



Sun Java System Web Server 6.1 SP8 Installation and Migration Guide



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Part No: 820-1642

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Preface

This guide explains how to install Sun Java™ System Web Server 6.1 and migrate from a previous version of the Sun Java System Web Server to this version. This guide is intended for system administrators, network administrators, Web Server administrators, Web developers, and software developers who want to install or migrate to Sun Java System Web Server 6.1.

This preface contains the following sections:

- [“Using This Guide”](#) on page 7
- [“Document Conventions”](#) on page 8
- [“Using the Documentation”](#) on page 8
- [“Product Support”](#) on page 10

Using This Guide

The following table provides information on how to install or migrate to Sun Java System Web Server 6.1:

TABLE P-1 How to Use This Guide

If you want to do this:	See:
Find out what is new in Sun Java System Web Server.	Chapter 1, New Features in Sun Java System Web Server 6.1
Find out what you need to do before installing the server, including installing other products required by the server.	Chapter 2 Before You Install Sun Java System Web Server
Get step by step instructions for installing and uninstalling the server on UNIX.	Chapter 3, Installing Sun Java System Web Server on UNIX
Get step by step instructions for installing and uninstalling the server on Windows.	Chapter 4, Installing Sun Java System Web Server on Windows

TABLE P-1 How to Use This Guide (Continued)

If you want to do this:	See:
Migrate your data and applications from iPlanet Web Server 6.0.	Chapter 5, Migrating from Version 6.0 to 6.1
Migrate your data and applications from iPlanet Web Server 4.1.	Chapter 6 Migrating from Version 4.1 to 6.1

Document Conventions

This guide uses the following conventions:

- When this document refers to Sun Java System Web Server, it refers to the Enterprise Edition.
- 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 *italic* font is used in code to represent placeholder parameters that should be replaced with an actual value. It is also 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.”).
- A slash (/) is used to separate directories in a path. (Windows supports both the slash and the backslash.)

Using the Documentation

The Sun Java System Web Server manuals are available as online files in PDF and HTML formats at:

<http://docs.sun.com/app/docs/coll/1308.5>

The following table lists the tasks and concepts described in the Sun Java System Web Server manuals.

TABLE P-2 Sun Java System Web Server Documentation Roadmap

For Information About	See the Following
Late-breaking information about the software and documentation	<i>Release Notes</i>

TABLE P-2 Sun Java System Web Server Documentation Roadmap (Continued)

For Information About	See the Following
Getting started with Sun Java System Web Server, including hands-on exercises that introduce server basics and features (recommended for first-time users)	<i>Getting Started Guide</i>
Performing installation and migration tasks: <ul style="list-style-type: none"> ■ Installing Sun Java System Web Server and its various components, supported platforms, and environments ■ Migrating from Sun Java System Web Server 4.1 or 6.0 to Sun Java System Web Server 6.1 	<i>Installation and Migration Guide</i>
Performing the following administration tasks: <ul style="list-style-type: none"> ■ Using the Administration and command-line interfaces ■ Configuring server preferences ■ Using server instances ■ Monitoring and logging server activity ■ Using certificates and public key cryptography to secure the server ■ Configuring access control to secure the server ■ Using Java 2 Platform, Standard Edition (J2SE) security features ■ Deploying applications ■ Managing virtual servers ■ Defining server workload and sizing the system to meet performance needs ■ Searching the contents and attributes of server documents, and creating a text search interface ■ Configuring the server for content compression ■ Configuring the server for web publishing and content authoring using WebDAV 	<i>Administrator's Guide</i>

TABLE P-2 Sun Java System Web Server Documentation Roadmap (Continued)

For Information About	See the Following
Using programming technologies and APIs to do the following: <ul style="list-style-type: none"> ▪ Extend and modify Sun Java System Web Server ▪ Dynamically generate content in response to client requests ▪ Modify the content of the server 	<i>Programmer's Guide</i>
Creating custom Netscape Server Application Programmer's Interface (NSAPI) plugins	<i>NSAPI Programmer's Guide</i>
Implementing servlets and JavaServer Pages™ (JSP™) technology in Sun Java System Web Server	<i>Programmer's Guide to Web Applications</i>
Editing configuration files	<i>Administrator's Configuration File Reference Guide</i>
Tuning Sun Java System Web Server to optimize performance	<i>Performance Tuning, Sizing, and Scaling Guide</i>

Product Support

If you have problems with your system, contact customer support using one of the following mechanisms:

- The online support web site at:
<http://www.sun.com/training/>
- The telephone dispatch number associated with your maintenance contract

Please have the following information available prior to contacting support. This helps to ensure that sun support staff can best assist you in resolving problems.

- Description of the problem, including the situation where the problem occurs and its impact on your operation.
- Machine type, operating system version, and product version, including any patches and other software that might be affecting the problem.
- Detailed steps on the methods you have used to reproduce the problem.
- Any error logs or core dumps.

New Features in Sun Java System Web Server 6.1

Sun Java System Web Server is a multi-process, multi-threaded, secure web server built on open standards. It provides high performance, reliability, scalability, and manageability for an enterprise of any size.

Sun Java System Web Server Features

The version 6.1 release of Sun Java System Web Server provides the following new features:

- **Enhanced Security**—New functionality in Sun Java System Web Server 6.1 allows you to restrict access using flat file authentication. Unlike previous versions of the Web Server, Sun Java System Web Server 6.1 also supports the Java Security Manager. The Java Security Manager is disabled by default when you install the product.
- **Servlet 2.3 Support**—Support for the Java™ Servlet 2.3 specification. For more information, see the following:

Java Servlets:

<http://java.sun.com/products/servlet/index.jsp>

Java Servlet 2.3 specification:

<http://java.sun.com/products/servlet/download.html>

For information about developing servlets and JSPs in Sun Java System Web Server, see the *Sun Java System Web Server 6.1 SP8 Programmer's Guide to Web Applications*.

- **JSP 1.2 Support**—Support for JavaServer Pages™ (JSP™) 1.2. For more information about this specification, see:
<http://java.sun.com/products/jsp/index.jsp>
- **JDK 1.4.2_13 Support**—Sun Java System Web Server 6.1 supports the Java Developer's Kit (JDK™) 1.4.2_13. This JDK is bundled with the Web Server and installed during installation (if you choose to install it). You can also install your own JDK at a later time, after you install the Web Server.

- Easy Migration—Sun Java System Web Server 6.1 allows easy migration from iPlanet Web Server versions 4.1 and 6.0.
- WebDAV Support—Sun Java System Web Server supports the Web Distributed Authoring and Versioning (WebDAV) protocol, which enables in-place collaborative web publishing with the following features:
 - compliance with RFC 2518, and interoperability with RFC 2518 clients
 - security and access control for web publishing
 - basic publishing operations on file system-based WebDAV collections and resourcesFor more information, see the *Sun Java System Web Server 6.1 SP8 Administrator's Guide*.

NSAPI Filters Support—Sun Java System Web Server 6.1 extends the Netscape Server Application Programmer's Interface (NSAPI) to support NSAPI filters. Filters enable the custom processing of HTTP request and response streams, allowing a function to intercept and potentially modify the content presented to or generated by another function. For example, a plugin could install an NSAPI filter to intercept an XML page generated by another plugin's Server Application Function (SAF), then transform that XML page into an HTML, XHTML, or WAP page appropriate for the client. Alternatively, an NSAPI filter could decompress data received from a client before presenting it to another plugin.

For more information, see the *Sun Java System Web Server 6.1 SP8 NSAPI Programmer's Guide*.

Compression Support—Sun Java System Web Server 6.1 supports content compression, which allows you to increase delivery speed to clients and serve higher content volumes without incurring a corresponding increase in hardware expenses. Content compression reduces content download time, a benefit most apparent to users of dial-up and high-traffic connections.

For more information, see the *Sun Java System Web Server 6.1 SP8 Administrator's Guide*.

- JNDI Support—Sun Java System Web Server supports the Java Naming and Directory Interface™ (JNDI) API, which provides seamless connectivity to heterogeneous enterprise naming and directory services.

For more information, see the *Sun Java System Web Server 6.1 SP8 Administrator's Guide*.

- JDBC Support—Sun Java System Web Server provides out-of-the-box seamless Java Database Connectivity (JDBC™) and supports a wide range of industry-standard and customized JDBC drivers.

For more information, see the *Sun Java System Web Server 6.1 SP8 Administrator's Guide*.

- *NSS 3.3.5 and NSPR 4.1.5 Support*—Sun Java System Web Server 6.1 supports Network Security Services (NSS) 3.3.5 and Netscape Portable Runtime (NSPR) 4.1.5.

- **New Search Engine Support**— Sun Java System Web Server 6.1 supports a new Java-based search engine that provides full-text search indexing and retrieval. The search feature allows you to search documents on the server and display results on a web page. Server administrators create the indexes of documents against which users will search, and can customize the search interface to meet specific needs.

For more information, see the *Sun Java System Web Server 6.1 SP8 Administrator's Guide*.

- **Sun Java Studio 8 Support** — Sun Java System Web Server 6.1 supports Sun™ Java Studio 8. Sun Java Studio technology is Sun's powerful, extensible, integrated development environment (IDE) for Java technology developers. It is based on NetBeans™ software, and integrated with the Sun Java System platform.

Sun Java Studio support is available on all platforms supported by Sun Java System Web Server 6.1. The plugin for the Web Server can be obtained in the following ways:

- From the Companion CD in the Sun Java System Web Server 6.1 media kit
- By using the AutoUpdate feature of Sun Java Studio
- From the download center for Sun Java System Web Server 6.1 at:

<http://www.sun.com/download/index.jsp>

Note – The Sun Java Studio 8 plugin for Sun Java System Web Server 6.1 works only with a local Web Server (that is, with the IDE and the Web Server on the same machine).

It is important to note that

The behavior of the Sun Java Studio 8 plug-in for Sun Java System Web Server 6.1 is the same as that for Sun ONE Application Server 7. For information about using the web application features in Sun Java Studio 8, see

<http://developers.sun.com/prodtech/javatools/>

For more information about Sun Java Studio, visit

<http://developers.sun.com/prodtech/javatools/jsenterprise/index.jsp>

Sun Java System ASP Support— Sun Java System Web Server now supports Sun Java System Active Server Pages 4.0.1 on the Windows, AIX and HP-UX platforms. Sun Java System Active Server Pages software is a server-side scripting and runtime environment for the cross-platform deployment of Active Server Pages (ASP or .asp) Web sites and Web applications.

- **PHP Compatibility**— Sun Java System Web Server 6.1 is compatible with PHP, the versatile and widely-used open source web scripting language. PHP runs on all major operating systems.

