Sun Java Enterprise System 7 Installation and Upgrade Guide

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Contents

Preface

This *Installation and Upgrade Guide* contains download, installation, and upgrade instructions for Sun Java™ Enterprise System 7 (Java ES) 7 Base, the core components in the Java ES platform.

Additional Java ES 7 documentation can be found in the Sun Java™ Enterprise System 7 Document Collection.

For information about other Java ES 7 product offerings, including the various Java ES suites, see the Sun Java™ Enterprise System 7 product page.

Who Should Use This Book

This *Installation and Upgrade Guide* is intended for Java technology developers and administrators. This guide is not intended for general Java technology end users. A familiarity with Java technologies, programming, and administrative concepts and techniques is assumed.

Before You Read This Book

It is recommended that you review the *Sun Java Enterprise System 7 Release Notes* before installing, upgrading, or configuring Java ES 7 components.

Related Books

Refer to the Sun Java™ Enterprise System 7 Document Collection for additional information about Java ES 7.

For complete information about the individual components in the Java ES platform, refer to the documentation available on the Sun Microsystems Documentation page

Additionally, you can find other kinds of documentation at:

- Collections of manuals for each product: docs.sun.com/prod/entsys.7
- The Java ES information hub on BigAdmin: sun.com/bigadmin/hubs/javaes

- The Java ES Interoperability space: wikis.sun.com/display/Interoperability
- The Java ES forum: forums.sun.com/forum.jspa?forumID=872

Related Third-Party Web Site References

Third-party URLs are referenced in this document and provide additional, related information.

Note – Sun is not responsible for the availability of third-party web sites mentioned in this document. Sun does not endorse and is not responsible or liable for any content, advertising, products, or other materials that are available on or through such sites or resources. Sun will not be responsible or liable for any actual or alleged damage or loss caused or alleged to be caused by or in connection with use of or reliance on any such content, goods, or services that are available on or through such sites or resources.

Documentation, Support, and Training

The Sun web site provides information about the following additional resources:

- Documentation (`http://www.sun.com/documentation/`)
- Support (`http://www.sun.com/support/`)
- Training (`http://www.sun.com/training/`)

Sun Welcomes Your Comments

Sun is interested in improving its documentation and welcomes your comments and suggestions. To share your comments, go to `http://docs.sun.com` and click Feedback.

Typographic Conventions

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

TABLE P–1 Typographic Conventions

Typeface	Meaning	Example
`AaBbCc123`	The names of commands, files, and directories, and onscreen computer output	Edit your `.login` file. Use `ls -a` to list all files. `machine_name% you have mail.`
`AaBbCc123`	What you type, contrasted with onscreen computer output	`machine_name%` **`su`** `Password:`
aabbcc123	Placeholder: replace with a real name or value	The command to remove a file is `rm` *filename*.
AaBbCc123	Book titles, new terms, and terms to be emphasized	Read Chapter 6 in the *User's Guide*. A *cache* is a copy that is stored locally. Do *not* save the file. **Note:** Some emphasized items appear bold online.

Shell Prompts in Command Examples

The following table shows the default UNIX® system prompt and superuser prompt for the C shell, Bourne shell, and Korn shell.

TABLE P–2 Shell Prompts

Shell	Prompt
C shell	`machine_name%`
C shell for superuser	`machine_name#`
Bourne shell and Korn shell	`$`
Bourne shell and Korn shell for superuser	`#`

◆ ◆ ◆ CHAPTER 1

Overview

Sun Java™ Enterprise System 7 (Java ES 7) software is a comprehensive set of subscription-based services that combines software, support, professional services, and educational services in a single package, for a single price. The software components within the Java ES 7 are rigorously tested to ensure interoperability and reliability.

This chapter provides a brief overview of Java ES 7 concepts and technologies.

Java ES 7 Components

Java ES 7 comprises a set of core or *Base* components and, optionally, a number of additional product suites oriented around various development focuses. For more information about the various optional Java ES product suites, refer to the Sun Java™ Enterprise System 7 Offerings page.

Note – This *Installation and Upgrade Guide* only covers Java ES 7 Base components, and does not cover installing or upgrading any optional Java ES product suites.

Refer to "Products in Java ES 7 Base" in *Sun Java Enterprise System 7 Release Notes* for the most current list of products and product versions included in Java ES 7 Base.

