



# Sun Java System Application Server 9.1 Installation Guide



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# Contents

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<b>Preface</b> .....	9
<b>1 Installing Application Server Software</b> .....	15
Distribution Types and Their Components .....	15
Installing GlassFish v2 .....	16
▼ To Install GlassFish Application Server .....	16
▼ To Install the Load Balancing Plug-in (standalone) .....	17
Application Server 9.1 with Java ES 5 Update 1 .....	18
▼ To Perform a Cleanup after Partial Installation .....	18
▼ To Configure Registry Server with Application Server 9.1 .....	19
Installing Application Server 9.1 .....	20
▼ To Install Application Server 9.1 without HADB .....	20
▼ To Install Application Server 9.1 with HADB .....	22
To Install Application Server 9.1 in Silent Mode .....	27
Application Server and Solaris 10 Zones .....	32
Application Server and MQ bundled with Solaris 10 .....	32
Propagation Levels of Components Installed Through Java ES 5 Update 1 .....	33
<b>2 Uninstalling Application Server Software</b> .....	35
Running the Uninstallation Program .....	35
▼ To Run the Uninstallation Program on UNIX or Linux .....	36
▼ To Run the Uninstallation Program on Windows .....	36
<b>Index</b> .....	39



# Tables

---

TABLE 1-1	Installation Configuration File Variables .....	29
-----------	---	----



# Examples

---

EXAMPLE 1-1	Installation Configuration File Example .....	28
-------------	---	----





# Preface

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This Installation Guide contains instructions for installing and uninstalling GlassFish Application Server and the Sun Java™ System Application Server.

This preface contains information about and conventions for the entire Sun Java System Application Server documentation set.

## Application Server Documentation Set

The Application Server documentation set describes deployment planning and system installation. The Uniform Resource Locator (URL) for Application Server documentation is <http://docs.sun.com/coll/1343.4>. For an introduction to Application Server, refer to the books in the order in which they are listed in the following table.

TABLE P-1 Books in the Application Server Documentation Set

Book Title	Description
<i>Documentation Center</i>	Application Server documentation topics organized by task and subject.
<i>Release Notes</i>	Late-breaking information about the software and the documentation. Includes a comprehensive, table-based summary of the supported hardware, operating system, Java Development Kit (JDK™), and database drivers.
<i>Quick Start Guide</i>	How to get started with the Application Server product.
<i>Installation Guide</i>	Installing the software and its components.
<i>Deployment Planning Guide</i>	Evaluating your system needs and enterprise to ensure that you deploy the Application Server in a manner that best suits your site. General issues and concerns that you must be aware of when deploying the server are also discussed.
<i>Application Deployment Guide</i>	Deployment of applications and application components to the Application Server. Includes information about deployment descriptors.
<i>Developer's Guide</i>	Creating and implementing Java Platform, Enterprise Edition (Java EE platform) applications intended to run on the Application Server that follow the open Java standards model for Java EE components and APIs. Includes information about developer tools, security, debugging, and creating lifecycle modules.

TABLE P-1 Books in the Application Server Documentation Set (Continued)

Book Title	Description
<i>Java EE 5 Tutorial</i>	Using Java EE 5 platform technologies and APIs to develop Java EE applications.
<i>Java WSIT Tutorial</i>	Developing web applications using the Web Service Interoperability Technologies (WSIT). Describes how, when, and why to use the WSIT technologies and the features and options that each technology supports.
<i>Administration Guide</i>	System administration for the Application Server, including configuration, monitoring, security, resource management, and web services management.
<i>High Availability Administration Guide</i>	Post-installation configuration and administration instructions for the high-availability database.
<i>Administration Reference</i>	Editing the Application Server configuration file, <code>domain.xml</code> .
<i>Upgrade and Migration Guide</i>	Upgrading from an older version of Application Server or migrating Java EE applications from competitive application servers. This guide also describes differences between adjacent product releases and configuration options that can result in incompatibility with the product specifications.
<i>Performance Tuning Guide</i>	Tuning the Application Server to improve performance.
<i>Troubleshooting Guide</i>	Solving Application Server problems.
<i>Error Message Reference</i>	Solving Application Server error messages.
<i>Reference Manual</i>	Utility commands available with the Application Server; written in man page style. Includes the <code>asadmin</code> command line interface.

## Related Documentation

Application Server can be purchased by itself or as a component of Sun Java Enterprise System (Java ES), a software infrastructure that supports enterprise applications distributed across a network or Internet environment. If you purchased Application Server as a component of Java ES, you should be familiar with the system documentation at <http://docs.sun.com/coll/1286.2>. The URL for all documentation about Java ES and its components is <http://docs.sun.com/prod/entsys.5>.

For documentation about other stand-alone Sun Java System server products, go to the following:

- [Message Queue documentation \(http://docs.sun.com/coll/1343.4\)](http://docs.sun.com/coll/1343.4)
- [Directory Server documentation \(http://docs.sun.com/coll/1224.1\)](http://docs.sun.com/coll/1224.1)
- [Web Server documentation \(http://docs.sun.com/coll/1308.3\)](http://docs.sun.com/coll/1308.3)

A Javadoc™ tool reference for packages provided with the Application Server is located at <http://glassfish.dev.java.net/nonav/javaee5/api/index.html>. Additionally, the following resources might be useful:

- The Java EE 5 Specifications (<http://java.sun.com/javase/5/javatech.html>)
- The Java EE Blueprints (<http://java.sun.com/reference/blueprints/index.html>)

For information on creating enterprise applications in the NetBeans™ Integrated Development Environment (IDE), see <http://www.netbeans.org/kb/55/index.html>.

For information about the Java DB database included with the Application Server, see <http://developers.sun.com/javadb/>.