PHP version 4.3.2 is recommended for use with Sun Java System Web Server 6.1. For PHP-related installation and configuration information specific to Sun Java System Web Server, see

<http://us2.php.net/manual/en/install.php>

- **Enhanced Hardware Accelerator Encryption Support**— Sun Java System Web Server 6.1 provides hardware accelerator support for Sun Crypto Accelerator 500 and 1000, a cryptographic accelerator board that enhances the performance of SSL on the Web Server.
- **Start on Boot Option**— On UNIX platforms, Sun Java System Web Server 6.1 introduces the Start on Boot option, which allows you to configure the Web Server to be started automatically when the system boots. To use this feature, you must install the Web Server as root (superuser) and select Start on Boot during installation. For more information, see [Chapter 3, Installing Sun Java System Web Server on UNIX](#)

Before You Install Sun Java System Web Server

The following sections provide the information you need to know before you install Sun Java System Web Server.

This chapter contains the following sections:

- “Supported Platforms” on page 15
- “Required Patches” on page 18
- “Supported Browsers” on page 18
- “Hardware and Software Requirements” on page 18
- “Other Technical Requirements” on page 19
- “Installation Overview” on page 21

Note – To upgrade Sun Java System Web Server 6.1, which is a part of the Sun Java Enterprise System 1, use the *patchadd* command.

Supported Platforms

The following table describes the platform support for Sun Java System Web Server :

Note – HP-UX 11i is supported only on PA-RISC platforms.

TABLE 2-1 Sun Java System Web Server 6.1 SP8 Supported Platforms

Vendor	Architecture	Operating System	Minimum Required Memory	Recommended Memory	Recommended Disk Space
IBM	PowerPC	AIX 5.1*, 5.2, 5.3	64 MB	192 MB	256 MB

TABLE 2-1 Sun Java System Web Server 6.1 SP8 Supported Platforms (Continued)

Vendor	Architecture	Operating System	Minimum Required Memory	Recommended Memory	Recommended Disk Space
Hewlett-Packard	PA-RISC 2.0	HP-UX 11.11	64 MB	192 MB	256 MB
Microsoft	x86	Windows 2000 SP4 or higher Windows XP Professional Windows 2000 Advance Server Windows 2003 SP1 Enterprise Edition (32 bit)	64 MB	192 MB	256 MB
Sun	SPARC**	Solaris 8, 9, 10	64 MB	192 MB	256 MB
Sun	SPARC** (64-bit)	Solaris 10	64 MB	192 MB	256 MB
Sun	SPARC**, x86	Trusted Solaris 8 (Professional Services Engagement)***	64 MB	192 MB	256 MB
Sun	x86	Solaris 9, 10	64 MB	192 MB	256 MB
Sun	x86	Sun Linux 5.0 (Deprecated) ****	64 MB	192 MB	256 MB

TABLE 2-1 Sun Java System Web Server 6.1 SP8 Supported Platforms (Continued)

Vendor	Architecture	Operating System	Minimum Required Memory	Recommended Memory	Recommended Disk Space
Red Hat	x86	Red Hat Advanced Server 2.1 <ul style="list-style-type: none"> ■ Linux kernel 2.4.9-e.3smp ■ glibc-2.2.4-26 ■ ncurses-4-5.0-5 You may also create a symbolic link from libncurses5.so to libncurses4.so, although we recommend that you install ncurses4-5.0-5.i386.rpm. Red Hat Enterprise Linux 3.0 update 1 <ul style="list-style-type: none"> ■ uname -r: 2.4.21-9.ELsmp Red Hat Advanced Server 4.0 SuSE Linux Enterprise 9.0	64 MB	192 MB	256 MB

* AIX 5.1 is deprecated.

** As of iPlanet Web Server 6.0, older SPARC CPUs are not supported. Sun Java System Web Server 6.1 continues to support the UltraSPARC architecture.

*** Sun or Sun Partner Advantage professional services highly recommended.

**** Support for Sun Linux 5.0 is deprecated and will be removed in the next release of the Sun Java System Web Server.

For better performance and support, migrate your Web Server to a supported operating system.

Note – For a Solaris installation, Sun Java System Web Server (SP5 onwards) supports Global Zone with Sparse Root Zone and Whole Root Zone.

Required Patches

You are recommended to update your operating system with the latest applicable patches.

For the Solaris OE platform, Sun's recommended patch list can be found in the following location:

[Click here](#)



Caution – Patch 108993-22 (SPARC) or 108994-22 (x86) is required on Solaris 8 when Solaris is configured to use LDAP for authentication.

Supported Browsers

Sun Java System Web Server runs on the following browsers:

- Netscape™ 7.0
- Netscape 6.2.1
- Netscape 4.79
- Microsoft Internet Explorer 6.0
- Microsoft Internet Explorer 5.5

Hardware and Software Requirements

In addition to the UNIX, Linux, or Windows operating system memory and disk space requirements listed above, your computer must have the following hardware and software:

All Platforms

- Java and cookies enabled in your browser.
- If you are using Internet Explorer, you need to set your browser to check 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.

UNIX/Linux

- Swap space at least as large as the amount of RAM on your system (twice the amount of RAM is recommended). Linux requires 256 MB swap space.

Windows

- If you plan on running more than two separate instances of Sun Java System 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).
- If you intend to use hostnames during the Sun Java System Web Server installation, DNS properly configured with an entry for your server in a DNS server.
- A static IP address on your machine.

Other Technical Requirements

Once you have the proper hardware and software necessary to install Sun Java System Web 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 19](#).
- Your server has a user account on UNIX, Linux, or Windows. See [“UNIX and Linux User Accounts for the Server” on page 19](#).
- You have two port numbers - one for the Administration Server and the other for the first Sun Java System Web Server server instance. For information on choosing port numbers for your server, see [“Choosing Unique Port Numbers” on page 21](#).

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 and Linux User Accounts for the Server

When the Sun Java System Web Server starts, it runs with a UNIX or Linux user account that you specify during installation. Any child processes of the server are created with this account as

the owner. It is best to create a UNIX or Linux 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.

On Solaris OE, by default, a user and group account named `webservd` is created for Sun Java System Web Server if it does not already exist.

On non-Solaris UNIX platforms (where the `webservd` user/group cannot be reserved outright), if you do not create a dedicated user account for Sun Java System Web Server, you can use the account with the name `nobody`. You might not however want to give the user `nobody` permissions for running the Sun Java System Web Server. Sometimes the user `nobody` does not work on some systems if a negative `uid/gid` is assigned 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 is strongly recommended that you use a dedicated account for the server.

The Administration Server can also run with a user account that has write permissions to the configuration files for all installed servers. However, it is much easier to run the Administration Server as `root` because then the 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).

The user you use to run the Sun Java System Web Server (often `nobody`) should be in the same group as the user you use to run the Administration Server (often `root`).

Note – When changing the server user, remove any `/tmp/lock.*` files created in the `/tmp` directory.

Windows User Accounts for the Server

You should create a Windows user account for your Sun Java System Web 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 it 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 Sun Java System servers so that multiple servers can have access to shared files.

Note – It is strongly recommended that you use a dedicated account for the server.

Choosing Unique Port Numbers

You need multiple port numbers: one for the Administration Server and one for each instance of Sun Java System Web Server. The Administration Server is a special instance of the Sun Java System Web Server that you use to manage your Sun Java System Web Server.

The standard web server port number is 80 and the standard SSL-enabled web server port number is 443, but you can install Sun Java System Web 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.siroe.com` and you choose port 9753, the URL of your server will be `http://www.siroe.com:9753/`.

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

Make sure the port you choose is not already in use. On UNIX and Linux systems, you can check the file `/etc/services` on the server machine to make sure you do not assign a port number that is reserved for another service. If you choose a port that is currently being used by another service, the installation program prompts you for another port.

Note – If you use UNIX or Linux, 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 do not have to be the `root` user to start the server.

Installation Overview

You can install Sun Java System Web Server by downloading it from the Sun Products download web site:

<http://www.sun.com/download/index.jsp>

You can also install it from the Sun Java System Web Server CD. In addition, the Sun Java System Web Server software comes with the 5.2 version of Sun Java System Directory Server on a Companion CD.

▼ To install Sun Java System Web Server

- 1 If you have iPlanet Web Server 4.1 already installed and plan to migrate that server to work with Sun Java System Web Server 6.1, shut down the 4.1 web server and save a back up of all its files in the server root.

Note – Direct migration from a version of iPlanet Web Server that is lower than 4.1 to Sun Java System Web Server 6.1 is not supported. You must first migrate your legacy server to iPlanet Web Server 4.1 and then to Sun Java System Web Server 6.1.

You must install Sun Java System Web Server 6.1 in a separate directory. For instance, if a previous version of the web server is installed in C:\netscape\server4, install Sun Java System Web Server 6.1 in C:\Sun\WebServer6.1.

On Windows you can save copies of files added to Winnt\System32 during server installation, and copies of the registry as well. For more information on saving copies of the registry, see your operating system documentation.

- 2 If you do not already have a browser installed, install one. For a list of supported browsers, see [“Supported Browsers” on page 18](#).
- 3 If you are planning to use users and groups for access control, and you do not have an Sun Java System Directory Server installed, install it from the Companion CD included with your Sun Java System Web Server software.
- 4 Install and configure Sun Java System Web Server.

Installing Sun Java System Web Server on UNIX

This chapter tells you how to install Sun Java System Web Server on UNIX systems. It contains the following sections:

- “Installing Web Server on UNIX Platforms” on page 23
- “Installing Across Multiple Machines” on page 31
- “Default Sun Java System Web Server Directories” on page 37
- “Using Uninstall on UNIX” on page 37

Installing Web Server on UNIX Platforms

The topics in this section describe the installation of Sun Java System Web Server on UNIX platforms.



Caution – You must install your version Sun Java System Web Server 6.1 in a server root directory separate from the server root directory that contains previous versions of the Web server.

Logging in as the Correct User

It is mandatory that the user ID of the user who runs the installation is same as Admin server user ID. Before you install Sun Java System Web Server, you must log in as root, unless you meet the following conditions:

- You plan to install the Sun Java System Web Server on a port higher than 1024.
- The location where you plan to install the server (the server root directory) is writable with your non-root login.
- You are not planning to use Express installation.

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

Note – Only root can bind to ports ≥ 1024 . However, to improve security, do not allow an instance to run as root. You can configure an instance to run as another user. By default, an instance's configuration files are writable by the user that instance runs as. This means a non-root user can modify an instance's configuration file to obtain root access. Therefore, to further improve security, avoid starting an instance as root.

Solaris offers the `net_privaddr` privilege to allow specific non-root users to bind to ports lesser than 1024. Using this privilege means even instances that bind to ports lesser than 1024 can be started by non-root users.

Unpacking the Files

To get the Sun ONE Web Server files and unpack them, follow these steps:

▼ To unpack the files

- 1 **Insert the Sun Java System Web Server CD in the drive.**
- 2 **Change to the CD-ROM directory. For example:**
`cd /cdrom`
- 3 **Change to the directory on the CD labeled with your UNIX operating system. For example:**
`cd Solaris_Sparc`
- 4 **Change to the installation directory. For example:**
`cd SUNWwbsvr`
- 5 **Copy the tar file, `sunw-webserver-6.1.<platform-name>.tar`, from the CD to your home directory or a temporary directory. For example:**
`cp sun-webserver-6.1.sol.tar /tmp/SUNWwbinstall`

Note – Untarring the file will cause the permissions of the destination directory to be modified so that applications can no longer write files to it. To avoid this problem, untar the file in a directory where you can modify the permissions. For example, instead of `/tmp`, use a subdirectory under `/tmp`, for example, `/tmp/SUNWwbinstall`.