Platform Support and System Requirements

Refer to "Platform Support and System Requirements" in *Sun Java Enterprise System 7 Release Notes* for the latest list of supported operating environments, requirements, and known issues for Java ES 7 software.

Also note that specific platform support may vary across individual component products. Be sure to refer to the platform requirements listed in the product documentation for each component product.

Interoperability Notes and Backward Compatibility

Refer to Chapter 2, "Product Interoperability in Java ES 7," in *Sun Java Enterprise System 7 Release Notes* for detailed interoperability and compatibility notes related to Java ES 7 software.

◆ ◆ ◆ CHAPTER 2

Getting and Installing Java ES 7

This chapter provides information about installing the Java ES 7 Base components. This chapter covers the following topics:

Getting Java ES 7 Base Components

Java ES 7 software is available for free download from the Sun Java™ Enterprise System 7 product page. This page also provides links for ordering Java ES 7 software in a CD or DVD media kit.

The components that make up Java ES 7 Base can be downloaded individually, and are offered at various support levels; you can pick the components you want as well as the type of licensing format that best suits your organization's needs.

You are welcome to use Java ES 7 software for free without support or indemnification. Various levels of Java ES 7 subscription licenses can also be purchased to provide Sun support and indemnification when running in a production environment. For information about the available support and service plans offered with a Java ES subscription, see `http://www.sun.com/software/javaenterprisesystem/support.jsp`.

Suggested Sequence for Installing Java ES 7

Sun recommends that you install the products in Java ES 7 Base in the following sequence, whether you are installing on a single system or deploying an architecture that spans several systems. This sequence has been developed based on the required and optional dependencies among the products in Java ES Base, as described in Chapter 2, "Product Interoperability in Java ES 7," in *Sun Java Enterprise System 7 Release Notes*.

1. **Solaris Cluster software**

   If any products run in a Solaris Cluster environment, Solaris Cluster software should be installed before the products that use Solaris Cluster services. Solaris Cluster agents should be installed as part of the Solaris Cluster installation.

2. **Solaris Cluster Geographic Edition software**

   Solaris Cluster Geographic Edition should be installed after Solaris Cluster software, upon which it depends. It should be installed before any products that use Solaris Cluster services.

3. **Directory Server Enterprise Edition**

   Several products store user data or configuration data in Directory Server, and might access Directory Server through Directory Proxy Server. Therefore, Directory Server Enterprise Edition should generally be installed before installing products that have dependencies on Directory Server and Directory Proxy Server.

4. **Web Server**

   A number of Java ES products require the support of a web container, which should be installed before the products requiring web container services. Web container services are normally provided by Web Server or GlassFish Enterprise Server, but if your architecture contains both, install Web Server first, before installing GlassFish Enterprise Server.

5. **Message Queue**

   If multiple products in your Java ES deployment rely on Message Queue, you should install it separately before the products that rely on it. If only GlassFish Enterprise Server relies on Message Queue, you can instead install Message Queue as part of the GlassFish Enterprise Server installation because GlassFish Enterprise Server 2.1.1 includes Message Queue 4.4.

6. **GlassFish Enterprise Server**

   GlassFish Enterprise Server should be installed after Web Server if Web Server is to be used to provide load balancing services between GlassFish Enterprise Server instances. Also, GlassFish Enterprise Server should be installed after Message Queue if a system-wide deployment of Message Queue is to be used to provide asynchronous messaging services instead of the Message Queue installation bundled with GlassFish Enterprise Server.

7. **Web Proxy Server**

   Web Proxy Server can be installed anytime, though generally it should be installed after the Web Server or GlassFish Enterprise Server installation for which it provides a proxy service.

8. **OpenSSO Enterprise**

OpenSSO Enterprise must be installed after the web container into which it is to be deployed, and it should be installed before the products that depend on it for authentication and authorization services.

9. **GlassFish Web Space Server**

   GlassFish Web Space Server should be installed last because it has required or optional dependencies on several other Java ES products.

Installing Solaris Cluster

Because Solaris Cluster is an integrated hardware and software solution, careful planning of your Solaris Cluster deployment is required before installing the software itself. For information about deployment planning, see these Solaris Cluster manuals:

- *Sun Cluster Overview for Solaris OS*
- *Sun Cluster Concepts Guide for Solaris OS*
- *Sun Cluster 3.1 - 3.2 Hardware Administration Manual for Solaris OS*
- *Sun Cluster Software Installation Guide for Solaris OS*
- *Sun Cluster Data Services Planning and Administration Guide for Solaris OS*

For information about installing the Solaris Cluster software, see *Sun Cluster Software Installation Guide for Solaris OS*.

