Sun Java™ System

Application Server 8 Installation Guide

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About This Guide

This guide describes how to create and run Java™ 2 Platform, Enterprise Edition (J2EE™ platform) applications that follow the new open Java standards model for Java™ Servlet, JavaServer Pages™ (JSP™), Enterprise JavaBeans™ (EJB™), and other J2EE components in the Sun Java™ System Application Server Platform Edition 8 environment.

This preface contains information about the following topics:

- Who Should Use This Guide
- Using the Documentation
- How This Guide Is Organized
- Documentation Conventions
- Documentation Conventions
- Contacting Sun

Who Should Use This Guide

The intended audience for this guide is the person who develops, assembles, and deploys J2EE applications in a corporate enterprise.

This guide assumes you are familiar with the following topics:

- J2EE specification
- HTML
- Java programming

- Java APIs as defined in the Java™ Servlet, JavaServer Pages™ (JSP™), Enterprise JavaBeans™ (EJB™), and Java™ Database Connectivity (JDBC™) specifications
- Structured database query languages such as SQL
- Relational database concepts
- Software development processes, including debugging and source code control

Using the Documentation

The Sun Java System Application Server Platform Edition manuals are available as online files in Portable Document Format (PDF) and Hypertext Markup Language (HTML).

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

Table 1 Sun Java System Application Server Documentation Roadmap

For information about	See the following
Late-breaking information about the software and the documentation. Includes a comprehensive, table-based summary of supported hardware, operating system, JDK, and JDBC/RDBMS.	*Release Notes*
Installing the Sun Java System Application Server software and its components, such as sample applications, the Administration Console, and the high-availability components. Instructions for implementing a basic high-availability configuration are included.	*Installation Guide*
Creating and implementing Java™ 2 Platform, Enterprise Edition (J2EE™ platform) applications intended to run on the Sun Java System Application Server that follow the open Java standards model for J2EE components and APIs. Includes general information about application design, developer tools, security, assembly, deployment, debugging, and creating lifecycle modules. A comprehensive Sun Java System Application Server glossary is included.	*Developer's Guide*
Using J2EE 1.4 platform technologies and APIs to develop J2EE applications and deploying the applications on the Sun Java System Application Server.	*J2EE 1.4 Tutorial*
Information and instructions on the configuration, management, and deployment of the Sun Java System Application Server subsystems and components, from both the Administration Console and the command-line interface. Topics include cluster management, the high-availability database, load balancing, and session persistence. A comprehensive Sun Java System Application Server glossary is included.	*Administration Guide*

Table 1 Sun Java System Application Server Documentation Roadmap *(Continued)*

For information about	See the following
Editing the Sun Java System Application Server configuration file, `domain.xml`.	*Reference*
Migrating your applications to the new Sun Java System Application Server programming model, specifically from iPlanet Application Server 6.x and from Netscape Application Server 4.0. Includes a sample migration.	*Migrating and Redeploying Server Applications Guide*
Information on solving Sun Java System Application Server problems.	*Troubleshooting Guide*
Utility commands available with the Sun Java System Application Server; written in manpage style.	*Utility Reference Manual*
Using the Sun™ Java System Message Queue 3.5 software.	The Sun Java System Message Queue documentation at: `http://docs.sun.com/db?p=prod/s1.s1msgqu`

How This Guide Is Organized

This guide provides instructions for installing the Sun Java System Application Server, and includes the following topics:

- Chapter 1, “Installing Application Server 8.”
- Chapter 2, “Upgrading an Application Server 7 Installation”
- Chapter 3 , “Uninstalling Application Server 8”

Documentation Conventions

This section describes the types of conventions used throughout this guide:

- General Conventions
- Conventions Referring to Directories

General Conventions

The following general conventions are used in this guide:

- **File and directory paths** are given in UNIX® format (with forward slashes separating directory names). For Windows versions, the directory paths are the same, except that backslashes are used to separate directories.
- **URLs** are given in the format:

  http://*server.domain*/*path*/*file*.html

  In these URLs, *server* is the server name where applications are run; *domain* is your Internet domain name; *path* is the server's directory structure; and *file* is an individual filename. Italic items in URLs are placeholders.
- **Font conventions** include:
  - The `monospace` font is used for sample code and code listings, API and language elements (such as function names and class names), file names, pathnames, directory names, and HTML tags.
  - *Italic* type is used for code variables.
  - *Italic* type is also used for book titles, emphasis, variables and placeholders, and words used in the literal sense.
  - **Bold** type is used as either a paragraph lead-in or to indicate words used in the literal sense.
- **Installation root directories** for most platforms are indicated by *install_dir* in this document. Exceptions are noted in "Conventions Referring to Directories" on page 7.