Copying the file may take some time.

6 Change to the directory on your UNIX machine where you copied the file. For example:

```
cd /tmp/SUNWwbinstall
```

7 Untar the file by typing `tar -xvf filename`. For example:

```
tar -xvf sun-webserver-6.1.sol.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 a `/WebServer` and a `/lib` directory, and the following files:

- README.txt
 - 3RD-PARTY-LICENSE.txt
 - LICENSE.txt
 - setup
 - installWrapper
 - setup.inf
 - template.inf.

▼ To install a Downloaded Server**1 Download the file from <http://www.sun.com/download/> and save it in a temporary directory.****2 Change to the directory on your UNIX machine where you copied the file. For example:**

```
cd /tmp/SUNWwbinstall
```

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

```
sun-webserver-6.1.<platform-name>.tar.gz
```

Example:

```
gunzip sunw-webserver-6.1.sol.tar.gz.
```

4 Untar the unzipped file by typing `tar -xvf filename`. Example:

```
tar -xvf sun-webserver-6.1.sol.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 a `/WebServer` and a `/lib` directory, and the following files:

- README.txt
 - 3RD-PARTY-LICENSE.txt
 - LICENSE.txt
 - setup
 - installWrapper
 - setup.inf

- `template.inf`.

Note – Untarring the file will cause the permissions of the destination directory to be modified so that applications can no longer write files to it. To avoid this problem, untar the file in a directory where you can modify the permissions. For example, instead of `/tmp`, use a subdirectory under `/tmp`, for example, `/tmp/SUNwbinstall`.

Running Setup

You run the setup program to install Sun Java System Web 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. 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. For more information, see “[To install using express installation](#)” on page 29.

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.

▼ To install using typical or custom installation

- 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.

Note – If you are not logged in as the root user (superuser), or if you do not have sufficient write permissions, you will get one or more error messages.

A welcome screen appears. Press Enter to continue with the installation.

- 3 **Choose whether you accept the software license agreement by typing Yes to accept, or No to decline. If you have not yet read the license agreement, cancel out of the installation and read the file LICENSE.txt that is in the same directory as the setup program. Type Yes or y to accept the agreement.**
- 4 **Specify the server root directory where the server files and directory structure will be installed or accept the default (/opt/SUNWwbsvr/) and press Enter.**

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

- 5 **Choose all components screen and press Enter.**
- 6 **Install the following subcomponents:**
 - **Server Core.** Installs the Administration Server and the first instance of Sun Java System Web Server.
 - **Java Development Kit.** Sun Java System Web Server 6.1 provides Java Developer's Kit (JDK) version 1.4.2_13 as a bundled product. You can install the provided JDK, or use your own JDK.

Note – If you do not want to install the bundled JDK, type 1 and press Enter. In this case, [“To install using typical or custom installation” on page 26](#) is an additional step in the installation process, where you would need to specify the path to the JDK.

- 7 **Specify the fully qualified domain name of the computer on which you are installing the server and press Enter. Example:**

plaza.sun.com

- 8 **Enter the UNIX user and group names to use when running the default instance of Sun Java System Web Server and press Enter.**

If you are installing as root, the default user and group on all UNIX systems except Solaris OE, is nobody. On Solaris OE, if you are installing as root, the default user and group is websrvd. If the user or group does not exist, it is automatically created during installation.

Note – HP-UX has a UID of -2 for nobody. If you have to run the server as nobody on this platform, change the UID of nobody to a positive unique number less than the UID max.

- 9 **Enter the UNIX user name to use when running the Administration Server and press Enter.**

In most cases this user is root.

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

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

For maximum flexibility, choose a port number above 1024. If you want to use a port number lower than 1024 for your Administration Server, you must be logged in as root to start the server. Do not use a port that is already in use.

This Administration Server is not the same as the Administration Server shipped with other Sun Java System servers.

For more information on ports, see [“Choosing Unique Port Numbers” on page 21](#).

12 Type the port number of Sun Java System Web Server.

The default is 80. This port should be different than the Administration Server port. Unless you are installing as root, the port must be within the stated range (1024 to 65535). If you are installing as root you can use port numbers below 1024.

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.sun.com` and you choose port 9753, the URL of the server will be `http://www.sun.com:9753/`

For more information on ports, see [“Choosing Unique Port Numbers” on page 21](#).

13 Type the root directory where content files of your server (the images, HTML documents and data you want to present to users accessing the server) will reside, and press Enter. The default is `server_root/docs`.

14 If you are installing Sun Java System Web Server as root (superuser), then the option to start Web Server automatically when the system boots up (Start on Boot) comes up next. If you want to enable Start on Boot, retain the default, which is Yes and press Enter; otherwise, type No and press Enter.

Note – You can disable the Start on Boot option as follows:

On Solaris and HPUX, you can turn off this option by editing the `S1WS_START_ONBOOT` variable in the `webserver01` script. On Linux, delete the following links to disable it:

```
/etc/rc.d/rc3.d/S75webserver01
```

```
/etc/rc.d/rc5.d/S75webserver01
```

15 If you chose to use your own JDK, enter the absolute path to the directory where you installed the JDK on your system.

Java support in Sun Java System Web Server 6.1 requires a JDK version that is at least JDK version 1.4.1.

The JDK must already exist in the specified directory.

If the custom JDK is located in a directory with a standard tree structure, you can press Enter to continue with the installation. If the custom JDK location follows a non-standard tree structure, then at this prompt you would need to enter the full path to the directory where `libjvm.so` (or `libjvm.sl`) is located.

16 After the installation program extracts and installs the Sun Java System Web Server components, press Enter.

17 Go to the `https-admserv` directory under your server root directory (for example, `/opt/SUNWwbsvr/`) and start the Administration Server by typing `./start`.

You can also type `./startconsole` in the server root directory.

`startconsole` starts the Administration Server and launches a browser to the Administration Server administration pages.

To configure your Sun Java System Web Server, use the URL:

`http://server_name:administration_port`

For example: `http://www.sun.com:5566`

Enter your administration user name and password.

You can now configure your Sun Java System Web Server. For more information on configuring and using Sun Java System Web Server 6.1, see the *Sun Java System Web Server 6.1 SP8 Administrator's Guide*.

▼ To install using 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. By default, the JDK used is the bundled JDK.

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.

Installation Setting	Value
administration port	8888
administration URL	<code>http://machine name:administration port</code>
HTTP port number	80
document root	<code>server_root/docs</code>
UNIX user to run server	<code>root</code>

Installation Setting	Value
subcomponents	All default subcomponents installed



Caution – You must log in as root to use Express installation.

- 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 accept the software license agreement by entering Yes to accept, or No to decline. If you have not yet read the license agreement, cancel out of the installation and read the file `LICENSE.txt` that is in the same directory as the `setup` program.**
- 5 Choose Express and press Enter.**
- 6 Type a server root directory or accept the default (`/opt/SUNWwbsvr/`).**
This directory is where the server files and directory structure will be installed. `root` must have write access to this directory.
- 7 Choose all components.**
Press Enter.
- 8 Enter the UNIX user and group names to use when running the default instance of Sun Java System Web 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 Administration Server.**
In most cases, this user is `root`.
- 10 Enter the Administration Server user name and password to use for authentication. You are asked to enter your password twice.**
- 11 After the installation program extracts and installs the Sun Java System Web Server components, press Enter.**

- 12 **Go to the `https-adminserv` directory under your server root directory (for example, `/opt/SUNWwbsvr/`) and start Administration Server by typing `./start`. You can also type `./startconsole` in the server root directory.**
`startconsole` starts the Administration Server and launches a browser to the Administration Server pages.
- 13 **To configure your Sun Java System Web Server, use the URL:**
`http://server_name:administration_port`
 For example: `http://www.sun.com:8888`
 Enter your administration user name and password.
 You can now configure your Sun Java System Web Server. For more information, see the *Sun Java System Web Server 6.1 SP8 Administrator's Guide*.

Installing Across Multiple Machines

You can install Sun Java System Web Server on multiple machines using two different methods: templated installation and silent installation.

Templated installation is executed from your local machine, where you run the installation program across multiple remote machines at once.

Silent installation requires that you first install the web server on a local machine, then edit the resulting log file, `install.inf`, to correspond to the remote machines. With silent installation, you must install the remote instances one by one.

Both methods are described in this section.

- To install using templated installation
- To install using silent installation

▼ To install using templated installation

To use templated installation, enter the installation settings for each remote machine in a template file called `template.inf`. You can then use the template to install the web server on multiple machines from a single session on your local machine.

The `template.inf` file is found in the same directory as the setup program.

To run templated installation, perform the following steps:

- 1 **In the `./rhosts` directory of your local machine, create an entry for each remote machine where you will install the web server using the format `remote_machine_name username`**

For example, if the remote machine is `host1` on the domain `docs`, and you are logged in as `root`, enter the following information:

```
host1.docs.com root
```

- 2 In the `/etc/hosts.equiv` directory of your local machine, create an entry for each remote machine where you will install the web server using the format**

remote_machine_name

For example, if the remote machine name is `host1` on the domain `docs`, enter the following information:

```
host1.docs.com
```

- 3 In the `/.rhosts` directory of each remote machine where you will install the web server, create an entry for your local machine using the format**

local_machine_name username

For example, if the local machine name is `chewbacca` on the domain `docs` and you are logged in as `root`, enter the following information:

```
chewbacca.docs.com root
```

- 4 In the `/etc/hosts.equiv` directory of each remote machine where you will install the web server, create an entry for your local machine using the format**

local_machine_name

For example, if the local machine name is `chewbacca` on the domain `docs`, enter the following information:

```
chewbacca.docs.com
```

- 5 Create a setup directory on your local machine with a link to server root**

```
ln -s server_root/ setup-directory
```

- 6 Change to the directory where `setup` resides.**

For the local machine share and export the directory containing the setup program via NFS:

- For the remote machine, create a setup directory and mount via NFS `mount -F nfs <local machine name >: setup-directory setup-directory`

- Finally make sure that the `SetupLocation` is accessible from the remote machine.

Note – Remote access is only on Solaris machines. Remote access is different from platform to platform.