For an example that shows installation and configuration of a specific Solaris Cluster configuration, see *Sun Cluster Quick Start Guide for Solaris OS*.

Installing Solaris Cluster Geographic Edition

For information about installing the Solaris Cluster Geographic Edition software, see *Sun Cluster Geographic Edition Installation Guide*.

To learn more about Solaris Cluster Geographic Edition, see *Sun Cluster Geographic Edition Overview*.

Installing Directory Server Enterprise Edition

Installing DSEE 6.3.1 is a multistep process because version 6.3.1 is a maintenance release that corrects issues known in versions 6.0 through 6.3. The steps to install DSEE 6.3.1 are:

1. Install DSEE 6.3, as described in "To Install Directory Server Enterprise Edition 6.3 From Zip Distribution" in *Sun Java System Directory Server Enterprise Edition 6.3 Installation Guide*.

2. Upgrade the installation to version 6.3.1, as described in "Upgrading Directory Server Enterprise Edition to 6.3.1 Using ZIP distribution" in *Sun Java System Directory Server Enterprise Edition 6.3.1 Release Notes*.
3. Install the Directory Service Control Center, as described in "Installing Directory Service Control Center From Zip Distribution" in *Sun Java System Directory Server Enterprise Edition 6.3 Installation Guide*

To learn about DSEE, see *Sun Java System Directory Server Enterprise Edition 6.3 Evaluation Guide*. To learn about deployment architectures for DSEE, see *Sun Java System Directory Server Enterprise Edition 6.3 Deployment Planning Guide*.

Installing Web Server

For information about installing Web Server, see *Sun Java System Web Server 7.0 Update 6 Installation and Migration Guide*.

Installing Message Queue

For information about installing Message Queue, see *Sun Java System Message Queue 4.3 Installation Guide*.

To learn about Message Queue and about deployment architectures for Message Queue, see *Sun Java System Message Queue 4.3 Technical Overview*.

Installing GlassFish Enterprise Server

For information about installing GlassFish Enterprise Server, see *Sun GlassFish Enterprise Server v2.1.1 Installation Guide*.

To learn about deployment architectures for GlassFish Enterprise Server, see *Sun GlassFish Enterprise Server v2.1.1 Deployment Planning Guide*.

Note – GlassFish Enterprise Server 2.1.1 and GlassFish 2.1 Update 6 offer equivalent functionality. GlassFish 2.1 Update 6 is a patch release that can be applied to an existing installation of GlassFish 2.1. GlassFish Enterprise Server 2.1.1 is a full release and does not require GlassFish 2.1 to be installed before installing 2.1.1. If you have already upgraded to GlassFish 2.1 Update 6, you do not need to install 2.1.1.

Installing Web Proxy Server

For information about installing Web Proxy Server, see *Sun Java System Web Proxy Server 4.0.11 Installation and Migration Guide*.

Installing OpenSSO Enterprise

For information about installing OpenSSO Enterprise, see *Sun OpenSSO Enterprise 8.0 Installation and Configuration Guide*.

To learn about OpenSSO Enterprise, see *Sun OpenSSO Enterprise 8.0 Technical Overview*. To learn about deployment architectures for OpenSSO Enterprise, see *Sun OpenSSO Enterprise 8.0 Deployment Planning Guide*.

Installing GlassFish Web Space Server

For information about installing GlassFish Web Space Server, see *Sun GlassFish Web Space Server 10.0 Installation Guide*.

◆ ◆ ◆ CHAPTER 3

Upgrading to Java ES 7

This chapter provides information about upgrading to the product versions in Java ES 7 Base. The following topics are covered in this chapter:

Upgrading From Java ES 6

In general, the product upgrade instructions follow a common process:

1. **Pre-upgrade preparation –** Back up configuration and application data, perform any patching of the operating system, upgrade any required dependencies, and perform other tasks in preparation for upgrading the product.
2. **Upgrade –** Obtain all the necessary packages, patches, and tools needed for the upgrade. You install upgraded software and the product as prescribed, including the migration of data to the upgraded product.
3. **Verification –** Verify that the upgrade has been successful using prescribed verification tests, including starting the upgraded product and testing various usage scenarios.
4. **Post-upgrade procedures –** Perform any additional configuration, customization, or other tasks that might be necessary to make the upgraded product operational, for example, to incorporate new functions.