The GlassFish Samples project is a collection of sample applications that demonstrate a broad range of Java EE technologies. The GlassFish Samples are bundled with the Java EE Software Development Kit (SDK), and are also available from the GlassFish Samples project page at <https://glassfish-samples.dev.java.net/>.

## Default Paths and File Names

The following table describes the default paths and file names that are used in this book.

TABLE P-2 Default Paths and File Names

Placeholder	Description	Default Value
<i>install-dir</i>	Represents the base installation directory for Application Server.	Application Server installed with Java ES on Solaris™, root user: /opt/SUNWappserver/appserver Application Server installed with Java ES on Linux, root user: /opt/sun/appserver/ Other Solaris and Linux installations, non-root user: <i>user's-home-directory</i> /SUNWappserver Other Solaris and Linux installations, root user: /opt/SUNWappserver Windows, all installations: <i>SystemDrive</i> : \Sun\AppServer

TABLE P-2 Default Paths and File Names (Continued)

Placeholder	Description	Default Value
<i>domain-root-dir</i>	Represents the directory containing all domains.	Java ES Solaris installations, root user: /var/opt/SUNWappserver/domains/ Java ES Linux installations, root user: /var/opt/sun/appserver/domains/ All other installations: <i>install-dir</i> /domains/
<i>domain-dir</i>	Represents the directory for a domain.  In configuration files, you might see <i>domain-dir</i> represented as follows:  \${com.sun.aas.instanceRoot}	<i>domain-root-dir/domain-dir</i>
<i>instance-dir</i>	Represents the directory for a server instance.	<i>domain-dir/instance-dir</i>

## Typographic Conventions

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

TABLE P-3 Typographic Conventions

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

## Symbol Conventions

The following table explains symbols that might be used in this book.

TABLE P-4 Symbol Conventions

Symbol	Description	Example	Meaning
[ ]	Contains optional arguments and command options.	ls [-l]	The -l option is not required.
{   }	Contains a set of choices for a required command option.	-d {y n}	The -d option requires that you use either the y argument or the n argument.
\${ }	Indicates a variable reference.	\${com.sun.javaRoot}	References the value of the com.sun.javaRoot variable.
-	Joins simultaneous multiple keystrokes.	Control-A	Press the Control key while you press the A key.
+	Joins consecutive multiple keystrokes.	Ctrl+A+N	Press the Control key, release it, and then press the subsequent keys.
→	Indicates menu item selection in a graphical user interface.	File → New → Templates	From the File menu, choose New. From the New submenu, choose Templates.

## 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/>)

## Searching Sun Product Documentation

Besides searching Sun product documentation from the docs.sun.com<sup>SM</sup> web site, you can use a search engine by typing the following syntax in the search field:

```
search-term site:docs.sun.com
```

For example, to search for “broker,” type the following:

```
broker site:docs.sun.com
```

To include other Sun web sites in your search (for example, [java.sun.com](http://java.sun.com), [www.sun.com](http://www.sun.com), and [developers.sun.com](http://developers.sun.com)), use `sun.com` in place of `docs.sun.com` in the search field.

## Third-Party Web Site References

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

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# Installing Application Server Software

---

This chapter provides instructions for installing the Sun Java System Application Server software. The following topics are discussed:

- “Distribution Types and Their Components” on page 15
- “Installing GlassFish v2” on page 16
- “Application Server 9.1 with Java ES 5 Update 1” on page 18
- “Installing Application Server 9.1” on page 20
- “Application Server and Solaris 10 Zones” on page 32

## Distribution Types and Their Components

You can download GlassFish Application Server from <https://glassfish.dev.java.net/public/downloadsindex.html>. The GlassFish v2 distribution includes the Application Server software, the Sun Java System Message Queue 4.1, Java DB, and ant 1.6.5. You can run GlassFish on Solaris SPARC, Solaris x86, Linux, Windows, and Mac OS.

Application Server 9.1 product distribution is available as: Application Server 9.1 with HADB and Application Server 9.1 without HADB. The standalone Application Server 9.1 is available at <http://www.sun.com/download>.

Application Server 9.1 without HADB includes the load balancing plug-in, Java DB, and Sun Java System Message Queue 4.1. Application Server 9.1 with HADB includes the load balancing plug-in, Java SE Development Kit (JDK) 5, Java DB, Sun Java System Message Queue 4.1, and HADB.

The Java ES 5 Update 1 distribution includes a Application Server 9.1 distribution as an optional download. This distribution includes HADB in addition to the load balancing plug-in, Java Development Kit (JDK) 5, Java DB, and the Sun Java System Message Queue 4.1.

Application Server 9.1 is also part of the Java EE SDK and the Java Application Platform SDK. You can download these distributions from <http://java.sun.com/javaee/downloads/index.jsp>.

You can download the latest version of Sun Java System Access Manager Policy Agent 2.2 from <http://www.sun.com/download>. For more information on how the Access Manager Policy Agent works with the Application Server 9.1, see Sun Java System Access Manager Policy Agent 2.2 Guide for Sun Java System Application Server 9.0/9.1 on docs.sun.com.

## Installing GlassFish v2

This section provides instructions for installing GlassFish v2 distribution and for installing the load balancing plug-in for GlassFish v2. This distribution does not support upgrades or patching.

- “To Install GlassFish Application Server ” on page 16
- “To Install the Load Balancing Plug-in (standalone)” on page 17

### ▼ To Install GlassFish Application Server

**Before You Begin** Get JDK (Java SE Development Kit) 5 or higher from <http://java.sun.com/javase/>, if you are using Solaris, Linux, or Windows..

If you are using Mac OS X, you need to download JDK 5 (supported on Mac OS X 1.4 or later) from <http://www.apple.com/support/downloads/java2se50release3.html> and make JDK 5 the default JVM.