- 7 Open the `template.inf` file.**

8 Enter the installation setting:

- **HostNames:** the name of the host where the web server will be installed, separated by commas. For example:
`host1,host2,host3`
- **Components:** the components to install, separated by commas. For example:
`webcore,jdk,cleanup`
- **SetUpLocation:** the location of the setup program used by the template file.
 For each host, enter the following:
 - `[hostname]`: the name of the machine where the web server will be installed by the template.
- **InstallType:** the type of installation to run: `express [1]`, `typical [2]`, or `custom [3]`.
- **SuiteSpotUserID:** The user ID used when running the default instance of the Sun Java System Web Server.
- **SuiteSpotGroup:** The group the user running the default instance of the Sun Java System Web Server belongs to.
- **ServerRoot:** the directory where your server will be installed. For example:
`/opt/SUNWwbsvr/`
- **HttpDocRoot:** The document root of the Sun Java System Web Server instance. For example:
`/opt/SUNWwbsvr/docs`
 For the core server, enter the following:
 - **AdminPort:** Enter the port number for the Administration Server.
 - **HttpPort:** The port of the default Sun Java System Web Server instance.
 - **AdminSysUser:** The user id used when running the Administration Server. The user should have access permissions to use the directory Server to perform user and group management tasks. For example, `root`.
 - **AdminName:** The user name used to access the administration screens of the Administration Server. For example: `admin`.
 - **AdminPassword:** The password used to access the administration screen of the Administration Server. For example: `admin`.

9 Run the installation wrapper by typing the following command at the command prompt:

```
path_to_perl_executable/perl installWrapper -f template.inf
```

Note – The `installWrapper` is a Perl script.

The following is an example of the `template.inf` file:

```
[ MachineName]
HostNames = draco.sun
Components=webcore,snmp,cleanup
SetUpLocation=/Sun/WebServer/P20030814.1
[iws-intern3]
InstallType= 2
SuiteSpotUserID= nobody
SuitespotGroup= nobody
SecurityCheck= False
RequireDomain= False
InstallWhich= 1
ServerRoot=/Sun/WebServer/tmpl_inst/SUNWwbsvr
HttpDocRoot=/Sun/WebServer/tmpl_inst/SUNWwbsvr/docs
JDK_DIR=/usr/j2se
[core]
Upgrade= False
Reinstall= False
AdminPort= 20000
HttpPort= 20001
AdminSysUser= root
AdminName= admin
AdminPassword= admin
UgLdapUse= No
CompVersions= 2:2:1:2:2:1:1:2:
[cleanup]
Archive= cleanup.zip
```

▼ To install using silent installation

Silent installation is a less efficient way than templated installation to install multiple instances of Sun Java System Web Server because remote instances of the server are installed one by one rather than several at a time. You use silent installation to create a file of responses to the setup program's prompts, then edit the file (`install.inf`) and use it to install future Sun Java System Web Server installations. With silent installation, you must first install Sun Java System Web Server on your local machine, then edit `install.inf` to correspond to the remote machines where you'll install additional instances of the server. If you are installing Sun Java System Web Server on a number of remote machines, it is recommended that you use templated installation instead.

Silent installation works best when you use the Typical installation and your installations are all similar.



Caution – The `install.inf` file contains the password used to log on to the Administration Server. The password is not encrypted; it is in plain text. If you use silent installation, delete the `install.inf` file once you are done with it.

To use silent installation, follow these steps:

- 1 **Run setup with the `-k` option, which creates a file called `install.inf` that contains all your responses to the installer prompts. At the command prompt, type:**
`./setup -k`
- 2 **Answer the installer prompts and install Sun Java System Web Server.**
- 3 **When the server is installed, go to the `server_root/setup` directory, where you find the `install.inf` file.**
- 4 **Copy the `install.inf` file to the directory where you will run setup to install your Sun Java System Web Server.**
- 5 **Edit the values in the `install.inf` file to match the values of the next server you want to install.**
 For example, change the machine name, port number, installation directory, etc.
- 6 **Run setup using the `install.inf` file for input. For example:**
`./setup -s -f install.inf`
- 7 **The server is installed.**

The following is an example of an `install.inf` file.

```
[General]
FullMachineName= draco.india.sun.com
SuiteSpotUserID= webservd
SuitespotGroup= webservd
ServerRoot= /Sun/WebServer
SecurityCheck= False
RequireDomain= False
Components= WebServer
```

```
[WebServer]
Upgrade= False
SuiteSpotUserID= webservd
SuiteSpotGroup= webservd
AdminPort= 4600
HttpPort= 4601
HttpDocRoot= /Sun/WebServer/docs
StartOnBoot= n
```

```

JDK_DIR= /Sun/WebServer/bin/https/jdk
JDK_LIBPATH=
AdminSysUser= root
AdminName= admin
AdminPassword= admin
CompVersions= 2:2:1:0:0:
Components= webcore,JDK,cleanup

[cleanup]
Archive= cleanup.zip

```

The following table shows some useful `install.inf` parameters to edit. For best results, do not edit any parameters except those listed in the table.

Parameter Name	Use
FullMachineName	The machine name.
SuiteSpotUserID	The user ID used when running the default instance of the Sun Java System Web Server.
SuiteSpotGroup	The group the user running the default instance of the Sun Java System Web Server belongs to.
ServerRoot	The directory where you install the server.
AdminPort	The Administration Server port.
HttpPort	The port of the default Sun Java System Web Server instance.
HttpDocRoot	The document root of the Sun Java System Web Server instance.
AdminSysUser	The user ID used when running the Administration Server.
AdminName	The user name used to access to the Administration Server's administration screens.
AdminPassword	The password used to access to the Administration Server's administration screens.
JDK_DIR	The directory where your JDK is installed.

Default Sun Java System Web Server Directories

When you install the Sun Java System Web Server product, two web server instances are installed by default under the server root directory:

- A Web Server instance
- A Web Server instance for administration purposes, also called the Administration Server. Files for the Web Server instance are stored in the `https-host.domain` directory under the installation directory.

Files for the Administration Server instance are stored in the `https-admserv` directory under the installation directory.

For more information about the configuration files that are created, see the *Sun Java System Web Server 6.1 SP8 Administrator's Configuration File Reference*.

Using Uninstall on UNIX

You can remove Sun Java System Web Server from your computer by using the uninstall application.



Caution – Though you can select individual subcomponents to uninstall, Sun does not recommend. The uninstaller only removes the parts of the code pertaining to the selected subcomponent, but does not update configuration files. Your server may not run if you uninstall individual subcomponents.

▼ To remove your Sun Java System Web Server

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

A list of Sun Java System servers currently installed in this location appears.

- 2 Find Sun Java System Web Server in the list and type the number next to it at the prompt.**

Note that uninstalling Sun Java System Web Server automatically uninstalls the Administration Server, since it is an instance of Sun Java System Web Server.

A list of installed Sun Java System Web Server subcomponents appears.

- 3 Select all subcomponents and press Return.**

The subcomponents 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.

Installing Sun Java System Web Server on Windows

This chapter provides information on how to install Sun Java System Web Server on Windows. It contains the following sections:

- “Installing on Windows” on page 39
- “Using Silent Installation” on page 44
- “Default Sun Java System Web Server Directories” on page 47
- “Using Uninstall on Windows” on page 47

Installing on Windows

The following sections describe the installation of the Sun Java System Web 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.

Note –

- If you have previous versions of Netscape or Sun Java System web servers installed, you must install your 4.x iPlanet Web Server in a different server root directory.
 - If you have Early Access versions of Sun Java System servers installed, uninstall them before installing the final version.
 - If you install Sun Java System Web Server 6.1 and iPlanet Web Server 4.x on the same machine, uninstall 4.x after you migrate it to the Sun Java System Web Server 6.1. When you uninstall iPlanet Web Server 4.x, because of DLL conflicts do not delete any shared DLL files (when asked, select “No to All”). If not, problem occurs during uninstalling Sun Java System Web Server 6.1.
 - If you have previous versions of Sun Java System web servers installed, shut down the Administration Server and Enterprise Server instances before installing Sun Java System Web Server 6.1.
 - If you want to monitor the Sun Java System Web Server using the Simple Network Management Protocol (SNMP), ensure that you have installed Windows SNMP components before installing the Sun Java System Web Server.
 - Be sure to use unique port numbers for all server instances on Windows systems.
-

Unpacking the Files

To get the Sun Java System Web Server files and unpack them, follow these steps:

▼ To install from a Sun Java System Web Server Enterprise Edition CD

- 1 **Insert the Sun Java System Web Server CD in the drive. Click the icon representing your CD-ROM drive.**
- 2 **Double-click the Windows folder.**
- 3 **Double-click the setup folder.**
The setup.exe file is inside this folder.

▼ To install a downloaded Server

- 1 **Download and unzip the file sun-websvr61-win.zip and save it in a temporary directory.**
- 2 **Double-click the setup.exe file to extract the files and launch the installation program.**

▼ To run setup.exe

Run the setup.exe program to install Sun Java System Web 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 text appears. Click Yes to accept the license.**
- 4 **The Select Installation Type screen appears. Choose the type 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 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.

If you chose Express installation, the following settings are set automatically for you. By default, the Java Developer's Kit (JDK) used is the bundled JDK. If you want to have different values for these settings, choose Typical or Custom installation.

Installation Setting	Values
administration port	8888
administration URL	http://machine name:administration port
HTTP port number	80
document root	server_root/docs
subcomponents	All default subcomponents installed



Caution – Do not use Express Installation if you already have another web server running on port 80.

- 5 **Click Next.**
- 6 **The Location of Installation dialog box appears. The default location for the server files is C:\Sun\WebServer6.1.**

If you want to install the Sun Java System Web Server in a non-default location, use Browse to navigate to the folder you want, or type the name in the field. If you choose a folder that does not exist, the installation program asks if you want to create the folder.



Caution – Ensure that the path to which you install the Web Server has no spaces in its name. For example, do not choose the C:\Program Files directory to install the product, since this directory contains a space in its name.

Click Next.

7 The Components to Install dialog box appears. Select Web Server from the list.

Note that because the Administration Server is now a Sun Java System Web Server instance, it is installed automatically when you install Sun Java System Web Server, and is not a choice on this product list.

If you did not change subcomponents or if you have completed your subcomponent selections, click Next to continue to [“To run setup.exe” on page 41](#).

If you are migrating from iPlanet Web Server 4.1, you must install all the subcomponents that you installed for 4.1, otherwise they may not work. You can install additional subcomponents as well.

8 If you clicked Change on the previous screen, the Select Sub-Components dialog box appears. By default the following subcomponents are installed:

- **Server Core.** Installs the Administration Server and the first instance of Sun Java System Web Server.
 - **Java Development Kit.** Sun Java System Web Server 6.1 provides JDK version 1.4.2_13 as a bundled product. You can install the provided JDK, or supply your own.

Click Continue when you are through choosing subcomponents, to return to the Components to Install dialog box ([“To run setup.exe” on page 41](#)).

9 Type the user name for Administration Server access; the default is admin. Type the Administration Server access password; type it again for verification.

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 [“To run setup.exe” on page 41](#).

Click Next.

10 Type the port number the Administration Server runs on. This can be any number from 1 to 65535. The URL for administration access is displayed. Make a note of this URL. The default port is 8888.