For all Java ES 7 Base components, the upgrade process involves running the upgrade installation utilities included with the component(s) to be upgraded. As with the general installation procedures, the component upgrade procedures should be performed in the order described in "Suggested Sequence for Installing Java ES 7" on page 12. Refer to the relevant product documentation for specific component upgrade instructions.

Upgrading from Java ES 5 and Earlier

The Java ES upgrade model was significantly changed in Java ES 6, and this changed model has been carried through to Java ES 7. Specifically, Java ES releases version 5 and earlier were based on a unified upgrade model that sometimes made it difficult to resolve dependencies across component products or deliver timely patches to individual components. Starting with Java ES 6, the upgrade model was changed such that each component product uses its own upgrade installer.

As with upgrading from Java ES 6, the upgrade process now involves running the upgrade installation utilities included with the component(s) to be upgraded. As with the general installation procedures, the component upgrade procedures should be performed in the order described in "Suggested Sequence for Installing Java ES 7" on page 12. Refer to the relevant product documentation for specific component upgrade instructions.

Planning for Upgrades

An upgrade plan is the essential starting point for performing an upgrade to Java ES 7. In an upgrade plan you specify the Java ES products you will upgrade and the sequence by which you will upgrade those products on the different computers or operating system instances in your Java ES deployment.

Your upgrade plan depends on a number of factors, each of which should be given careful consideration in preparing for upgrade to Java ES 7:

Upgrade Objectives and Priorities

An upgrade plan reflects your upgrade objectives and priorities, which often depend on the scope and complexity of your existing deployment architecture.

For example, your Java ES deployment architecture might consist of a single Java ES product running on a single computer, and your upgrade objective is to fix some bug in the previous software release. On the other hand, your Java ES deployment architecture might consist of a number of interoperating Java ES products deployed across a number of different computers, and your upgrade objective is to achieve some new functionality by upgrading the minimum number of products required to achieve that end with minimal downtime.

In general, the greater the number of Java ES products and computers in your deployment architecture, and the more ambitious your upgrade objectives, the more complex will be your upgrade plan.

Upgrade Dependencies

One of the main issues in planning the upgrade of a Java ES product is to understand that product's dependencies on other Java ES products, and whether other products need to be upgraded to support the upgrade of the intended product. Researching and working through this issue can affect your upgrade plan in two distinct ways:

- It can add to the set of products you need to upgrade in order to achieve your upgrade objectives.
- It can change the order in which you upgrade individual products.

The "Interoperability Matrix" in *Sun Java Enterprise System 7 Release Notes* provides dependency information about each product in Java ES 7 Base, including supported product versions for each dependency. Use this information, coupled with knowledge of the product versions in your existing Java ES deployment, to determine whether you need to upgrade some additional products in order to support your intended upgrades.

Multi-Instance Upgrades

The sequence of upgrade procedures in an upgrade plan depends on how redundancy is being used in a deployment architecture. Multiple instances of a Java ES product can be used to achieve high availability, scalability, serviceability, or some combination of these service qualities. Three technologies make use of redundant products in Java ES deployment architectures: load balancing (Directory Proxy Server, Web Server, Web Proxy Server, Application Server, Access Manager, and Portal Server), high availability techniques (Sun Cluster and High Availability Session Store, and others), and Directory Server replication.

In most cases where redundancy is involved, upgrades must be performed without incurring significant downtime. These rolling upgrades attempt to successively upgrade redundant instances of a product without compromising the service that they provide.

Redundant instances are usually deployed across multiple computers. For upgrade planning, you might need to isolate the upgrade of replicated products from other product upgrades in order to achieve minimal downtime. In such cases, you often perform all the pre-upgrade tasks for the replicated products on each computer before performing the rolling upgrade.

Each replication technology has configuration or reconfiguration procedures that might affect the overall sequence of Java ES product upgrades. For example, products that run in a Sun Cluster environment can require upgrading Sun Cluster before upgrading the products that are running in the Sun Cluster environment.