#### 1 Download the GlassFish v2 distribution

<https://glassfish.dev.java.net/public/downloadsindex.html>.

#### 2 Set the environment variable JAVA\_HOME to point to the directory in which JDK 5 is installed.

#### 3 Run the following command:

```
java -Xmx256m -jar <filename>.jar
```

#### 4 Set ANT\_HOME to point to the ant 1.6.5 installation, which is at <downloaded-dir>/glassfish/lib/ant directory.

#### 5 Navigate to the glassfish directory:

```
cd glassfish
```



- 6 If you do not want clustering capabilities, run the following command:

```
ant -f setup.xml
```

- If you want to use GlassFish with clustering, change the command to:

```
ant -f setup-cluster.xml
```

## ▼ To Install the Load Balancing Plug-in (standalone)

Use the procedures in this section if the load balancing plug-in is not part of the Application Server distribution you are using. If you are using the Sun Java System Application Server 9.1 (bundle with HADB), see “To Install Application Server 9.1 with HADB” on page 22 for instructions for installing the load balancing plug-in.

The load balancing plug-in is not currently bundled with the GlassFish v2 Application Server. If you want load balancing capabilities, you can download the load balancing plug-in from the following locations:

- Solaris (SPARC): <http://download.java.net/javaee5/external/SunOS/aslb/jars/>
- Solaris (x86): [http://download.java.net/javaee5/external/SunOS\\_X86/aslb/jars/](http://download.java.net/javaee5/external/SunOS_X86/aslb/jars/)
- Linux: <http://download.java.net/javaee5/external/Linux/aslb/jars/>
- Windows: <http://download.java.net/javaee5/external/WINNT/aslb/jars/>
- Mac OS: <http://download.java.net/javaee5/external/Darwin/aslb/jars/>

- 1 Before you install the load balancer plug-in, ensure that you have installed a supported web server. For a list of supported web servers, see “Web Servers” in *Sun Java System Application Server 9.1 Release Notes*.
- 2 Create the `lbplugin` directory within `<glassfish_install_dir>/lib`.
- 3 Unjar this file in the `lbplugin` directory. Run the following command: `jar -xvf <lbplugin>.jar`.
- 4 Unzip the following two files: `SUNWaslb.zip` and `SUNWaspx.zip` in the same directory. Delete the zip files.
- 5 Change permissions on all shared libraries within `lbplugin` directory. Run the following command: `chmod -R 755 ${glassfish.home}/lib/lbplugin/lib`.
- 6 Create a configuration for the load balancer. See “Setting up Load Balancing” in *Sun Java System Application Server 9.1 Quick Start Guide*.
- 7 Restart the Web Server after creating a configuration for the load balancer.

**Next Steps** You need to configure Web Server for load balancing. For detailed instructions on manually configuring Web Server for load balancing, see “Configuring Sun Java System Web Server” in *Sun Java System Application Server 9.1 High Availability Administration Guide*.

## Application Server 9.1 with Java ES 5 Update 1

If you are using the Sun Java System Application Server 9.1 distributed as an optional download with the Java Enterprise System 5 Update 1 (Java ES 5 Update 1) release, use the following procedure:

1. Install Sun Java System Application Server 9.1. For instructions on how to install Application Server 9.1, see [“Installing Application Server 9.1” on page 20](#).
2. After the installation is complete, start the domain.  
On Solaris or Linux, Application Server 9.1 installer detects earlier versions of Application Server or other Java ES Components installed in native package format and automatically performs the upgrade of the binaries.
3. Start the Java ES 5 Update 1 installation.

The Java ES Update 1 installer could report that conflict were detected in Application Server components. Ignore these conflict messages and proceed with the installation.

Java ES 5 Update 1 installer validates the Application Server installation and then installs the selected Java ES components.

---

**Note** – Application Server 9.1 is not supported with Java ES 5 and needs the Java ES 5 Update 1 Portal Server. Portal Server for Java ES 5 Update 1 is not supported on Windows.

If you run into problems with using the Portal Server database while using Application Server 9.1 with Java ES 5 Update 1 Portal Server, see the Portal Database Not Found After Java DB Restart in the Java ES 5 Update 1 Installation Guide.

---

### ▼ To Perform a Cleanup after Partial Installation

This procedure describes how to perform a cleanup on your machine after a partial, failed installation of the package-based Application Server 9.1 distribution. You can use this procedure for preparing your machine for installing Application Server.

- 1 **Remove the partly installed Application Server by running the following commands:**

On Solaris:

```
cd /var/sadm/pkg
```

```
ls -ltr
```

`pkgrm <Application Server packages>`

On Linux:

`rpm -qa | grep -i sun`

`rpm -e <Application Server rpm>`

- 2 **If you have removed packages manually, you need to delete the correspondent entries from the productregistry file or delete the productregistry file.**

The location of productregistry file: /var/sadm/install directory on Solaris, /var/tmp/ directory on Linux.

- 3 **Kill any running Application Server processes.**
- 4 **Remove the Application Server installation directory.**

## ▼ To Configure Registry Server with Application Server 9.1

**Before You Begin** If you are using Application Server 9.1 with Java ES 5 Update 1, you need to install Registry Server manually from the Java ES 5 Update 1 distribution directory from `<JavaES_distribution_dir>/<OS>/Products/registry-svr/Packages` directory.

The following procedure describes how to Configure Registry Server from Java ES 5 Update 1 to work with Application Server 9.1.

- 1 **Run the following command:**

```
cd <registry_server_install_dir>/install
```

On Solaris, `<registry_server_install_dir>` is `/opt/SUNWsrcv-registry`, by default. On Linux, the default install location is `/opt/sun/srcv-registry`.

