



Sun GlassFish Enterprise Server v3 Quick Start Guide



Sun Microsystems, Inc.
4150 Network Circle
Santa Clara, CA 95054
U.S.A.

Part No: 820-7689-10
December 2009

Copyright 2009 Sun Microsystems, Inc. 4150 Network Circle, Santa Clara, CA 95054 U.S.A. All rights reserved.

Sun Microsystems, Inc. has intellectual property rights relating to technology embodied in the product that is described in this document. In particular, and without limitation, these intellectual property rights may include one or more U.S. patents or pending patent applications in the U.S. and in other countries.

U.S. Government Rights – Commercial software. Government users are subject to the Sun Microsystems, Inc. standard license agreement and applicable provisions of the FAR and its supplements.

This distribution may include materials developed by third parties.

Parts of the product may be derived from Berkeley BSD systems, licensed from the University of California. UNIX is a registered trademark in the U.S. and other countries, exclusively licensed through X/Open Company, Ltd.

Sun, Sun Microsystems, the Sun logo, the Solaris logo, the Java Coffee Cup logo, docs.sun.com, Enterprise JavaBeans, EJB, GlassFish, J2EE, J2SE, Java Naming and Directory Interface, JavaBeans, Javadoc, JDBC, JDK, JavaScript, JavaServer, JavaServer Pages, JMX, JRE, JSP, JVM, MySQL, NetBeans, OpenSolaris, SunSolve, Sun GlassFish, Java, and Solaris are trademarks or registered trademarks of Sun Microsystems, Inc. or its subsidiaries in the U.S. and other countries. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. in the U.S. and other countries. Products bearing SPARC trademarks are based upon an architecture developed by Sun Microsystems, Inc.

The OPEN LOOK and Sun™ Graphical User Interface was developed by Sun Microsystems, Inc. for its users and licensees. Sun acknowledges the pioneering efforts of Xerox in researching and developing the concept of visual or graphical user interfaces for the computer industry. Sun holds a non-exclusive license from Xerox to the Xerox Graphical User Interface, which license also covers Sun's licensees who implement OPEN LOOK GUIs and otherwise comply with Sun's written license agreements.

Products covered by and information contained in this publication are controlled by U.S. Export Control laws and may be subject to the export or import laws in other countries. Nuclear, missile, chemical or biological weapons or nuclear maritime end uses or end users, whether direct or indirect, are strictly prohibited. Export or reexport to countries subject to U.S. embargo or to entities identified on U.S. export exclusion lists, including, but not limited to, the denied persons and specially designated nationals lists is strictly prohibited.

DOCUMENTATION IS PROVIDED "AS IS" AND ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT, ARE DISCLAIMED, EXCEPT TO THE EXTENT THAT SUCH DISCLAIMERS ARE HELD TO BE LEGALLY INVALID.

Copyright 2009 Sun Microsystems, Inc. 4150 Network Circle, Santa Clara, CA 95054 U.S.A. Tous droits réservés.

Sun Microsystems, Inc. détient les droits de propriété intellectuelle relatifs à la technologie incorporée dans le produit qui est décrit dans ce document. En particulier, et ce sans limitation, ces droits de propriété intellectuelle peuvent inclure un ou plusieurs brevets américains ou des applications de brevet en attente aux États-Unis et dans d'autres pays.

Cette distribution peut comprendre des composants développés par des tierces personnes.

Certains composants de ce produit peuvent être dérivés du logiciel Berkeley BSD, licenciés par l'Université de Californie. UNIX est une marque déposée aux États-Unis et dans d'autres pays; elle est licenciée exclusivement par X/Open Company, Ltd.

Sun, Sun Microsystems, le logo Sun, le logo Solaris, le logo Java Coffee Cup, docs.sun.com, Enterprise JavaBeans, EJB, GlassFish, J2EE, J2SE, Java Naming and Directory Interface, JavaBeans, Javadoc, JDBC, JDK, JavaScript, JavaServer, JavaServer Pages, JMX, JRE, JSP, JVM, MySQL, NetBeans, OpenSolaris, SunSolve, Sun GlassFish, Java et Solaris sont des marques de fabrique ou des marques déposées de Sun Microsystems, Inc., ou ses filiales, aux États-Unis et dans d'autres pays. Toutes les marques SPARC sont utilisées sous licence et sont des marques de fabrique ou des marques déposées de SPARC International, Inc. aux États-Unis et dans d'autres pays. Les produits portant les marques SPARC sont basés sur une architecture développée par Sun Microsystems, Inc.

L'interface d'utilisation graphique OPEN LOOK et Sun a été développée par Sun Microsystems, Inc. pour ses utilisateurs et licenciés. Sun reconnaît les efforts de pionniers de Xerox pour la recherche et le développement du concept des interfaces d'utilisation visuelle ou graphique pour l'industrie de l'informatique. Sun détient une licence non exclusive de Xerox sur l'interface d'utilisation graphique Xerox, cette licence couvrant également les licenciés de Sun qui mettent en place l'interface d'utilisation graphique OPEN LOOK et qui, en outre, se conforment aux licences écrites de Sun.