If iPlanet Web Server 4.x is installed on your system, do not use the same Administration Server port number for Sun Java System Web Server 6.1 as you used for iPlanet Web Server 4.x.

For more information on ports, see [“Choosing Unique Port Numbers” on page 21](#).

Click Next.

11 The Default Web Server dialog box appears. A default instance of Sun Java System Web Server is installed automatically.

Type a port number for the default instance of your Sun Java System Web Server. This port should be different than the 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.sun.com` and you choose port 9753, URL of the server will be `http://www.sun.com:9753/`

For more information on ports, see “[Choosing Unique Port Numbers](#)” on page 21.

Type the path for the default primary document directory of the server, where server’s content files (the images, HTML documents and data you want to present to users accessing the server) will reside. The default is `C:\server_root\docs`. Click Browse to navigate your file system.

12 The JDK Configuration dialog box appears.

You can use the JDK included with Sun Java System Web Server (JDK 1.4.2_13) or you can use a custom JDK that already resides on your system.

Java support in the Sun Java System Web Server 6.1 requires a JDK version that is at least JDK version 1.4.

To use your own JDK, click the Use Custom Java Development Kit checkbox and enter the absolute path to the folder where you installed the JDK on your system. For example, `D:\jdk1.4` If the custom JDK is located in a directory with a non-standard tree structure, then enter the full path to the directory where `java.dll` is located.

13 The Configuration Summary dialog box appears.

You can review your settings in this dialog box. It also contains a list of the Sun Java System Web 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 Install. If you want to change some of the settings, click Back and correct the information.

The server files are installed.

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 Sun Java System Web Server exists, use it to uninstall the portion of Sun Java System Web Server you installed.

14 The Setup Complete dialog box appears.

To view the Readme file, keep the View Readme checkbox checked (by default), and click Finish.

The Readme file contains a pointer to the latest Release Notes for Sun Java System Web Server 6.1.

You can start the Administration Server in either of the following ways:

- Select Start Menu -> Programs -> Sun Java System Web Server, and choose Start Web Server Administration Server.
- From the Control Panel's Services item.

To start the servers automatically after reboot, change the Startup Type of the services to Automatic from the Control Panel's Services item, as shown in the Figure 4-1: Changing the Services Startup Type

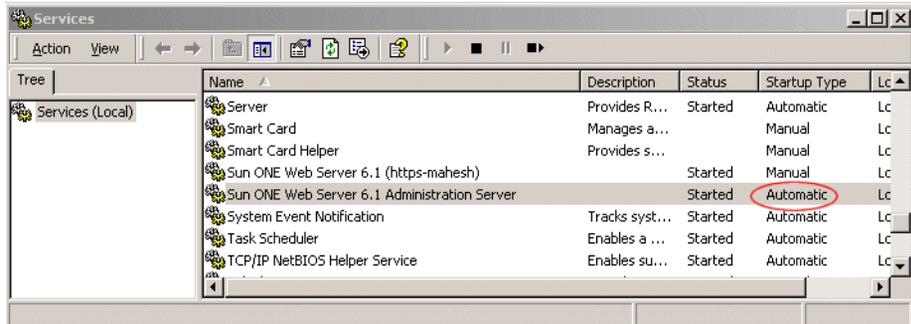


FIGURE 4-1 Changing the Services Startup Type

- 15 Restart your machine or use the Services Control Panel to start the Sun Java System Web Server.
- 16 To configure your Sun Java System Web Server, use the URL:

`http://server_name:administration_port`

For example: `http://www.sun.com:8888`

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

You can now configure your server. For more information, see the *Sun Java System Web Server 6.1 SP8 Administrator's Guide*.

Using Silent Installation

If you want to install several Sun Java System Web Servers, you can use silent installation to create a file of responses to the setup prompts of program. You can then edit the file, `install.inf`, and use it for future Sun Java System Web Server installations.

Silent installation works best when you use the Typical installation and your installations are all similar.



Caution – The `install.inf` file contains the password used to log on to the Administration server. The password is not encrypted; it is in plain text. If you use silent installation, be sure to delete the `install.inf` file once you are through with it.

Because Sun Java System Web Server is downloaded as a self-extracting `.exe` file, you must first extract the files before running `setup.exe`.

▼ To extract the files

- 1 **Double-click the self-extracting `.exe` file to start the installer.**
- 2 **When you launch the installer, it unpacks the files to your `TEMP` directory. Without exiting the installer, go to the `TEMP` directory and copy the installation files to another location.**
- 3 **Once the files are copied, exit the installer.**

You now have a copy of `setup.exe` that you can use for creating the `install.inf` file.

To use silent installation, follow these steps:
- 4 **From the command line, run `setup` with the `-k` option, which creates a file called `install.inf` that contains all your responses to the prompts of installer. At the command prompt, type:**

```
setup.exe -k
```
- 5 **Answer the installer prompts and install Sun Java System Web Server.**
- 6 **When the server is installed, go to the `server_root/setup` directory, where you will find the `install.inf` file.**
- 7 **Copy the `install.inf` file to the directory where you will run `setup` to install the Sun Java System Web Server.**
- 8 **Edit the values in the `install.inf` file to match the values of the next server you want to install.**

For example, change the port number, installation directory.
- 9 **Run `setup` using the `install.inf` file for input. For example:**

```
setup.exe -s -f install.inf
```

10 The server is installed.

The following is an example of an `install.inf` file.

```
[General]
Components=svrcore,WebServer
ServerRoot=d:\servers\s1ws61-0815

[WebServer]
Components=WebCore,JDK,CleanUp
AdminPort=8888
HttpPort=80
HttpDocRoot=d:/servers/s1ws61-0815/docs
AdminName=admin
AdminPassword=admin
UgLdapUse=FALSE
JDK_DIR=d:/servers/s1ws61-0815/bin/https/jdk
JDK_LIBPATH=
JDK_CLASSPATH=

[CleanUp]
Archive=cleanup.zip
```

The following table shows some useful `install.inf` parameters to edit. For best performance, do not edit any parameters except those listed in the table.

Parameter Name	Use
ServerRoot	The directory where you install the server.
AdminPort	The Administration Server port.
HttpPort	The port of the default Sun Java System Web Server instance.
HttpDocRoot	The document root of the Sun Java System Web Server instance.
AdminName	The user name used to access to administration screens of the Administration Server.
AdminPassword	The password used to access to administration screens of the Administration Server.
JDK_DIR	The directory where your JDK is installed.

Default Sun Java System Web Server Directories

When you install the Sun Java System Web Server product, two web server instances are installed by default under the installation directory:

- A Web Server instance
- A Web Server instance for administration purposes, also called the Administration Server. Files for the Web Server instance are stored in the `https-host.domain` directory under the installation directory.

Files for the Administration Server instance are stored in the `https-admserv` directory under the installation directory.

For more information about the configuration files that are created, see the *Sun Java System Web Server 6.1 SP8 Administrator's Configuration File Reference*.

Using Uninstall on Windows

▼ To uninstall your Sun Java System Web Server

- 1 **Select Start Menu -> Control Panel -> Add/Remove Programs -> Sun Java System Web Server**
or
Select Start Menu -> Programs -> Sun Java System Web Server -> Uninstall Web Server.
- 2 **The Sun Java System Uninstall window appears. This window lists all the Sun Java System installed in this directory. Click the checkbox next to Sun Java System Web Server and click Uninstall. Note that uninstalling Sun Java System Web Server automatically uninstalls the Administration Server, since it is an instance of Sun Java System Web 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 configuration files have not been deleted, and that you should rename them before reinstalling the server. Click OK to continue.**

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.

Migrating Web Server from Version 6.0 to 6.1

This chapter contains migration information, the changes that take place when you migrate the Web Server from version 6.0 to 6.1.

This chapter contains the following information:

- “Migration Overview” on page 49
- “Migrating Settings and Data” on page 50
- “What Does Not Get Migrated” on page 53
- “Overview of Changes in Sun Java System Web Server 6.1” on page 53

Note – To upgrade Sun Java System Web Server 6.1, which is a part of the Sun Java Enterprise System, use the *patchadd* command.

Migration Overview

You can migrate the following iPlanet Web Server 6.0 information to work with Sun Java System Web Server 6.1.

- Document roots
- Configuration styles information
- Virtual server settings
- Access Control List (ACL) information
- Secure Socket Layer (SSL) information
- Certificates and keys
- NSAPI information
- JavaServer Pages (JSPs)
- Server Side HTML (SHTML)
- Simple Network Management Protocol (SNMP) settings (the *snmp.conf* file)
- The file cache tuning configuration settings (the *nsfc.conf* file)

Migrating Settings and Data



Caution – Shut down the server instances before migrating.

▼ To migrate settings and data from a 6.0 to the Sun Java System Web Server 6.1

- 1 In the Administration Server page, click the Migrate Servers tab.
- 2 Click Migrate Server.



FIGURE 5-1 Migrate Server Page

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

/usr/netscape/server4

C:\netscape\server4

Sun Java System Web Server detects whether there are server instances installed in the directory you specified and displays the servers you can migrate in a section of the page called “Installed Servers.” You cannot migrate the Administration Server.

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



FIGURE 5-2 Select a Server to Migrate

5 In the new Migration parameters window that is launched, specify the migration parameters.

Migration Parameters

Server Name:

Run Server As:

Document Root

Please select a document root. If you do not use the old server's document root, the documents on the old server will not be visible from the migrated server. Should you wish to revert back to the old server's document root, you can always set the primary document root to the old server's document root from the Content Management tab in the Web Server Administration Server.

Document Root: Use the same document root as the old server Use the new server's document root

Search Collections

6.1 has a new Search Engine (Nova). Hence search migration is not supported. Please refer Search document for details.

Java

FIGURE 5-3 Specify the Migration parameters

The sections on the form that you see depend upon which features your 6.0 Web Server is using and which components you installed. The following sections of parameters are possible:

- General Migration Parameters
 - Document Root
 - Java

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 6.0 server that are not supported in 6.1.

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

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

What Does Not Get Migrated

The migration process does not migrate the following:

- 4.x-style legacy servlets
See “[Legacy Servlets](#)” on page 59 for more information.
- Search collections and indexes
See “[Search Migration](#)” on page 60 for more information.
- Command Line scripts
See “[Command Line Scripts](#)” on page 54 for more information.
- Cron-control settings
See “[Cron Control](#)” on page 58 for more information.
- Certificate mappings
See “[Configuration Files](#)” on page 55 for more information.
- Some configuration files
See the sections “[Configuration Files](#)” on page 55 and “[Configuration Files Removed in Sun Java System Web Server 6.1](#)” on page 58.
- Simple Session Manager and JDBC Session Manager
See “[Session Managers](#)” on page 61 for more information.
- Connection Group settings in server.xml
See “[Connection Groups Settings](#)” on page 58 for more information.
- CGIstub directory
See “[Cgistub Directory](#)” on page 54 for more information.