The Java ES Upgrade Process

The process of upgrading a Java ES deployment can involve a number of individual product upgrades performed in a particular order to ensure a smooth transition to a updated software system. Upgrades of large or complex Java ES deployments are normally carried out first in a staging environment, before being executed in a production environment. The use of a staging environment allows you to test after each product upgrade as well as to write scripts to simplify or accelerate the upgrade in a production environment.

When you have tested the upgrade process in a staging environment, and have confidence that the upgrade is working properly, you can reproduce the process in your production environment.

Product-By-Product Upgrade Instructions

The following sections provide information about upgrading each product in Java ES 7 Base. Each section presents an overview of the various upgrade paths and scenarios supported by a product, and then provides references to the product documentation where you will find complete instructions for performing each upgrade path or scenario.

Upgrading to Solaris Cluster 3.2 1/09

Solaris Cluster provides several different upgrade paths to version 3.2 1/09:

- Standard upgrade
- Dual-partition upgrade
- Live upgrade
- Rolling upgrade

Several factors determine which paths are available to a given deployment of Solaris Cluster:

- The current operating system version: Solaris 8, Solaris 9, or Solaris 10
- The processor architecture: SPARC or x86
- The current version of Solaris Cluster: 3.0 through 3.2
- Whether a concurrent operating system upgrade is planned

The *Sun Cluster Upgrade Guide for Solaris OS* describes which paths are available in each context, provides guidance in choosing the most appropriate path, and gives detailed instructions for performing the tasks associated with each upgrade path. Additionally, the *Solaris Cluster 3.2 1/09 Release Notes* provide information about issues related to upgrading to Solaris Cluster 3.2 1/09.

Note – Solaris Cluster does not support direct upgrade on x86 based systems running Solaris 8 or Solaris 9. See the *Sun Cluster Upgrade Guide for Solaris OS* for the best approach to upgrading in this situation.

Upgrading to Solaris Cluster Geographic Edition 3.2 1/09

Solaris Cluster Geographic Edition does not provide a direct upgrade path to version 3.2 1/09. Instead, upgrade is performed by:

1. Uninstalling the existing version of Solaris Cluster Geographic Edition.
2. Installing Solaris Cluster Geographic Edition.

Note that Solaris Cluster Geographic Edition software configuration data is retained across this upgrade process, so no reconfiguration is necessary.

For more information about upgrading Solaris Cluster Geographic Edition, including detailed instructions for performing the upgrade, see Chapter 4, "Upgrading the Sun Cluster Geographic Edition Software," in *Sun Cluster Geographic Edition Installation Guide*. Additionally, the *Solaris Cluster Geographic Edition 3.2 1/09 Release Notes* provide information about issues related to upgrading to Solaris Cluster Geographic Edition 3.2 1/09.

Upgrading to Directory Server Enterprise Edition 6.3.1

Past versions of Directory Server Enterprise Edition (DSEE) were delivered in two ways:

- File-based format, packed in a ZIP distribution
- Package-based format, included in past Java ES releases

Additionally, prior to version 6.0, the constituent components of Directory Server Enterprise Edition were delivered as separate products; for example, Directory Server 5.2 and Directory Proxy Server 5.2.

To support these past practices, Directory Server Enterprise Edition provides these upgrade paths to version 6.3.1:

- "Upgrading from a File-Based ZIP Distribution of DSEE 6.*x*" on page 22

Note – When upgrading from DS 6.2, which was part of Java ES R5 Update 1, be sure to follow the instructions in Sun Alert 235361 (perform a full export/import of the relevant LDIF file).

Upgrading from a File-Based ZIP Distribution of DSEE 6.*x*

Use the following steps to upgrade from a file-based ZIP distribution of Directory Server Enterprise Edition 6.0, 6.1, 6.2, or 6.3 to the file-based ZIP distribution of version 6.3.1:

1. Upgrade the installation to version 6.3.1, as described in "Upgrading Directory Server Enterprise Edition to 6.3.1 Using ZIP distribution" in *Sun Java System Directory Server Enterprise Edition 6.3.1 Release Notes*.
2. Install the Directory Service Control Center if it was not already installed in the previous 6.x version, as described in "Installing Directory Service Control Center From Zip Distribution" in *Sun Java System Directory Server Enterprise Edition 6.3 Installation Guide*.