  By default, the location of *install_dir* on **most** platforms is:
  - Solaris and Linux file-based installations, non-root user:

    user's home directory`/SUNWappserver`
  - Solaris and Linux file-based installations, root user:

    `/opt/SUNWappserver`
  - Windows, all installations:

    system drive`:\Sun\AppServer`

  For the platforms listed above, *default_config_dir* is identical to *install_dir*. See "Conventions Referring to Directories" on page 7 for exceptions and additional information.

- **Domain root directories** are indicated by *domain_dir* in this document, which by default is an abbreviation for the following:

  install_dir`/domains/`*domain_dir*

  However, for package-based installations, the directory containing all the domains can be changed from *install_dir*`/domains/` to another directory during installation. In configuration files, you may see *domain_dir* represented as follows:

  `${com.sun.aas.instanceRoot}`

- **UNIX-specific descriptions** throughout this manual apply to the Linux operating system as well, except where Linux is specifically mentioned.

Conventions Referring to Directories

By default, when using the Solaris package-based or Linux RPM-based installation, the application server files are spread across several root directories. This guide uses the following document conventions to correspond to the various default installation directories provided:

- *install_dir* refers to `/opt/SUNWappserver`, which is the default location for the static portion of the installation image. All utilities, executables, and libraries that make up the application server reside in this location.
- *default_config_dir* refers to `/var/opt/SUNWappserver/domains`, which is the default location for any domains that are created.

Contacting Sun

You might want to contact Sun Microsystems in order to:

- Give Us Feedback
- Obtain Training
- Contact Product Support

Give Us Feedback

If you have general feedback on the product or documentation, please send this to appserver-feedback@sun.com.

Obtain Training

Application Server training courses are available at:

http://training.sun.com/US/catalog/enterprise/web_application.html/

Visit this site often for new course availability on the Sun Java System Application Server.

Contact 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/supportraining/

- The telephone dispatch number associated with your maintenance contract

Please have the following information available prior to contacting support. This helps to ensure that our 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. Here are some of the commonly used commands:
  - **Solaris:** `pkginfo, showrev`
  - **Linux:** `rpm`
  - **All:** `asadmin version --verbose`
- Detailed steps on the methods you have used to reproduce the problem
- Any error logs or core dumps
- Configuration files such as:
  - *domain_dir*`/config/domain.xml`
  - a web application's `web.xml` file, when a web application is involved in the problem
- For an application, whether the problem appears when it is running in a cluster or standlone

Chapter 1

Installing Application Server 8

This guide provide instructions for installing the Sun Java™ System Application Server 8. The following topics are discussed:

- What You're Installing
- Installing the Application Server Software

What You're Installing

The Application Server product is made up of the following components:

- Application Server 8 software, including administrative tools and utilities
- Sun ONE Message Queue
- PointBase Database Server

The J2EE™ 1.4 SDK product is made up of the following components:

- Application Server 8 software, including administrative tools and utilities
- Java™ 2 Paltform Standard Edition (J2SE™) SDK
- J2SE™ SDK samples, which includes BluePrints applications, such as Petstore, Adventure Builder, and SmartTicket

Installing the Application Server Software

After you have verified that your system meets the requirements specified in the *Release Notes*, perform the following steps to install the Application Server product:

- Installing on Unix

- Installing on Windows

Installing on Unix

1. Navigate to the directory where you downloaded the bundle file.
2. Change the permission of the bundle file so that you have execute access:

   `chmod +x <bundle-file-name>`
3. Run the installation program.
   a. To run the installation program that uses a graphical interface, at the command prompt type the name of the bundle file at the command prompt.
   b. To run the installation program that uses the command-line interface, at the command prompt type the name of the bundle file followed by the `-console` option.
4. If you wish to upgrade your installation, see Chapter 2: Upgrading an Application Server 7 Installation.
5. Set the PATH environment variable to include the Application Server *install_dir*`/bin` directory.
6. To verify the installation, follow the instructions of the Quick Start Guide, located in *install_dir*`/docs/QuickStart.html`.

Installing on Windows

1. Navigate to the directory where you downloaded the `.exe` file.
2. Double click the `.exe` file to start the installation program.
3. Follow the instructions on the wizard screens of the installation program. If you wish to upgrade your installation, see Chapter 2: Upgrading an Application Server 7 Installation.
4. Optional: Set the PATH environment variable to include the Application Server *install_dir*`/bin` directory.
5. To verify the installation, follow the instructions of the Quick Start Guide, located in *install_dir*`/docs/QuickStart.html`.

