administration Server page and the Server Manager page.

During the migration process, you can migrate the certificates from either the individual server instance or from the administration server.

The way Enterprise Server 4.0 uses and manages certificates has changed from Enterprise Server 3.6. Enterprise Server 3.6 used an alias to refer to a certificate and key pair. Multiple server instances could use to a single alias. The administration server managed all the aliases and the certificates in them.

In Enterprise Server 4.0, each server instance (including the Enterprise Administration Server) has its own certificate/key pair, which is now called a trust database. You manage the trust database from the Server Manager's Security tab. The trust database includes the server certificate and all the included Certificate Authorities. The certificate and key database files are now named after the server instance that uses them. If multiple Enterprise Server 3.6 instances use the same alias, when you migrate each instance you can choose to migrate the certificate and key pair. The migrated certificate and key pair are named for the Enterprise Server 4.0 instance each time you migrate.

The migration not only migrates the certificate, it migrates the whole trust database associated with the server instance. All the Certificate Authorities (CAs) in your 3.6 database are migrated to the 4.0 database. If they duplicate 4.0 CAs, use the 3.6 CA until it expires; then use the 4.0 CA. Do not attempt to delete duplicate CAs.

When you migrate certificates from Enterprise Server 3.6 to Enterprise Server 4.0 make sure that the Enterprise Administration Server user for 4.0 has read and write permissions on the Enterprise Server 3.6 database files. The files are *alias*-cert.db and *alias*-key.db, located in the *3.6_server_root*/ alias directory.

For more information on using certificates with Enterprise Server, see the *Netscape Enterprise Server Administrator's Guide.*

Note   If you are migrating an SSL-enabled server, you will have to manually start the migrated server because you have to specify a password when starting it.

Migrating Web Publishing

If you had web publishing turned on in Enterprise Server 3.6 server, the configuration files are migrated automatically as part of the migration process.

To successfully migrate web publishing data, you must choose the following options on the Migration Parameters page:

*   In the Document Root section, choose to use your old document root. Web publishing relies on pathnames, and if you use a new document root your pathnames change.

*   In the Web Publishing section, choose to migrate web publishing metadata. If you do not choose this option, your metadata will be lost.

In addition, you may need to install filters that render non-HTML documents in HTML for web publishing and search. For more information, see "Document Filters" on page 61.

Migrating Netshare

If you had Netshare turned on in Enterprise Server 3.6, you migrate the configuration files automatically as part of the migration process.

To successfully migrate Netshare directories and environment, on the Migration Parameters page you must choose to use your old document root. Otherwise your Netshare data is not carried forward.

Migrating Search

You need to choose which search collections, if any, you want to migrate. The Migration Parameters page has checkboxes for you to select the collections you want to migrate. If you don't migrate a collection when you migrate the server, you cannot go back and migrate it in the future.

If you choose to use your old document root, the search collections you migrated work automatically. If you choose to use a new document root instead of your old one, you may need to recreate some of your collections before they will work.

Document Filters

Some past releases of Enterprise Server included filters that converted files of many formats to HTML so that they could be included in collections, indexed, searched, and used for web publishing. Beginning with Enterprise Server 3.6 SP1, these filters were no longer included as part of Enterprise Server.

To use this capability in 4.0, most people must purchase and install filters from Verity. To use the filters, follow these steps:

1. Download the filters from Verity at `http://www.verity.com/netscapefilters`.

2. Uncompress them and install them into the *server_root*`/plugins/search` directory.

3. For each instance of the server for which you want to enable document conversion, open the *server_root*`/https-`*server-id*`/config/webpub.conf` file for editing.

4. Within the [NS-loader] section of this file, add the following line:

   `NS-enable-conversion=Y`

5. Go to the Server Manager for the server instance.

6. Click Apply to apply the changes you made to the `webpub.conf` file for that server instance. The server automatically restarts.

7. Reindex any multi-format collections.

If you bought Enterprise Server 3.6 before SP1, or if you already have the filters in your system and do not need to get them from Verity, complete the following steps for each instance of the server for which you are enabling document conversion:

1. Open the *server_root*/https-*server-id*/config/webpub.conf file for editing.

2. Within the [NS-loader] section of this file, add the following line:

   NS-enable-conversion=Y

3. Go to the Server Manager for the server instance.

4. Click Apply to apply the changes you made to the webpub.conf file for that server instance. The server automatically restarts.

5. Reindex your multiformat collections.

If you are migrating from a previous version of Enterprise Server, and you do not get the new filters, you may experience problems with non-HTML documents converted to HTML for search or web publishing. Without the new filters, if you reindex or update a multi-format collection, documents won't be converted to HTML and your search results will be incorrect. For non-HTML files converted to HTML for web publishing, any existing files that have been converted to HTML will remain available in HTML. However, any new non-HTML files, or any new versions of exiting non-HTML files will not be available in HTML.

If you do not want to have HTML renditions of any of your documents, reindex them using the Index and Update Properties page in the Web Publishing tab.

Migrating Applications

After migrating your server settings and data, you may also need to make changes to your applications so that they run on Enterprise Server 4.0.

Migrating Server-Side JavaScript Applications

Enterprise Server 4.0 supports JavaScript 1.4. For information about the changes between JavaScript 1.2 and 1.4, see the "New Features" section in the document *Core JavaScript Reference v1.4* at:

http://developer.netscape.com/docs/manuals/js/core/jsref/index.htm

You must recompile and reregister server-side JavaScript applications before running them in 4.0.

Migrating NSAPI Applications

Most NSAPI programs you used with Enterprise Server 3.6 will work in Enterprise Server 4.0 without being recompiled.Some undocumented data structures have been moved out of `nsapi.h` and are no longer public. Going forward, if your plugins use any of these data structures, you should re-write them to use accessor functions. The data structures that are now private are defined in `nsapi_pvt.h`, which is shipped with the build for informational purposes only.

For more information on these data structures and the new accessor functions, see the *Programmer's Guide to Enterprise Server 4.0*.

Migrating Java Servlets

After you've migrated your server, Java servlets that ran in Enterprise Server 3.6 should run in 4.0 without being recompiled. The migration leaves 3.6 servlets in their original directory. The migrated servlets run in compatibility mode, which may make them a little slower than other 4.0 servlets.

Also, if your 3.6 servlet referenced any additional files, you need to add the path to these files to your JVM classpath. To update the classpath, use the Configure JVM Attributes page, which you can find in the Server Manager on the Servlets tab.

HTTP Java Applets

HTTP Java applets are no longer supported. Instead, use Java servlets.

Web Application Interface

Enterprise Server 3.0 provided an API, called the Web Application Interface (WAI), to extend server functionality. With Enterprise Server 4.0, developers are encouraged to use industry-standard Java servlets for any future applications they develop. WAI is still supported, but Enterprise Server 4.0 focuses on supporting Java servlet development.

By default, the WAI component is not installed when you install the server. You must manually select it for installation. If you did not select WAI when you installed Enterprise Server 4.0, you can run the installer again and install just the WAI component.

In addition, Enterprise Server no longer includes an Object Request Broker (ORB) as part of the release. If you want to continue using WAI, you must obtain the ORB yourself. Visibroker 3.3 is available from Inprise at `http://www.inprise.com`. If you are migrating from a previous version of Enterprise Server, you must still get an updated version of the ORB. The ORB shipped with the 3.6 Enterprise Server is an earlier version which is no longer supported.

Warning You must install the ORB before migrating your Enterprise Server. If you do not, you will get an error message when you try to start your migrated server instance.

Index