- 2 **Run the following command:**

```
<Ant-base_dir>/ant -f build-install.xml
-Dinstall.properties=./install.properties install
```

Where `<Ant-base_dir>` is `/usr/sfw/bin` on Solaris and `/opt/sun/share/bin` on Linux.

- 3 **Run the following command:**

```
<Ant-base_dir>/ant -f build-install.xml appserver.deploy.as9
```

- 4 **Run the following command:**

```
<Ant-base_dir>/ant -f build-install.xml appserver.domain.stop
```

**5 Run the following command:**

```
<Ant-base_dir>/ant -f build-install.xml appserver.domain.start
```

## Installing Application Server 9.1

If you are using the Sun Java System Application Server 9.1 file-based installation, use one of the following procedures:

- [“To Install Application Server 9.1 without HADB” on page 20](#)
- [“To Install Application Server 9.1 with HADB” on page 22](#)
- [“To Install Application Server 9.1 in Silent Mode” on page 27](#)

### ▼ To Install Application Server 9.1 without HADB

**Before You Begin** Use this procedure if you are using the Sun Java System Application Server file—based installer. Verify that your system meets the requirements specified in “Hardware and Software Requirements” in *Sun Java System Application Server 9.1 Release Notes*.

Solaris and Linux installations support both root and non-root user installations. Users of Windows installations should have Power User or Administrator access. If you are installing as a non-root user on Solaris or Linux, you must have read-write access to the following directories:

- The installation directory you select
- The home directory of the installation user
- The /var/tmp directory
- The /tmp directory
- The web server installation directory and the web server instance directory, if applicable.

**1 Navigate to the directory where you downloaded the distribution file.**

**2 If you have downloaded a .bin file, change the permission of the distribution file so that you have execute access:**

```
chmod +x distribution_filename
```

**3 Run the installation program.**

- **If you are installing from a .bin file, use the following command to run the installation program :**

```
./distribution_filename
```

Use the -console option to run the installation program in command-line mode.

- 
- **If you are installing from a .zip file, unzip the file, navigate to the extracted folder, and run the following command:**  

```
./setup
```

Use the `-console` option to run the installation program in command-line mode.
  - **If you are installing from an .exe file on Windows, double-click the file.**
- 4 **Specify the directory where you want to install the software or accept the default installation directory.**
  - 5 **Choose to install JDK 5 or use a pre-installed JDK 5.**
  - 6 **In the Administration Configuration page (or when prompted at the command line), enter the following:**
    - Admin User Name – Name of the user who administers the server.
    - Password – Admin user’s password to access the Admin Server (8-character minimum).
    - Master Password — The master password (8-character minimum).
    - Admin Port – Administration port number for initial server instance. The default value is 4848.
    - HTTP Port - Port number to access the default server instance. You need to provide this value only if you had selected to install DAS.
    - HTTPS Port - Secure port number to access the default server instance. You need to provide this value only if you had selected to install DAS.
    -

---

**Note** – The installation program automatically detects ports in use and suggests unused ports for the default settings. The default ports are:

- Administration Server - The default is 4848
- HTTP server - The default is 8080
- HTTPS sever - The default is 8181 In addition, five other ports are automatically assigned. You can change the automatically assigned values after installation using the Admin Console. The default ports assigned are:
  - Sun Java System Message Queue - The default is 7676
  - IIOP - The default is 3700 for IIOP, and 3820 and 3890 for IIOP/SSL
  - JMX - The default is 8686

If these default port numbers are in use, the installation program assigns random port numbers from the dynamic port range. This number may not be the next available port number.

---

**7 In the Installation Options page, select the options that you want. Installation Options are:**

- Register Application Server: Select this option to register your installation of Application Server.
  - Upgrade from Previous Version: Select this option to upgrade from configuration data from an earlier installation of Application Server.
  - Enable Updatecenter Client: Select this option to enable Updatecenter to check for available updates and collect system data.
- 

**Note** – If you are running the installer in command-line mode, you need to run the `asupgrade` command manually.

---

**8 On the Ready to Install page, click Install Now.**

**Note** – To create a Windows service, the `sc.exe` utility must be available on the system. Windows 2000 users may need to install the Windows 2000 Resource Kit to get this utility. For other supported Windows versions, the utility is included in the operating system.

---

**9 After the installation completes, set the PATH environment variable to include the Application Server *install-dir/bin* directory.****10 Verify the installation by following the procedures in the *Sun Java System Application Server 9.1 Quick Start Guide*, located in *install-dir/docs/QuickStart.html* or on [docs.sun.com](http://docs.sun.com).**

If you have problems with your installation, see the known issues and limitations in “Installation” in *Sun Java System Application Server 9.1 Release Notes*.

**See Also** The Application Server 9.1 bundle without HADB does not include the load balancing plug-in. You can download and install the load balancing plug-in separately. For instructions, see “[To Install the Load Balancing Plug-in \(standalone\)](#)” on page 17.

## ▼ To Install Application Server 9.1 with HADB

**Before You Begin** Use this procedure if you are using the Sun Java System Application Server file—based installer. Verify that your system meets the requirements specified in “Hardware and Software Requirements” in *Sun Java System Application Server 9.1 Release Notes*.

Solaris and Linux installations support both root and non-root user installations. Users of Windows installations should have Power User or Administrator access. If you are installing as a non-root user on Solaris or Linux, you must have read-write access to the following directories:

- The installation directory you select

- The home directory of the installation user
- The `/var/tmp` directory
- The `/tmp` directory
- The web server installation directory and the web server instance directory, if applicable.