Overview of Changes in Sun Java System Web Server 6.1

When you migrate information from web server 6.0 to 6.1, changes are made in the following areas, listed alphabetically:

- “[Cgistub Directory](#)” on page 54
- “[Command Line Scripts](#)” on page 54
- “[Configuration Files](#)” on page 55
- “[Connection Groups Settings](#)” on page 58
- “[Cron Control](#)” on page 58
- “[Java Migration](#)” on page 58
- “[Java Server Pages](#)” on page 59
- “[Legacy Servlets](#)” on page 59
- “[Search Migration](#)” on page 60

- “Security” on page 60
- “Session Managers” on page 61
- “Symbolic Links in Configuration Files (UNIX and Linux)” on page 62
- “Web Applications” on page 62
- “Web Publishing Using WebDAV” on page 63

Cgistub Directory

The migration process does not migrate the CGIstub directory. If you configured CGI settings for an instance on your previous server, you need to manually copy the CGIstub directory to the appropriate location after migrating to Sun Java System Web Server 6.1.

Command Line Scripts

If you have made modifications to your start or stop scripts in your 6.0 server, those changes will not be carried forward by the migration program. This applies to the reconfig, restart, and rotate scripts also.

The following table lists the command line scripts that are available in Sun Java System Web Server 6.1, and also, points you to further documentation sources for more information:

Command Line Script	Description	For more information, see:
start, startsvr.bat	<ul style="list-style-type: none"> ▪ Starts a server instance. ▪ Each server instance has its own start script 	<i>Sun Java System Web Server 6.1 Administrator's Guide</i>
stop, stopsvr.bat	<ul style="list-style-type: none"> ▪ Stops a server instance. ▪ Each server instance has its own stop script 	<i>Sun Java System Web Server 6.1 Administrator's Guide</i>
restart	Restarts a server instance	<i>Sun Java System Web Server 6.1 Administrator's Guide</i>
reconfig	Dynamically reconfigures the server without restarting it.	<i>Sun Java System Web Server 6.1 Administrator's Guide</i>
rotate	Rotates logs.	<i>Sun Java System Web Server 6.1 Administrator's Guide</i>
HttpServerAdmin	Provides command line utilities for virtual server administration	<i>Sun Java System Web Server 6.1 Administrator's Guide</i>

Configuration Files

The following table provides a summary listing of the configuration files in Sun Java System Web Server 6.1. It describes the changes introduced in the current release, and points you to further documentation sources:

Configuration File	Description	For more information, see:
ACL files: <ul style="list-style-type: none"> ■ generated-https-server-id.acl ■ genwork-https-server-id.acl 	<ul style="list-style-type: none"> ■ Location: <i>install-dir</i>/httpacl/ ■ These provide access control lists to protect server resources ■ May reference databases defined in “Configuration Files” on page 55 ■ File names are specified in “Configuration Files” on page 55 ■ During migration, ACL files from the old <i>server-root</i>/httpacl directory are copied to the new <i>server-root</i>/httpacl directory with the new instance name. ■ Non-default ACL files listed in the <ACLFILE> element of the <i>server.xml</i> file and that are present in the old <i>server-root</i>/httpacl directory are copied to the new <i>server-root</i>/httpacl directory. 	<i>Access Control Programmer’s Guide</i>
certmap.conf	<ul style="list-style-type: none"> ■ Location: <i>server_root</i>/userdb/ ■ Configures how a client certificate is mapped to an LDAP entry ■ Not migrated. During migration you receive a message that you need to manually migrate existing entries in the <i>certmap.conf</i> of the server instance you want to migrate. 	<i>Sun Java System Web Server 6.1 Administrator’s Configuration File Reference</i>
dbswitch.conf	<ul style="list-style-type: none"> ■ Location: <i>server_root</i>/userdb/ ■ Provides a list of authentication databases, and is used to check group membership for access control ■ Unchanged from Web Server 6.0 	<i>Sun Java System Web Server 6.1 Administrator’s Configuration File Reference</i>

Configuration File	Description	For more information, see:
magnus.conf	<ul style="list-style-type: none"> ■ Location: <code>server-id/config</code> ■ Defines server plug-ins library initialization and server parameters ■ Copied into the new server root director, during migration. ■ During migration, Sun Java System Web Server 6.1 loads built-in load module functions from the new installation directory while custom modules continue to be loaded from the old installation directory. ■ Some <code>magnus.conf</code> directives that were supported in Web Server 6.0 are deprecated in 6.1. 	<p><i>Sun Java System Web Server 6.1 Administrator's Configuration File Reference</i>, for a description of supported and deprecated directives.</p> <p>Sun Java System Web Server 6.1 <i>NSAPI Programmer's Guide</i>, for a description of the <code>Init</code> directives.</p>
mime.types	<ul style="list-style-type: none"> ■ Location: <code>install-dir/config/</code> ■ Contains mappings between MIME (Multipurpose Internet Mail Extensions) types and file extensions ■ During migration, the <code>mime.types</code> file of the old instance in the <code>/config</code> directory is migrated into the new <code>server-root/server-instance/config</code> directory. ■ Non-default <code>mime.types</code> (<code>mime1.types</code>, <code>mime2.types</code>, and so on) present in old <code>server-instance/config</code> directory which are listed in the <code>MIME</code> element of <code>server.xml</code> are migrated into the new <code>server-instance/config</code> directory. 	<p><i>Sun Java System Web Server 6.1 Administrator's Configuration File Reference</i></p>
nsfc.conf	<ul style="list-style-type: none"> ■ Location: <code>server_root/https-admserv/config/</code> ■ Sets file cache parameters. ■ Unchanged from Web Server 6.0 	<p><i>Sun Java System Web Server 6.1 Administrator's Configuration File Reference</i></p>

Configuration File	Description	For more information, see:
obj.conf	<ul style="list-style-type: none"> ■ Location: <i>install-dir</i>/config/ ■ Contains instructions for the server on how to handle HTTP requests from clients and service web server content such as native server plugins and CGI programs. ■ Configured per virtual server class and named in the format <vs-name>.obj.conf ■ New directives and functions added in Web Server 6.1 to configure filters and WebDAV. ■ Search, JSP092, and Webpub objects are not migrated. 	<i>Sun Java System Web Server 6.1 NSAPI Programmer's Guide</i>
server.xml	<ul style="list-style-type: none"> ■ Location: <i>instance-dir</i>/config/ ■ Contains most of the server configuration. ■ During migration, the server.xml file created in the new Web Server 6.1 instance contains information from the following files:- old server.xml file- web-apps.xml- start-jvm- jvm12.conf 	<i>Sun Java System Web Server 6.1 Administrator's Configuration File Reference</i>
*.clfilter <ul style="list-style-type: none"> ■ obj.conf .clfilter ■ magnus.conf .clfilter ■ server.xml .clfilter 	<ul style="list-style-type: none"> ■ Location: <i>instance-dir</i>/config/ ■ Legacy .clfilter files, for example, web-apps.xml.clfilter are not migrated. 	<i>Sun Java System Web Server 6.1 Administrator's Guide</i>
secmod.db	<ul style="list-style-type: none"> ■ Imported certificates and keys for external hardware accelerators are stored in the secmod.db file, which is generated when the PKCs#11 module is installed. ■ Overwritten during migration 	<i>Sun Java System Web Server 6.1 Administrator's Guide</i>
<ul style="list-style-type: none"> ■ access log ■ error log 	<ul style="list-style-type: none"> ■ Server log files records activity of the Server. ■ During migration, new access logs are created. ■ Error logs in 6.0 <i>server-instance</i>/logs directory are copied to the <i>server-instance</i>/logs in 6.1. 	<i>Sun Java System Web Server 6.1 Administrator's Guide</i>

Configuration Files Removed in Sun Java System Web Server 6.1

The following configuration files are no longer supported and are removed during migration:

- `rules.properties`
- `context.properties`
- `servlet.properties`
- `start-jvm`
- `jvm12.conf`
- `web-apps.xml`
- `web-apps.xml.clfilter`
- `webpub.conf`
- `webpub.conf.clfilter`

Connection Groups Settings

Every listen socket in the Sun Java System Web Server 6.0 has at least one connection group associated with it. When you created a listen socket, a connection group was also created, which contained the default virtual server you specified for the listen socket.

In Sun Java System Web Server 6.1, the connection group functionality is dropped. The virtual server is now directly bound to a listen socket. During migration, each connection group is migrated to an LS (listen socket) element. Each LS element contains attributes derived from both the connection group's and the listen socket's attributes.

Cron Control

Cron file names are changed in Sun Java System Web Server 6.1. The Web Server 6.0 file `ns-cron.conf`, is called `schedulerd.conf` in Sun Java System Web Server 6.1, and the version 6.0 file `cron.conf` is now called `scheduler.conf`. These are located in the `https-admserv/config/` directory.

Cron settings from the previous version of your Web server are not migrated to Sun Java System Web Server 6.1 during migration. If you need to preserve these, copy the cron settings for the migrated instance to the cron files.

Java Migration

Unlike in the 6.0 release, Java is enabled by default in the Sun Java System Web Server 6.1. In the Sun Java System Web Server 6.1, you can enable and configure Java for every instance of the server. Unlike in the previous 6.0 release which supported an installation-wide configuration of the JDK.

During migration you can choose to install either the JDK that is bundled with Sun Java System Web Server 6.1 (JDK 1.4.2_13) or install a custom JDK. If you install the server with a custom JDK, the `javahome` setting of the migrated instance refers to the custom JDK path (taken from the `javahome` setting of the Administration Server). Otherwise the `javahome` setting points to `/bin/https/jdk`.

Sun Java System Web Server 6.1 supports the Java Development Kit (JDK) version 1.4 and above. It does not support a standalone Java Runtime Environment (JRE).

In the Sun Java System Web Server 6.1 this data is stored in the `server.xml` file.

The `JAVA` element in the new `server.xml` file contains the JDK configuration information copied from the `start-jvm` file of the migrated instance.

The `JVMOPTIONS` element in the new `server.xml` file contains the JVM options information from the `jvm12.conf` file of the migrated instance.

If the previous version of your server was configured to use JDK 1.4.1 or above, the `NSES_JDK` path from the server's `start-jvm` file is copied into the Sun Java System Web Server 6.1 `server.xml` file, otherwise, the JDK path points to `server-root/bin/https/jdk`, which is the default JDK path in Sun Java System Web Server 6.1.

For information about the mapping of the `start-jvm` and `jvm12.conf` files with the `server.xml` file in Sun Java System Web Server 6.1, refer to the Sun Java System Web Server 6.1 *Administrator's Configuration File Reference*.

Java Server Pages

Sun Java System Web Server 6.1 supports Java Server Pages (JSP) 1.2 specification. The `JSP092` object representing JSP version 0.92 is no longer supported in Sun Java System Web Server 6.1 and is deleted during migration.

Style examples using JSP 1.2 can be found in the following directory:
`server_root/plugins/servlets/examples/web-apps/`

Legacy Servlets

Sun Java System Web Server 6.1 supports the Servlet 2.3 specification.