Upgrading from a File-Based ZIP Distribution of DSEE 5.*x*

Use the following steps to upgrade from a file-based ZIP distribution of Directory Server Enterprise Edition 5.x to the file-based ZIP distribution of version 6.3.1:

1. Install Directory Server Enterprise Edition 6.3, as described in "To Install Directory Server Enterprise Edition 6.3 From Zip Distribution" in *Sun Java System Directory Server Enterprise Edition 6.3 Installation Guide*.
2. Upgrade the installation to version 6.3.1, as described in "Upgrading Directory Server Enterprise Edition to 6.3.1 Using ZIP distribution" in *Sun Java System Directory Server Enterprise Edition 6.3.1 Release Notes*.
3. Migrate all the Directory Server 5.x instances to version 6.3.1, as described in the *Sun Java System Directory Server Enterprise Edition 6.3 Migration Guide*.
4. Install the Directory Service Control Center, as described in "Installing Directory Service Control Center From Zip Distribution" in *Sun Java System Directory Server Enterprise Edition 6.3 Installation Guide*.

Upgrading from a Package-Based Distribution of DSEE 6.*x*

To upgrade from the package-based distribution of Directory Server Enterprise Edition 6.0 (in Java ES 5) or 6.2 (in Java ES 5 Update 1) to version 6.3.1, follow the instructions in "Upgrading Directory Server Enterprise Edition to 6.3.1 Using Native Packages" in *Sun Java System Directory Server Enterprise Edition 6.3.1 Release Notes*. Note that the upgraded installation is not exactly equivalent to installing the file-based ZIP distribution of version 6.3.1 because it represents a package-based upgrade, not a file-based installation.

Upgrading from a Package-Based Distribution of DSEE 5.*x*

Use the following steps to upgrade from the package-based distribution of Directory Server 5.2 and Directory Proxy Server 5.2 (in Java ES 2005Q4) to Directory Server Enterprise Edition 6.3.1. Note that the upgraded installation is not exactly equivalent to installing the file-based ZIP distribution of version 6.3.1 because it represents a package-based upgrade, not a file-based installation.

1. Install DSEE 6.0 from Java ES 5.
2. Upgrade to DSEE 6.3.1. Download and upgrade shared components, and then download and upgrade DS 6.3 by means of patches. Refer to *Sun Java System Directory Server Enterprise Edition 6.3.1 Release Notes* for more information.
3. Migrate from 5.*x* to 6.3.1 using the instructions in the *Sun Java System Directory Server Enterprise Edition 6.3 Migration Guide*.

Upgrading to Web Server 7.0 Update 6

Past versions of Web Server were delivered in two ways:

- File-based format, packed in a ZIP distribution
- Package-based format, included in past Java ES releases

Direct migration from a Web Server version lower than 6.0 is not supported. See "Installation, Migration, and Upgrade Notes" in *Sun Java System Web Server 7.0 Update 6 Release Notes* for more information.

To support these past practices, Web Server provides three upgrade paths to version 7.0 Update 6:

- Upgrading from a file-based ZIP distribution of version 7.x
- Upgrading from a package-based distribution of version 7.x (Java ES 5 and 5 Update 1)
- Migrating from version 6.*x*

The remainder of this section explains the following topics:

- "Upgrading from a File-Based ZIP Distribution of Web Server 7.*x*" on page 23
- "Upgrading from a Package-Based Distribution of Web Server 7.*x*" on page 24
- "Upgrading from Web Server 6.*x* or Older Versions" on page 24

Upgrading from a File-Based ZIP Distribution of Web Server 7.*x*

This installation program provided with Web Server 7.0 Update 6 can identify and upgrade Web Server file-based installations back to version 7.0.

Before Upgrading – Before using the Web Server 7.0 Update 6 installer to upgrade an older 7.x file-based installation, you should review "Installation, Migration, and Upgrade Notes" in

Sun Java System Web Server 7.0 Update 6 Release Notes and "Migration and Upgrade" in *Sun Java System Web Server 7.0 Update 6 Release Notes* .

To Upgrade – To upgrade a Web Server 7.*x* file-based installation using the Web Server 7.0 Update 6 installer, see "Upgrading the Web Server from 7.0 to 7.0 Update 6" in *Sun Java System Web Server 7.0 Update 6 Installation and Migration Guide*.