**1 Navigate to the directory where you downloaded the distribution file.**

**2 If you have downloaded a .bin file, change the permission of the distribution file so that you have execute access:**

```
chmod +x distribution_filename
```

**3 Run the installation program.**

- **If you are installing from a .bin file, use the following command to run the installation program :**

```
./distribution_filename
```

Use the `-console` option to run the installation program in command-line mode.

- **If you are installing from a .zip file, unzip the file, navigate to the extracted folder, and run the following command:**

```
./setup
```

Use the `-console` option to run the installation program in command-line mode.

- **If you are installing from an .exe file on Windows, double-click the file.**

**4 Specify the directory where you want to install the software or accept the default installation directory.**

**5 Select the components to install. If you are using a Application Server bundle without HADB, you will not see this screen.**

The following components are available for installation:

- **Node Agent** – All machines that contain application server instances should have a node agent installed.
- **High Availability Database Server** -This component stores session information so requests can be failed over if you are using the load balancing plug-in.
- **Load Balancing Plug-in** - Install the load balancing plug-in on the machine where a web server is installed. If you do not already have a web server installed on the machine where you are installing the load balancing plug-in, you cannot continue to install the load balancer plug-in. Supported web servers are Sun Java System Web Server 6.1 and above (including 7.0), Apache 2.0.x, and IIS 5.0 and above.

- Domain Administration Server and Administration Tool - The Domain Administration Server (DAS) acts as a central repository for applications and configuration information for server instances, even if the instances are located on a remote machine. It includes graphical and command-line administration tools.
- Command Line Administration Tool Only - Install the Command Line Administration tool on machines which do not contain a DAS, but from which you want to communicate with the DAS or a node agent. For example, install the command-line administration tool on machines from which you plan to remotely administer the Application Server using the command-line administration tools.
- No Administration Tools - Use this option when installing components on a machine that already contains the administration tools, or on which no administration tools are required. For example, when installing the load balancing plug-in on a machine with a web server, but no Application Server, no Application Server administration tools are required.
- Sample Applications - Samples come with the source, schema, Ant build scripts, and EAR files. Any existing data associated with the database-related samples is available in the included Java DB database.

---

**Note** – Before you run incremental installation of Application Server 9.1 components, ensure that server processes are stopped if Domain Administration Server or Node Agent component is pre-installed on the machine

---

**6 Choose to install JDK 5 or use a pre-installed JDK 5.**

**7 If you selected the load balancing plug-in component:**

- a. **Select the Web Server you have installed. Ensure that you have installed a supported web server. For a list of supported web servers, see “Web Servers” in *Sun Java System Application Server 9.1 Release Notes*.**
- b. **If you have Sun Java System Web Server, provide the *install-dir* and the *instance-dir*. If you have Apache web server or IIS, provide the *install-dir*.**
- c. **If you have created a DAS certificate for the Apache web server, automatically import the certificate by providing the Certificate file location.**

The Certificate file location is the location of the DAS certificate file. Ensure that you provide the path to certificate file inclusive of the name of the certificate file.

Automatic import of DAS certificate is supported only for Apache web server. If you are using Apache web server, install Application Server without the load balancing plug-in. After installing Application Server, create and export a DAS certificate by using the `certutil` utility, and run the Application Server installer again to install the load balancing plug-in. For instructions on how to create and export DAS certificate for Apache web server,



see Chapter 4, “Configuring Web Servers for Load Balancing,” in *Sun Java System Application Server 9.1 High Availability Administration Guide*

If you are using Sun Java System Web Server or IIS, you will need to manually import the DAS certificate. You need to install load balancer without a DAS certificate. After installing the load balancing plug-in, you can create a DAS certificate and manually import it. For instructions, see Chapter 4, “Configuring Web Servers for Load Balancing,” in *Sun Java System Application Server 9.1 High Availability Administration Guide*.

**8 If you are installing the load balancing plug-in on Web Server 7.0, the installer displays the Sun Java System Web Server 7.0 information page. Enter the following:**

- Web Server Administrator User - Name of the user who administers the web server.
- Web Server Administrator Password - Password to access the Web Server administration server.
- Web Server Host Name - Name of the web server host.
- Web Server Administration Port - Port number to access the Web Server administration server. The default port is 8989.

---

**Note –**

- Ensure that you enter valid values for these fields related to Web Server 7.0 administration server. The installer does not validate these values.
  - After you install load balancing plug-in on Windows for Sun Java Systems Web Server 7.0, you need to reboot the machine, so that the installer updates the system PATH environment variable to add the path to the plug-in libraries.
- 

The Installation Summary page is displayed indicating the installation status.

**9 In the Administration Configuration page (or when prompted at the command line), enter the following:**

- Admin User Name – Name of the user who administers the server.
- Password – Admin user’s password to access the Admin Server (8-character minimum).
- Master Password — The master password (8-character minimum).
- Admin Port – Administration port number for initial server instance. The default value is 4848.
- HTTP Port - Port number to access the default server instance. You need to provide this value only if you had selected to install DAS.
- HTTPS Port - Secure port number to access the default server instance. You need to provide this value only if you had selected to install DAS.
- Node agent name — A name for the node agent. You need to provide this value only if you had selected the Node Agent option.

■

---

**Note** – The installation program automatically detects ports in use and suggests unused ports for the default settings. The default ports are:

- Administration Server - The default is 4848
- HTTP server - The default is 8080
- HTTPS sever - The default is 8181 In addition, five other ports are automatically assigned. You can change the automatically assigned values after installation using the Admin Console. The default ports assigned are:
  - Sun Java System Message Queue - The default is 7676
  - IIOP - The default is 3700 for IIOP, and 3820 and 3890 for IIOP/SSL
  - JMX - The default is 8686

If these default port numbers are in use, the installation program assigns random port numbers from the dynamic port range. This number may not be the next available port number.