Netscape Enterprise Server iPlanet Web Server 4.0 and 4.1 supported the Java Servlet 2.1 specification. This specification did not include web applications. A deployment scheme was developed to make servlet deployment simpler. With the advent of Java Web Applications (`.war` files) and their deployment descriptors, it is no longer necessary to maintain a proprietary deployment system.

iPlanet Web Server 6.0 supported both types of deployment schemes, but the 4.x implementation (referred to as legacy servlets) was marked as deprecated (See Chapter 8: “Legacy Servlet and JSP Configuration” of the iPlanet Web Server, Enterprise Edition Programmer's Guide to Servlets).

Sun Java System Web Server 6.1 does not support Legacy Servlets. The legacy-style properties files for the server you want to migrate - `servlet.properties`, `context.properties`, and `rules.properties` - are removed during migration.

Because there is no one-to-one mapping for all of the features, legacy servlets cannot be migrated automatically.

For documentation and samples to help you migrate your 4.x legacy-style servlets to the web applications structure in Sun Java System Web Server 6.1, see the *Sun Java System Web Server 6.1 SP8 Programmer's Guide to Web Applications*.

Search Migration

Because the search engine used in Sun Java System Web Server 6.0 is replaced by a new search engine in Sun Java System Web Server 6.1, existing search collections and indexes are not migrated during the migration process. To use the Search functionality in Sun Java System Web Server 6.1, you create and configure new search collections and indexes. For more information, see the *Sun Java System Web Server 6.1 SP8 Administrator's Guide*.

Security

Sun Java System Web Server provides new flat file authentication and closer integration of native access control with web application security constraints. However, core authentication and authorization support is the same as in the version 6.0 release.

Sun Java System Web Server 6.1, apart from providing ACL-based authentication, also leverages the security model defined in the J2SE Specification to provide several features that help you develop and deploy secure Java Web applications. The J2SE/Servlet-based access control infrastructure relies on the use of security realms.

In Sun Java System Web Server 6.1, authentication is performed by Java security realms which are configured through `AUTHREALM` entries in the `server.xml` file. In case any such rules have been set, authorization is performed by access control rules in the deployment descriptor file `web.xml`.

For more information about security-related features in Sun Java System Web Server 6.1, see the *Sun Java System Web Server 6.1 SP8 Administrator's Guide* and the *Sun Java System Web Server 6.1 SP8 Programmer's Guide*.

Session Managers

The Simple Session Manager and JDBC Session Manager that were deprecated in the version 6.0 release of Sun Java System Web Server are not supported in the 6.1 release.

Sun Java System Web Server 6.1 provides the following session management options:

- StandardManager, the default session manager
- PersistentManager, a provided session manager that uses a persistent data store
- IWSSessionManager, a provided session manager that allows backward compatibility with any custom session managers you may have created using Sun Java System Web Server 6.0.
- MMapSessionManager (UNIX Only), a provided persistent memory map (mmap) file based session manager that works in both single process and multi-process mode

The following API functions of the Sun Java System Web Server 6.1 session manager API are not implemented in Sun Java System Web Server 6.1:

- Form-based logins: Form-based login for single sign on is not supported. The following are therefore deprecated:
 - GetHandleFormLoginSession
 - SetHandleFormLoginSession

The update method. The update method which followed a call to the `HttpRequest` methods, `inputstream`, in version 6.0 of the Web server is now deprecated.
- Session manager monitoring mechanism: Sun Java System Web Server 6.1 does not provide support for monitoring session manager statistics. The following are therefore deprecated:
 - getContext
 - getMaxSession
 - getSessionCount
 - getSessionReapCount
- SimpleSessionManager and JdbcSessionManager. Web Server 6.0 provided deprecated support to the SimpleSessionManager and JdbcSessionManager options, and implemented the same functionality through `iWSSessionManager` and `JdbcStore`, respectively. The SimpleSessionManager and JdbcSessionManager options are not supported in Sun Java System Web Server 6.1.

For more information about Session Managers, see the *Sun Java System Web Server 6.1 SP8 Programmer's Guide to Web Applications*.

Symbolic Links in Configuration Files (UNIX and Linux)

Symbolic or relative links in server configuration files might cause problems when upgrading. Ensure 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. Sun recommends these links should not transverse any symbolic links.

Web Applications

In the 6.0 version of the Web Server, information pertaining to web applications was stored in the `server.xml` file and the `web-apps.xml` file. The `web-apps.xml` file is not supported in Sun Java System Web Server 6.1, and web application data is now stored in the following files:

- `server.xml`
- `web.xml`
- `sun-web.xml`
- `obj.conf`

The `VS` (virtual server) element in the `server.xml` file in Sun Java System Web Server 6.1 now contains a `WEBAPP` (web application) element for every web application it hosts. The attributes of the `WEBAPP` element are consistent with the mechanism used in Web Server 6.0 to configure web applications and are dynamically reconfigurable, that is, they do not require a server restart in order for changes to be applied to the server instance.

For every web application, the deployment descriptor file, `sun-web.xml`, is created in the `<web-application>/WEB-INF` directory. The deployment descriptor file is based on the schema file, `sun-web-app_2_3-1.dtd`, which is compliant with the Servlet 2.3 specification. This schema file is also located in the `<web-application>/WEB-INF` directory.

If you have used the `web-apps.xml` file to tune certain server parameters in the 6.0 version of the Web Server, you would perform an identical function using the `sun-web.xml` deployment descriptor in Sun Java System Web Server 6.1. Following is an example reap interval which specifies the number of seconds between checks for expired sessions.

In Web Server 6.0:

```
<init-param>
  <param-name>reapInterval</param-name>
  <param-value>180</param-value>
</init-param>
```

In Web Server 6.1:

```
<sun-web-app>
...
  <session-config>
```

```
<session-manager>
  <manager-properties>
    <property name="reapIntervalSeconds" value="180">
  </manager-properties>
</session-manager>
...
</session-config>
...
</sun-web-app>
```

For more information on the deployment descriptor files supported in Sun Java System Web Server 6.1, see the *Sun Java System Web Server 6.1 SP8 Programmer's Guide to Web Applications*.

Web Publishing Using WebDAV

Sun Java System Web Server 6.1 introduces a new feature, web publishing through WebDAV (Web Distributed Authoring and Versioning), a protocol that enables in-place collaborative web publishing.

WebDAV functionality is configured by extending the VS element in the `server.xml` file to include two new elements, DAV and DAVCOLLECTION.

New functions have been added to the `obj.conf` file to support WebDAV functionality as an NSAPI plug-in.

For more information on the WebDAV feature, see the *Sun Java System Web Server 6.1 SP8 Administrator's Guide*. For more information on WebDAV functions in the `obj.conf` file, see the *Sun Java System Web Server 6.1 SP8 NSAPI Programmer's Guide*. For more information on WebDAV-related elements in the `server.xml` file, see the *Sun Java System Web Server 6.1 SP8 Administrator's Configuration File Reference*.

Migrating from Web Server Version 4.1 to 6.1

This chapter contains migration information to help, when you migrate your Sun Java System Web Server from version 4.1 to 6.1.

This chapter contains the following information:

- “Migration Overview” on page 65
- “Migrating Settings and Data” on page 66
- “What Does Not Get Migrated” on page 72
- “Summary of Migration-Related Changes” on page 72

Migration Overview

You can migrate the following iPlanet Web Server 4.1 information to work with Sun Java System Web Server 6.1.

- Document roots and any other directory mappings
- Configuration styles information
- Software and hardware virtual server settings
- Access Control List (ACL) information
- Secure Socket Layer (SSL) information
- Certificates and keys
- NSAPI information
- JavaServer Pages (JSPs)
- Simple Session Manager and JDBC Session Manager (deprecated)
- Server Side HTML (SHTML)
- Simple Network Management Protocol (SNMP) settings (the `snmp.conf` file)
- The file cache tuning configuration settings (the `nsfc.conf` file)

Note – Direct migration from a version of iPlanet Web Server that is lower than 4.1 to Sun Java System Web Server 6.1 is not supported. You must first migrate your legacy server to iPlanet Web Server 4.1 and then to Sun Java System Web Server 6.1.

Note – In general, when this document refers to iPlanet Web Server 4.1, the information applies to service pack releases as well, such as iPlanet Web Server 4.1, SP12.

Migrating Settings and Data



Caution – Shut down all server instances before migrating.

▼ To migrate settings and data from a 4.1 server to the 6.1 server

- 1 In the Administration Server page, click the Migrate Servers tab.
- 2 Click Migrate Server.



FIGURE 6-1 Migrate server page

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

/usr/netscape/server4

C:\netscape\server4

Sun Java System Web Server detects whether there are server instances installed in the directory you specified and displays the servers you can migrate in a section of the page called “Installed Servers.” The Administration Server cannot be migrated.

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



FIGURE 6-2 Select a Server to Migrate

- 5 In the new Migration parameters window that is launched, specify the migration parameters.



FIGURE 6-3 Specify the Migration Parameters

The sections on the form that you see depend upon which features your 4.1 iPlanet Web Server is using and which components you installed. The following sections of parameters are possible:

- General Migration Parameters

- Document Root
- Java

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 4.1 server that are not supported in 6.1.

```

Migrating Server Settings... Overwriting dbswitch.conf ...
Assimilating ACL Files...
Assimilating magnus.conf...
Warning: Web Publishing is no longer supported.
Warning: The following paths do not exist in the new server and must be dealt
with manually:
  /usr/netcape_migration/servers4/instance/docdirs/dir3
  /usr/netcape_migration/servers4/instance/docdirs/dir4
  /usr/netcape_migration/servers4/instance/docdirs/dir2
  /usr/netcape_migration/servers4/instance/docdirs/dir5
  /usr/netcape_migration/servers4/instance/docdirs/dir1
  /usr/netcape_migration/servers4/instance/docs/servlet
  /usr/netcape_migration/servers4/manual/https/ug
  /usr/netcape_migration/servers4/servlet
  /usr/netcape_migration/servers4/instance/docs
Assimilating server.xml...
Assimilating Keys and Certificates...
Assimilating obj.conf...
Warning: certmap.conf and ns-cron.conf are not migrated.
Warning: old access logs are not migrated. 6.1 will have new access logs.
Old instance/logs/errors are migrated to new instance/logs/errors.
Assimilating mime.types...
SEE /space/mega/iss/61/bin/https/install/misc/mime.types for any new MIME types.
Assimilating snmp.conf...
Assimilation complete.

Migrating Server Xml ... Info: The JDK version in the old server configuration is not
1.4 or greater, the JDK shipped with Web Server 6.1 will be used.

Warning: All variables defined in VARS of server.xml have reference to 6.1 server
root and 6.1 server name.

Assimilation complete.

New server created but not started.
Before starting this server, you should either stop the 4.1 server or change this
server's port number.

  Configure Migrated Server  Close

```

FIGURE 6-4 The Migrate server-name Page

Note – During migration from a version 4.1 release, the Address directive from the `magnus.conf` file, which is deprecated in the Sun Java System Web Server 6.1 is also migrated. This leads to the following warning message at server startup: "Warning (): Address directive ignored." You can ignore this warning message.