Upgrading from a Package-Based Distribution of Web Server 7.*x*

To upgrade from the package-based distribution of Web Server 7.0 (in Java ES 5) or 7.0 Update 1 (in Java ES 5 Update 1) to version 7.0 Update 6, apply the patches for the appropriate platform, as described in "Upgrade" in *Sun Java System Web Server 7.0 Update 6 Release Notes*. Before downloading and installing the patches, you should review "Migration and Upgrade" in *Sun Java System Web Server 7.0 Update 6 Release Notes*, also in *Sun Java System Web Server 7.0 Update 4 Release Notes*.

Note that the upgraded installation is not exactly equivalent to installing the file-based ZIP distribution of version 7.0 Update 6 because it represents a package-based upgrade, not a file-based installation.

Upgrading from Web Server 6.*x* or Older Versions

Web Server 6.0 and 6.1 configurations can be migrated to 7.0 Update 6. Direct migration from a Web Server version lower than 6.0 is not supported. Earlier versions such as Web Server 4.0 or later must first be migrated to Web Server 6.1, then to Web Server 7.0. Follow these steps to migrate from Web Server 6.*x* versions:

1. Install Web Server 7.0 Update 6, as described in Chapter 2, "Installing the Web Server," in *Sun Java System Web Server 7.0 Update 6 Installation and Migration Guide*.
2. Migrate 6.x server instances to 7.0 Update 6, as described in Chapter 5, "Migrating to Web Server 7.0," in *Sun Java System Web Server 7.0 Update 6 Installation and Migration Guide*.

Upgrading to Message Queue 4.3

Versions of Message Queue prior to Java ES 6 were delivered in two ways:

- Package-based format for UNIX-based platforms (Solaris, Linux, and HP-UX)
- File-based format for Windows

To support these past practices, Message Queue provides two upgrade paths to version 4.3:

- "Upgrading to Message Queue 4.3 on the Solaris or Linux Platform" on page 25
- "Upgrading to Message Queue 4.3 on the Windows Platform" on page 25

Upgrading to Message Queue 4.3 on the Solaris or Linux Platform

On Solaris and Linux, the installer provided with Message Queue 4.3 can automatically identify and upgrade Message Queue installations back to version 3.6, and the following instance data from the existing installation will be used by version 4.3:

- Configuration properties
- File-based persistent data store
- Log files
- Flat-file user repository
- Access control properties file

Before Upgrading – Before using the Message Queue 4.3 installer to upgrade an older version, you should review "Compatibility Issues" in *Sun Java System Message Queue 4.3 Installation Guide* in *Sun Java System Message Queue 4.3 Installation Guide*. You should also review "Upgrading from Previous Versions" in *Sun Java System Message Queue 4.3 Installation Guide* or "Upgrading from Previous Versions" in *Sun Java System Message Queue 4.3 Installation Guide* in *Sun Java System Message Queue 4.3 Installation Guide*.

To Upgrade – To upgrade a Message Queue installation using the Message Queue 4.3 installer, see"Installation Procedure" in *Sun Java System Message Queue 4.3 Installation Guide* or "Installation Procedure" in *Sun Java System Message Queue 4.3 Installation Guide* in *Sun Java System Message Queue 4.3 Installation Guide*.

Upgrading to Message Queue 4.3 on the Windows Platform

On Windows, upgrading from past versions of Message Queue to version 4.3 is not supported, but version 4.3 can coexist with past versions in different locations on the same system. As an alternative, you can:

1. Save data from the past version.
2. Uninstall the past version.
3. Install version 4.3.
4. Migrate data saved in Step 1 to the version 4.3 installation.

For information about this alternative, see "Windows" in *Sun Java System Message Queue 4.3 Installation Guide* in *Sun Java System Message Queue 4.3 Installation Guide*.

Refer to "Compatibility Issues" in *Sun Java System Message Queue 4.3 Installation Guide* in *Sun Java System Message Queue 4.3 Installation Guide* to help you decide whether to install a coexistent copy of version 4.3 or to replace the past version with version 4.3.

Upgrading to GlassFish Enterprise Server 2.1.1

GlassFish Enterprise Server supports upgrade from a variety of products:

- GlassFish v2/2.1

- Sun Java System Application Server: file-based and package-based distributions
- Sun Java System Application Server, Enterprise Edition: file-based and package-based distributions
- Sun Java System Application Server, Platform Edition

For a complete list of the products, versions, and distributions that are supported for upgrade, see "Upgrade Overview" in *Sun GlassFish Enterprise Server v2.1.1 Upgrade Guide*.