---

**10 In the Installation Options page, select the options that you want. Installation Options are:**

- Register Application Server: Select this option to register your installation of Application Server.
- Upgrade from Previous Version: Select this option to upgrade from configuration data from an earlier installation of Application Server.
- Enable Updatecenter Client: Select this option to enable Updatecenter to check for available updates and collect system data.

---

**Note** – If you are running the installer in command-line mode, you need to run the `asupgrade` command manually.

---

**11 On the Ready to Install page, click Install Now.**

---

**Note** – To create a Windows service, the `sc.exe` utility must be available on the system. Windows 2000 users may need to install the Windows 2000 Resource Kit to get this utility. For other supported Windows versions, the utility is included in the operating system.

---

**12 After the installation completes, set the PATH environment variable to include the Application Server *install-dir*/bin directory.**

- 13 Verify the installation by following the procedures in the *Sun Java System Application Server 9.1 Quick Start Guide*, located in *install-dir/docs/QuickStart.html* or on [docs.sun.com](http://docs.sun.com).**

If you have problems with your installation, see the known issues and limitations in “Installation” in *Sun Java System Application Server 9.1 Release Notes*.

**Next Steps** If you have installed load balancing plug-in, you need to configure Web Server for load balancing. For detailed instructions on configuring Web Server for load balancing, see Chapter 4, “Configuring Web Servers for Load Balancing,” in *Sun Java System Application Server 9.1 High Availability Administration Guide*.

## To Install Application Server 9.1 in Silent Mode

You can use this procedure only with the Sun Java System Application Server 9.1 installer. GlassFish v2 does not offer Silent Mode installation. Silent mode installation is non-interactive. You cannot use the Silent Mode if you are installing the load balancing plug-in on Web Server 7.0. You must first provide a configuration file for information that the installer needs. The following topics are discussed:

- [“Creating the Installation Configuration File” on page 27](#)
- [“Modifying the Installation Configuration File” on page 29](#)
- [“Using the Installation Configuration File to Install in Silent Mode” on page 31](#)

### Creating the Installation Configuration File

The installation configuration file is created when you use the `savestate` option when starting an interactive installation. During the interactive installation, your input is collected and stored in the configuration file you specified. This file forms the template for silent installation, which you can use later to install the product on one or more machines. If needed, you can modify the installation configuration file.

On Solaris and Linux, for the graphical interface the syntax is:

```
./distribution_filename -savestate configuration_filename
```

On Solaris and Linux, for the command-line interface, the syntax is:

```
./distribution_filename -console -savestate configuration_filename
```

To create the installation configuration file on the Windows platform, start the installation program from the command line. Change to the directory where the executable file resides. For the graphical method the syntax is:

```
distribution_filename -savestate configuration_filename
```

On Windows, for the command-line method, the syntax is:

*distribution\_filename -console -savestate configuration\_filename.*

---

**Note** – If you do not include a path to the installation configuration file, the file is created in the directory where you are running the installation program.

---

#### EXAMPLE 1-1 Installation Configuration File Example

The following example shows an installation configuration file created by running the installation program with the `savestate` option.

```
#
# Wizard Statefile created: Mon Apr 30 11:42:36 IST 2007
#           Wizard path: /var/tmp/sjsasAAAvXaW4p/appserv.class
#

#
# Install Wizard Statefile section for Sun Java System Application Server
#
#
[STATE_BEGIN Sun Java System Application Server
b146d7a741e40985b9d99975a81c9741253346b6]
defaultInstallDirectory = /SUNWappserver
currentInstallDirectory = /space/programs/as9ee/temp
JDK_LOCATION = /space/programs/as9/jdk5/jdk
INST_ASADMIN_USERNAME = admin1
INST_ASADMIN_PASSWORD = ngghybgbednrreyatoqzvanqzva
INST_MASTER_PASSWORD = pgyrcyuakiequqlkurvunatrvq
INST_ASADMIN_PORT = 44517
INST_ASWEB_PORT = 44514
INST_HTTPS_PORT = 44520
STORE_ADMIN_AUTH = TRUE
ADMIN_PASSWORD_ENCRYPTED = TRUE
INST_JMS_PORT = 44532
INST_ORB_PORT = 44529
INST_ORB_SSL_PORT = 44535
INST_ORB_MUTUALAUTH_PORT = 44538
INST_JMX_PORT = 44541
CREATE_DESKTOP_SHORTCUT = FALSE
UPDATE_PATH = FALSE
CREATE_UPDATE_ICON =
CREATE_WINDOWS_SERVICE = FALSE
CREATE_DAS = TRUE
[STATE_DONE Sun Java System Application Server
b146d7a741e40985b9d99975a81c9741253346b6]
```

## Modifying the Installation Configuration File

You can modify the installation configuration file by editing the variables and values described in the following table. This table has four columns showing variable names, valid values (if applicable), contents, and comments.

TABLE 1-1 Installation Configuration File Variables

Variable Name	Valid Values (If Applicable)	Content	Comments
Build ID		The string of characters following the distribution in the STATE_BEGIN and STATE_END sections. This value is automatically generated.	No need to alter this value unless installing a different distribution file than the one that produced the configuration file. To find the build ID, enter <b>distribution_filename -id</b> at the command prompt.
defaultInstallDirectory		Default installation directory path.	
currentInstallDirectory		Selected absolute installation directory path.	
JDK_LOCATION		Selected JDK installation directory path.	This entry is needed only for distributions that do not contain a bundled JDK.
INST_ASADMIN_USERNAME		Administrator user name for initial server instance.	
INST_MASTER_PASSWORD		SSL certificate database password for asadmin operations.	This entry is obfuscated by default. See also: ADMIN_PASSWORD_ENCRYPTED.
INST_ASADMIN_PASSWORD		Administrator password for initial server instance.	This entry is obfuscated by default. See also:ADMIN_PASSWORD_ENCRYPTED.
INST_ASADMIN_PORT	0 - 65535	Administration server port number for initial server instance.	Default value is 4848.
INST_ASWEB_PORT	0 - 65535	HTTP port number for initial server instance.	Default value is 8080.
INST_HTTPS_PORT	0 - 65535	HTTPS port number for initial server instance.	Default value is 8081.