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

The Migrate *server-name* Page

When you migrate, you see a page (Migrate *server_name*) that logs all the migration information, including all errors encountered. You receive warnings for the features you used in iPlanet Web Server 4.1 that are not supported in Sun Java System Web Server 6.1. The migration program does not migrate entries in `obj.conf` corresponding to obsolete features.

If you get fatal errors while migrating, the migration continues. The results page shows what errors occurred and 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 iPlanet Web Server instances, you need to set up features such as distributed administration and clusters again in your 6.1 Administration Server.

You can also migrate keys and certificates.

Migrating User and Group Information

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 Administration Server, on the Global Settings tab, use the Configure Directory Service page to point to a Directory Server.

Migrating Virtual Servers

iPlanet Web Server 4.1 provided two methods for creating hardware virtual servers: the *object* method and the *virtual* method. Migration of hardware virtual server information depends on which method you used:

- If your iPlanet Web Server 4.1 hardware virtual servers were created using the *object* method, these hardware virtual server settings are migrated from the 4.1 `obj.conf` file to the 6.1 `server.xml` file.
- If your iPlanet Web Server 4.1 hardware virtual servers were created using the *virtual* method, these hardware virtual server settings are migrated from the 4.1 `virtual.conf` file to the 6.1 `server.xml` file.

iPlanet Web Server 4.1 software virtual servers settings are migrated from the 4.1 `obj.conf` file to the 6.1 `server.xml` file.

Migrating ACLs

If you had ACLs set up in your Administration Server 4.1 for distributed administration, these ACLs are not migrated. You must add them manually to your new Administration Server.

Migrating Certificates

The migration process copies the database files in the `4.1_server_root/alias` directory, such as `key3.db` and `cert7.db`, to the `6.1_server_root/alias` directory.

In addition, the SSL parameters located in the `magnus.conf` file of 4.1 Server are automatically added to the `6.1_server.xml` configuration file.

The ACL-related files, `secmod.db` and `dbswitch.conf` files are overwritten during migration.

For more information on using certificates with Sun Java System Web Server, see the *Sun Java System Web Server 6.1 SP8 Administrator's Guide*.

Migrating Applications

After migrating your server settings and data, you need to make changes to your applications so that they run on Sun Java System Web Server 6.1.

Migrating NSAPI Applications

Most NSAPI programs you used with iPlanet Web Server 4.1 will work in Sun Java System Web Server 6.1 without being recompiled. Some undocumented data structures have been moved out of `nsapi.h` and are no longer public. 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.

Custom NSAPI plug-ins are not automatically copied to the new server directory. If you have custom plug-ins, make sure you copy your plug-ins to the upgraded path as shown in the `magnus.conf` of the new server.

For more information on these data structures and the new accessor functions, see the *Sun Java System Web Server 6.1 SP8 NSAPI Programmer's Guide*.

Server-side Java Applets (HttpApplets)

Server-side Java applets (HttpApplets) are not supported. Instead use Java servlets. You will need to rewrite your server-side Java applets as servlets and reinstall them.

What Does Not Get Migrated

The migration process does not migrate the following:

- 4.1-style legacy servlets
See [“Java Servlets” on page 73](#) for more information.
- Search collections and indexes
See [“Search” on page 75](#) for more information.
- Start and Stop scripts
See [“Start and Stop Scripts” on page 75](#) for more information.
- Cron-control settings
See [“Cron Control” on page 58](#) for more information.
- Certificate mappings
See [“The certmap.conf File” on page 74](#) for more information.
- WAI
- Web Publishing
See [“Web Publishing” on page 75](#) for more information.
- Server Side JavaScript (SSJS)/LiveWire
See [“Server Side JavaScript \(SSJS\)/LiveWire” on page 75](#)

Summary of Migration-Related Changes

When you migrate information from iPlanet Web Server 4.1 to Sun Java System Web Server 6.1, the changes are made in the following areas:

- [“Access and Error Logs” on page 73](#)
- [“Configuration Files” on page 73](#)
- [“Java Server Pages” on page 59](#)
- [“Java Servlets” on page 73](#)
- [“Cron Control” on page 58](#)
- [“The certmap.conf File” on page 74](#)
- [“Simple Session Manager” on page 74](#)
- [“Virtual Servers” on page 75](#)
- [“Web Publishing” on page 75](#)
- [“Search” on page 75](#)
- [“Start and Stop Scripts” on page 75](#)
- [“Symbolic Links in Configuration Files \(UNIX and Linux\)” on page 75](#)
- [“Server Side JavaScript \(SSJS\)/LiveWire” on page 75](#)

Access and Error Logs

The access and error server log files records the activity of the Server. During migration, new access logs are created. Error logs from the `4.1server-instance/logs` directory is copied to the `server-instance/logs` in Sun Java System Web Server 6.1.

Configuration Files

Certain directives found in the iPlanet Web Server 4.1 `magnus.conf` file are now located in the Sun Java System Web Server 6.1 `server.xml` file. During the migration process, these directives are automatically removed from the 6.1 server's `magnus.conf` file and added to the `server.xml` file.

In addition, `Init` functions located in the iPlanet Web Server 4.1 `obj.conf` file are moved to the Sun Java System Web Server 6.1 `magnus.conf` file.

For a list of deprecated directives, see the *Sun Java System Web Server 6.1 SP8 Administrator's Configuration File Reference*.

Note – During migration, multi-line `Init` directives are compressed to single-line directives in the Sun Java System Web Server 6.1 `magnus.conf` file.

Java Server Pages

iPlanet Web Server 4.0 Java Server Pages (JSPs) were written in JSP 0.92. The iPlanet Web Server 4.1 and 6.0 JSPs are written in JSP 1.2. Version 0.92 is no longer supported in Sun Java System Web Server 6.1. JSPs must be rewritten according to the version 1.2 standard. In addition, Sun recommends that developers create JSPs as part of web applications. Style examples can be found in `server_root/plugins/servlets/examples/web-apps`.

JSPs written in JSP 1.2 that are part of a web application can reside in any directory that the server can serve from.

JSP 1.2 samples are in `server_root/plugins/samples/servlets/jsp.10`.

Java Servlets

Netscape Enterprise Server / iPlanet Web Server 4.0 and 4.1 supported the Java Servlet 2.1 specification. This specification did not include web applications. A deployment scheme was developed to make servlet deployment simpler. With the advent of Java Web Applications (`.war` files) and their deployment descriptors, it is no longer necessary to maintain a proprietary deployment system.

iPlanet Web Server 6.0 supported both types of deployment schemes, but the 4.x implementation referred to as legacy servlets was marked as deprecated. See Chapter 8: “Legacy Servlet and JSP Configuration” of the iPlanet Web Server, Enterprise Edition Programmer's Guide to Servlets.

Sun Java System Web Server 6.1 does not support Legacy Servlets. The legacy-style properties files for the server you want to migrate - `servlet.properties`, `context.properties`, and `rules.properties` - are removed during migration.

Because there is no one-to-one mapping for all of the features, legacy servlets cannot be migrated automatically.

For documentation and samples to help you migrate your 4.1 legacy-style servlets to the web applications structure, see the *Sun Java System Web Server 6.1 SP8 Programmer's Guide to Web Applications*.

Cron Control

Cron file names have been changed in Sun Java System Web Server 6.1. The file `ns-cron.conf` is called `schedulerd.conf` in Sun Java System Web Server 6.1, and the file `cron.conf` is now called `scheduler.conf`. These are located in the `https-admserv/config` directory.

Cron settings from the previous version of your Web server are however not migrated to Sun Java System Web Server 6.1 during migration. Copy the cron settings for the migrated instance to the cron files.

The certmap.conf File

The certificate mapping file, `certmap.conf`, is not migrated during the migration process. During migration you receive a message that you need to manually migrate existing entries in the `certmap.conf` of the server instance you want to migrate.

Simple Session Manager

Simple Session Manager and JDBC Session Manager are not supported by Sun Java System Web Server 6.1. For more details about session managers, see the *Sun Java System Web Server 6.1 SP8 Programmer's Guide to Web Applications*.

If your iPlanet Web Server 4.1 web applications specified `SimpleSessionManager`, you should change the name of the class to `IWSSessionManager`. You then have the option of adding persistence. `Persistence-type` must be set to `s1ws60`. Other `Init` attributes such as `timeOut` and `reapInterval` are unchanged.

If your iPlanet Web Server 4.1 web application specified `JDBCSessionManager`, you should change the name of the class to `IWSSessionManager` and add the following attribute to the `init-param` element of the session manager:
`session-data-store=com.netscape.server.http.session.JdbcStore`. `Persistence-type` must be set to `s1ws60`.

Other attributes such as `provider` and `url` remain unchanged.

The package name of the `MMapSessionManager` has been changed from `com.netscape.server.http.session` in the 4.1 version of the Web Server to `com.iplanet.server.http.session` in the 6.0 and 6.1 versions.

Virtual Servers

In iPlanet Web Server 4.1, you could create multiple server instances using hardware and software virtual servers, but these instances were required to share the same configuration information. With Sun Java System Web Server 6.1, you can set up multiple *classes* of virtual servers. Each class has separate configuration information.

The settings for virtual servers are stored in the `server.xml` file, found in the `server_root/server_ID/config` directory. See the *Sun Java System Web Server 6.1 SP8 Administrator's Guide* for more information on virtual servers.

Web Publishing

Sun Java System Web Server 6.1 does not support the iPlanet Web Server 4.1 Web Publishing feature. It provides a new feature called WebDAV that enables collaborative file sharing and authoring on the Web. See the *Sun Java System Web Server 6.1 SP8 Administrator's Guide* for more information.

Search

Because the search engine used in iPlanet Web Server 4.1 has been replaced by a new search engine in Sun Java System Web Server 6.1, existing search collections and indexes are not migrated during the migration process. To use the Search functionality in Sun Java System Web Server 6.1, create and configure new search collections and indexes. For more information, see the *Sun Java System Web Server 6.1 SP8 Administrator's Guide*.

Start and Stop Scripts

If you have made modifications to your start or stop scripts in your 4.1 server, those changes will not be carried forward by the migration program. This applies to the `reconfig`, `restart`, and `rotate` scripts as well.

Symbolic Links in Configuration Files (UNIX and Linux)

Symbolic or relative links in server configuration files might cause problems when upgrading. Ensure 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. These links should not transverse any symbolic links.

Server Side JavaScript (SSJS)/LiveWire

Data and settings are not migrated applications that use SSJS/Livewire.

See the *Sun Java System Web Server 6.1 SP8 Programmer's Guide to Web Applications* for an appendix explaining how to convert SSJS applications to JSPs. In addition, you can find an example of a converted application in `server_root/plugins/samples/servlets/jsp.10/hangman`.

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