Note – GlassFish Enterprise Server 2.1.1 is functionally equivalent to GlassFish Enterprise Server 2.1 Patch 6. If you have already performed the 2.1P6 patch upgrade, you do *not* need to perform the 2.1.1 upgrade.

To support the various products and distributions, GlassFish Enterprise Server offers four upgrade paths:

- Side-by-side upgrade of a file-based ZIP installation
- In-place upgrade of a file-based ZIP installation
- Upgrade of a package-based installation
- Upgrade of a package-based installation to a file-based ZIP installation

These upgrade paths, and the instructions for following them, are described in Chapter 2, "Upgrading an Enterprise Server Installation," in *Sun GlassFish Enterprise Server v2.1.1 Upgrade Guide*.

Before performing an upgrade to GlassFish Enterprise Server 2.1.1, you should review Chapter 1, "Enterprise Server Compatibility Issues," in *Sun GlassFish Enterprise Server v2.1.1 Upgrade Guide* and "Upgrading the Enterprise Server" in *Sun GlassFish Enterprise Server v2.1.1 Release Notes*.

Upgrading to Web Proxy Server 4.0.11

Past versions of Web Proxy Server were delivered in two ways:

- File-based format, packed in a ZIP distribution
- Package-based format, included in past Java ES releases

To support these past practices, Web Proxy Server provides three upgrade paths to version 4.0.11:

- "Upgrading from a File-Based ZIP Distribution of Web Proxy Server 4.*x*" on page 27
- "Upgrading from a Package-Based Distribution of Web Proxy Server 4.*x*" on page 27
- "Upgrading from Web Proxy Server 3.6" on page 27

Upgrading from a File-Based ZIP Distribution of Web Proxy Server 4.*x*

This installation program provided with Web Proxy Server 4.0.11 can identify and upgrade Web Proxy Server file-based installations back to version 4.0.

To upgrade a Web Proxy Server 4.x file-based installation using the Web Proxy Server 4.0.11 installer, see Chapter 1, "Installing Sun Java System Web Proxy Server," in *Sun Java System Web Proxy Server 4.0.11 Installation and Migration Guide*.

Upgrading from a Package-Based Distribution of Web Proxy Server 4.*x*

To upgrade from the package-based distribution of Web Proxy Server 4.0.1 (in Java ES 2005Q4), 4.0.4 (in Java ES 5) or 4.0.5 (in Java ES 5 Update 1) to version 4.0.11, apply the patches for the appropriate platform, as described in "Upgrade Support" in *Sun Java System Web Proxy Server 4.0.11 Release Notes*.

Note that the upgraded installation is not exactly equivalent to installing the file-based ZIP distribution of version 4.0.11 because it represents a package-based upgrade, not a file-based installation.

Upgrading from Web Proxy Server 3.6

Web Proxy Server does not support a direct upgrade to version 4.0.11 from versions prior to 4.0. Instead, follow the instructions provided in Chapter 3, "Migrating From Version 3.6," in *Sun Java System Web Proxy Server 4.0.11 Installation and Migration Guide*.

Upgrading to OpenSSO Enterprise 8.0 Update 1 Patch 2

Upgrading to OpenSSO Enterprise 8.0 U1P2 is supported from the following releases and platforms:

Previous Release	Upgrade Supported From This Platform
Sun Java System Access Manager 7.1 Upgrade is supported for: ■ Sun Java Enterprise System package based installations ■ WAR file deployment only if the configuration data is in Sun Java System Directory Server.	Solaris SPARC, Solaris x86, Linux, and Windows systems
Sun Java System Access Manager 7 2005Q4	Solaris SPARC, Solaris x86, and Linux systems

Previous Release	Upgrade Supported From This Platform
Sun Java System Federation Manager 7.0	Solaris SPARC, Solaris x86, Linux, and Windows systems

For information about upgrading to OpenSSO Enterprise 8.0 U1P2, see Installing OpenSSO Enterprise 8.0 Update 1.

Note – Several issues with Portal Server can arise as a result of upgrading Access Manager to OpenSSO Enterprise. For information about these issues, see Chapter 3, "Known Issues and Limitations," in *Sun Java Enterprise System 7 Release Notes*.