TABLE 1-1 Installation Configuration File Variables (Continued)

Variable Name	Valid Values (If Applicable)	Content	Comments
STORE_ADMIN_AUTH	TRUE, FALSE	Whether to create admin authentication user preference file.	
ADMIN_PASSWORD_ENCRYPTED	TRUE, FALSE	Obfuscated admin password flag.	In the initial statefile created by the product installer, this flag is set to TRUE, since the admin password value is obfuscated for security reasons.  To override the value for admin password, enter INST_ASADMIN_PASSWORD value in clear text and set this flag to FALSE to enable silent installation to process it correctly.
INST_JMS_PORT	0 - 65535	JMS port number for initial server instance.	If the configuration file does not include this entry, default value of 7676 is used.
INST_ORB_PORT	0 - 65535	ORB port number for initial server instance.	If the configuration file does not include this entry, default value of 3700 is used.
INST_ORB_SSL_PORT	0 - 65535	Secure ORB port number for initial server instance.	If the configuration file does not include this entry, default value of 3820 is used.
INST_ORB_MUTUALAUTH_PORT	0 - 65535	Mutual authentication ORB port number for initial server instance.	If the configuration file does not include this entry, default value of 3920 is used.
INST_JMX_PORT	0 - 65535	JMX port number for initial server instance.	If the configuration file does not include this entry, default value of 8686 is used.
CREATE_DESKTOP_SHORTCUT	TRUE, FALSE	Whether to create autodeploy folder desktop shortcut.	Valid for Windows platforms only and is disregarded otherwise.
UPDATE_PATH	TRUE, FALSE	Whether to update PATH environment variable to include Application Server bin directory.	Valid only for Windows platforms and is disregarded otherwise.  If this entry is not present, default value of FALSE is used.

TABLE 1-1 Installation Configuration File Variables (Continued)

Variable Name	Valid Values (If Applicable)	Content	Comments
CREATE_WINDOWS_SERVICE	TRUE, FALSE	Whether to create the server as a Windows service.	Valid for Windows platforms only and is disregarded otherwise.
SELECTED_ADDONS	JBI	Add-ons selected for installation. If no add-ons are selected, the value is blank.	Valid for Java EE SDK SOA Starter Kit Preview installations only and is disregarded otherwise.
CREATE_DAS	TRUE, FALSE	Creates a DAS if set to TRUE. The default domain is named <code>domain1</code> and is created under default <code>domain-root-dir</code> .	Equivalent to selecting "Domain Administration Server" component in component selection panel.
CREATE_NA	TRUE, FALSE	Creates a node agent if set to TRUE. The default node agent would be named <code>agent1</code> and is created under default node agents root.	Equivalent to selecting "Application Server Node Agent" component in component selection panel.
WEBSERVER_INSTALL_DIR	A valid, read-writable directory location.	Installation directory of a supported Web server.	Used only when the load balancing plug-in component is selected for installation.
WEBSERVER_INSTANCE_DIR	A valid read-writable directory location.	Instance directory of selected web server where the load balancing plug-in will be configured.	Used when load balancing plug-in component is selected to be installed on Sun Java System Web Server. Not applicable for other web servers.
PLUGIN_TYPE	Sun ONE Web Server, Apache HTTP Server, or Microsoft IIS Web Server.	Type of web server on which the load balancing plug-in will be installed/configured.	Used only when the load balancing plug-in component is selected for installation.
PLUGIN_CERTIFICATE_FILE	A valid path to a certificate file.		Used only when Apache HTTP Server is selected for load balancing plug-in installation. Not supported or is ignored for other web servers.

## Using the Installation Configuration File to Install in Silent Mode

After creating the configuration file, use it to install Application Server in silent mode as many times as needed. Use the following procedure:

## ▼ To Install in Silent Mode

- 1 Review the installation configuration file and verify that it contains the values to use for your silent installation.
- 2 Copy your installation configuration file to each machine where you plan to install the software.
- 3 Copy the Application Server distribution file to each machine where you plan to install the software.
- 4 Navigate to the directory where you copied the distribution file and your installation configuration file.
- 5 Start silent installation at the command line using one of the following command formats:

- **On Solaris or Linux:**

- `./distribution_filename -silent configuration_filename`

- **On Windows:**

- `distribution_filename -silent configuration_filename`

The installation program reads the specified *configuration\_filename*, checks for adequate disk space, then installs the product based on the data in *configuration\_filename*.

When the prompt is returned, the silent installation is complete and the installation components are installed on your systems.

- 6 Start the Application Server software by using the instructions in the *Sun Java System Application Server 9.1 Administration Guide*.

## Application Server and Solaris 10 Zones

You can install Application Server on local or global zones.

Consider the following before you install Application Server on a Solaris zone:

- “Application Server and MQ bundled with Solaris 10” on page 32
- “Propagation Levels of Components Installed Through Java ES 5 Update 1” on page 33

## Application Server and MQ bundled with Solaris 10

Application Server and Message Queue components are bundled and pre-installed as part of Solaris 10. These packages are installed under `/usr` directory.