Chapter 2

Upgrading an Application Server 7 Installation

You can use the upgrade wizard to transfer configuration information from a Sun Application Server version 7 Platform Edition (AS7.0PE) installation to a Sun Java System Application Server 8 Platform Edition installation. Information that is transferred includes data about deployed applications, the file realm, security certificates, and other resource and server configuration settings. The upgrade wizard can used in Graphical User Interface (GUI) mode or in Command Line Interface (CLI) mode.

You can start the upgrade wizard in GUI mode from the command line or from the desktop:

- To start the wizard in GUI mode from the command line, change to the *install_dir*`/bin` directory and type `asupgrade`.
- On Windows, to start the wizard from the desktop, double-click the asupgrade icon in the *install_dir*`/bin` directory.

If you selected the Upgrade checkbox during the Application Server installation process, the wizard will automatically display after the installation completes.

Upgrading through the Wizard

From the Application Server Upgrade Wizard screen:

1. In the Version 7.x Installation Directory field, enter the location of the Sun Application Server version 7.x Platform Edition installation from which to import the configuration.
2. In the Application Server Installation Directory field, Enter the location of the Application Server installation to which you want to transfer the configuration.

If the Upgrade Wizard was started from the Installation Wizard, the default value for this field will be the directory to which the Application Server software was just installed.

3. If you do not have any security certificates to transfer, click the Next button and continue with Step 8.
4. If you have security certificates that must be transferred, check the Transfer Security Certificates checkbox, click the Next button and the Transfer Security Certificates screen displays.
5. From the Transfer Security Certificates screen , press the Add Domain button to add domains with certificates to be transferred.
6. From the Add Domain dialog, you select the domain name and the source and target certificate passwords:
   a. Click on the Source Domain pulldown and select the domain that contains the security certificates to migrate. .In the Passwords panel, enter the password for the Source Certificate File, which is used for NSS trusted database `cert7.db` and `key3.db` files.
   b. Enter the password for the Target User Key Database, which is used for the JSSE `keystore.jks` file that contains user keypair certificates.
   c. Enter the password for the Target Certificate Authority Database, which is used for the JSSE `cacerts.jks` file that contains certificate authority certificates.
   d. Click the OK button when done.
7. Repeat Step 5 and Step 6 until you have added all the domains with certificates you want transferred. When you are done adding domains, click the Next button and continue with Step 8.
8. The Upgrade Results screen displays, showing the status of the upgrade operation in the Results field.
9. Click the Finish button to close the wizard when upgrading is done.

Upgrading through the Command Line

The Upgrade Wizard can also be run from the command line using the following syntax:

```
asupgrade [-c] [--help] --source S1AS7.x_installation
 --target J2EE1.4_installation
 [--domain domain_name --nsspwdfile nss_pwd_file_path
  --jkspwdfile jks_pwd_file_path --capwdfile ca_pwd_file]...
```

The following table describes the command options.

Table 1: Options of the `asupgrade` Tool

Option	Description
`-c`	Command line utility will be invoked for upgrade
`--source`	Installation root directory of the S1AS7.0 server
`--target`	Installation root directory of the J2EE 1.4 Application Server
`--domain`	Destination domain name for migrated certificates
`--nsspwdfile`	Path to NSS password file
`--jkspwdfile`	Path to JKS password file
`--capwdfile`	Path to CA certificate password file

Chapter 3

Uninstalling Application Server 8

All components in the current Application Server installation directory are automatically selected for uninstallation.

NOTE

- It is important to use the uninstall routine described here. If you attempt another method, problems will arise when you try to reinstall the same version, or when you install a new version.
- If you do not stop all domains before the uninstallation, then orphaned processes may exist on your system after the uninstallation.

To uninstall the Application Server software, perform the following steps:

1. Make sure you have stopped all domains.
2. Navigate to your Application Server installation directory.
3. Invoke the uninstall program as follows:
   - On UNIX, type one of the following commands at the command prompt:
     - To use the uninstall that has a graphical interface:

       ```
       ./uninstall
       ```

     - To use the uninstall that has a command-line interface:

       ```
       ./uninstall -console
       ```

   - On Windows, under the Sun Microsystems, J2EE 1.4 SDK program group in the Start Programs area of your desktop, click Uninstall.
   - On Windows, you can also invoke the uninstall program through the Control Panel:

I. Navigate to the Control Panel

II. Choose Add/Remove Programs.

III. Select Java 2 Platform, Enterprise Edition 1.4 SDK from the list of installed programs.

IV. Click Remove.

NOTE If you did not stop all domains before the uninstallation, orphaned processes may be running on your system. On UNIX, you can identify the processes with the `ps -ef` command and terminate them with the `kill` command.