Global zone installation:

- Before installing, make sure you remove the version of application server that is bundled in Solaris 10. Refer the Java ES installation guide for instructions.
- If Application Server 8.2 has been installed through Java ES 5 Update 1, it is automatically upgraded by the Application Server installation along with shared components. Refer to Java ES Update 1 Installation Planning guide for information about shared components

Sparse zone installation:

- If global zone has a version of application server bundled in Solaris, remove this application server installation. Refer to Java ES 5 Update 1 Installation guide for instructions on how to uninstall this application server installation.
- If there is a version of Application Server 8.2 installed through Java ES 5 Update 1, it is automatically upgraded to Application 9.1 installation along with shared components. Refer to Java ES Update 1 Installation Planning guide for information about shared components.
- The version of Message Queue (MQ) that is bundled as part of Java ES 5 Update 1 is 3.7 UR1 and the one bundled with Application Server 9.1 is 4.1.

If you do not have MQ installed or if you have a version of MQ lower than 4.1 on the global zone, the Application Server 9.1 installer (running on sparse local zone) will not be able to automatically install or upgrade MQ on global zone. Before you run the Application Server 9.1 installer in sparse local zone, you need to download Message Queue 4.1 standalone package-based installation from (<https://mq.dev.java.net/downloads.html>) and install it in global zone. Alternatively, you can install Sample Applications from Application Server 9.1 installer, which will install MQ 4.1 in global zone or upgrade the existing MQ in global zone.

- If global zone has a version of application server installed through Java ES or through Application Server 9.1 installation, they are set not to propagate to local zones. You can have another copy of the installation in sparse zone. If a sparse zone already has an application server installation through Java ES, you can upgrade that version.

Installations on whole root local zones are much simpler because all components of Application Server (including shared components, MQ, HADB) can be installed and they do not interfere with packages in other global and sparse zones.

## Propagation Levels of Components Installed Through Java ES 5 Update 1

The propagation levels of components installed through Application Server 9.1 installation (with Java ES 5 Update 1) are:

- Bundled Application Server packages have propagation set to TRUE to all zones.

- Application Server packages that are part of Java ES Update 1 and Application Server 9.1 installation do not propagate to local zones.
- Message Queue and shared components that are part of Java ES Update 1 and Application Server 9.1 installation are set to propagate to all zones from the global zone.
- HADB packages are not set to propagate to local zones.

# Uninstalling Application Server Software

---

If you installed Application Server as part of a Java Enterprise System installation, see the *Sun Java System Installation Guide* for uninstallation instructions. If you installed the stand-alone version of Application Server it is important to use the uninstall routine described here. If you attempt another method, problems arise when you try to reinstall the same version or when you install a new version.

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

If you have installed Application Server 8.2 (from the JES 5 installer) and upgraded to Application Server 9.1, ensure that you run the Java ES uninstaller before you run the Application Server 9.1 uninstaller.



---

**Caution** – Do not manually delete files or directories from your Application Server installation. Always use the uninstallation program.

---

## Running the Uninstallation Program

Before you run the uninstallation program, stop all clustered instances and node agents, if any, and then stop all domains. If you do not stop all domains before the uninstallation, orphaned processes might exist on your system after the uninstallation. On UNIX, identify the processes using the `ps -ef` command and terminate them using the `kill` command. Stop the HADB and any associated `ma` processes, if you are using HADB.

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

## ▼ To Run the Uninstallation Program on UNIX or Linux

**Before You Begin** Make sure that you have stopped all domains and other related processes, command prompts using the installation directory or its subdirectories, and any applications using Java Platform, Standard Edition (Java SE) files bundled with the product.

- 1 Navigate to your Application Server installation directory.
- 2 Invoke the uninstallation program as follows:
  - To use the uninstallation that has a graphical interface, at the command prompt, type:  
`./uninstall`
  - To use the uninstallation that has a command-line interface, at the command prompt, type:  
`./uninstall -console`

---

**Note** – Use the `- javahome` option to provide a path to a JRE installation if the uninstaller is unable to locate it on your machine.

---

## ▼ To Run the Uninstallation Program on Windows

**Before You Begin** Make sure that you have stopped all domains and other related processes, and command prompts using the installation directory or its subdirectories, and any applications using Java SE files bundled with the product.

- Invoke the Uninstallation program in one of the following ways:
  - Under the Sun Microsystems, Application Server program group in the Start Programs area of your desktop, click Uninstall.
  - Invoke the uninstall program through the Control Panel:
    - a. Navigate to the Control Panel.
    - b. Choose Add/Remove Programs.
    - c. From the list of installed programs, select Sun Java System Application Server Enterprise Edition.
    - d. Click Remove.

**Next Steps** After you uninstallation is complete, carefully examine the installation directory contents and remove the remaining files or directories that you do not require.



# Index

---

## A

administration port, 25  
administration user name, 25  
Application Server, distributions, 15

## B

bin directory, 22, 26

## D

default ports, 21, 26  
Domain Administration Server, 24

## G

GlassFish, 15-16  
    with clustering capabilities, 16-17  
    without clustering capabilities, 16-17

## H

High-Availability Database Server, 23  
HTTP port, 21, 25  
HTTPS port, 21, 25

## I

IIOP ports, default, 21, 26  
Installing  
    Application Server, 20-22, 22-27  
    GlassFish, 16-17

## J

Java 2 SDK, 21, 24  
Java ES 5 Update 1  
    Application Server 9.1 installation, 18-20  
    distribution of Application Server 9.1, 15  
JMX port, default, 21, 26

## L

load balancing plug-in, 23  
Load Balancing plug-in (Standalone), installing, 17-18

## M

master password, 25  
Message Queue  
    default port, 21, 26

## N

node agents, 23  
non-root users, 20, 22

**P**

password, 25

PATH environment variable

    changing, 22, 26

ports, default, 21, 26

**R**

removing software installation, 35

**S**

sample applications, 24

**U**

uninstalling, 35