Les produits qui font l'objet de cette publication et les informations qu'il contient sont régis par la législation américaine en matière de contrôle des exportations et peuvent être soumis au droit d'autres pays dans le domaine des exportations et importations. Les utilisations finales, ou utilisateurs finaux, pour des armes nucléaires, des missiles, des armes chimiques ou biologiques ou pour le nucléaire maritime, directement ou indirectement, sont strictement interdites. Les exportations ou réexportations vers des pays sous embargo des États-Unis, ou vers des entités figurant sur les listes d'exclusion d'exportation américaines, y compris, mais de manière non exclusive, la liste de personnes qui font objet d'un ordre de ne pas participer, d'une façon directe ou indirecte, aux exportations des produits ou des services qui sont régis par la législation américaine en matière de contrôle des exportations et la liste de ressortissants spécifiquement désignés, sont rigoureusement interdites.

LA DOCUMENTATION EST FOURNIE "EN L'ETAT" ET TOUTES AUTRES CONDITIONS, DECLARATIONS ET GARANTIES EXPRESSES OU TACITES SONT FORMELLEMENT EXCLUES, DANS LA MESURE AUTORISEE PAR LA LOI APPLICABLE, Y COMPRIS NOTAMMENT TOUTE GARANTIE IMPLICITE RELATIVE A LA QUALITE MARCHANDE, A L'APTITUDE A UNE UTILISATION PARTICULIERE OU A L'ABSENCE DE CONTREFACON.

Sun GlassFish Enterprise Server v3 Quick Start Guide

Sun GlassFish™ Enterprise Server v3 provides a server for the development and deployment of Java™ Platform, Enterprise Edition (Java EE platform) applications and web technologies based on Java technology. Enterprise Server v3 provides the following:

- A lightweight and extensible core based on OSGi Alliance standards
- A web and scripting container
- An easy-to-use Administration Console for configuration and management
- Update Tool connectivity for updates and add-on components

The following topics are addressed in this guide:

- “About This Quick Start Guide” on page 3
- “Default Paths and File Names” on page 4
- “Default Administration Values” on page 5
- “Starting and Stopping the Default Domain” on page 6
- “Starting and Stopping the Database Server” on page 6
- “Starting the Administration Console” on page 7
- “Deploying and Undeploying Applications” on page 8
- “Updating and Extending an Existing Installation” on page 12
- “Removing Enterprise Server v3 Software” on page 13
- “For More Information” on page 13

About This Quick Start Guide

The *Sun GlassFish Enterprise Server v3 Quick Start Guide* demonstrates key features of the Enterprise Server product and enables you to quickly learn the basics. Step-by-step procedures introduce you to product features and enable you to use them immediately.

This guide assumes that you have already obtained and installed the Sun GlassFish Enterprise Server v3 software. For more information about installing Enterprise Server v3, see the [Sun GlassFish Enterprise Server v3 Installation Guide](#).

The instructions and examples in this guide use the forward slash character (/) as path separators in all file and command names. Be sure to use the correct character for the system on which Enterprise Server is installed. For example:

- **UNIX®, Linux, or Mac OS X systems:** *as-install/bin/asadmin*
- **Windows systems:** *as-install\bin\asadmin*

This guide provides basic information only. For comprehensive information about Enterprise Server and other entities mentioned in this guide, see “[For More Information](#)” on page 13.

To review additional details about this release before you begin using the software, see the [Sun GlassFish Enterprise Server v3 Release Notes](#). The *Release Notes* provide important information about the Enterprise Server v3 release, including details about new features, information about known issues and possible workarounds, and tips for installing and working with Enterprise Server v3 software.

When this *Quick Start Guide* is updated, the most recent version is available in the Enterprise Server v3 [documentation collection \(http://docs.sun.com/coll/1343.9\)](http://docs.sun.com/coll/1343.9).

Default Paths and File Names

The following table lists the default paths and file names used in this guide and throughout Enterprise Server documentation.

TABLE 1 Default Paths and File Names

| Placeholder | Description | Default Value |
|--------------------------|--|---|
| <i>as-install</i> | Represents the base installation directory for Enterprise Server. In configuration files, <i>as-install</i> is represented as follows: \${com.sun.aas.installRoot} | Installations on the Solaris™ operating system, Linux operating system, and Mac operating system: <i>user's-home-directory/glassfishv3/glassfish</i> Windows, all installations: <i>SystemDrive:\glassfishv3\glassfish</i> |
| <i>as-install-parent</i> | Represents the parent of the base installation directory for Enterprise Server. | Installations on the Solaris operating system, Linux operating system, and Mac operating system: <i>user's-home-directory/glassfishv3</i> Windows, all installations: <i>SystemDrive:\glassfishv3</i> |
| <i>domain-root-dir</i> | Represents the directory in which a domain is created by default. | <i>as-install/domains/</i> |

TABLE 1 Default Paths and File Names (Continued)

| Placeholder | Description | Default Value |
|-------------------|--|------------------------------------|
| <i>domain-dir</i> | <p>Represents the directory in which a domain's configuration is stored.</p> <p>In configuration files, <i>domain-dir</i> is represented as follows:</p> <pre> \${com.sun.aas.instanceRoot} </pre> | <i>domain-root-dir/domain-name</i> |

Default Administration Values

The following table lists default administration values for Enterprise Server. See [“Default Paths and File Names” on page 4](#) for more information about the *as-install* and *domain-dir* placeholders.

TABLE 2 Default Administration Values

| Item | Default Value or Location |
|--|---------------------------|
| Domain name | domain1 |
| Master password | changeit |
| Command-line utility (asadmin) | <i>as-install</i> /bin |
| Configuration files | <i>domain-dir</i> /config |
| Log files | <i>domain-dir</i> /logs |
| Administration server port | 4848 |
| HTTP port | 8080 |
| HTTPS port | 8181 |
| Pure JMX clients port | 8686 |
| Message Queue port | 7676 |
| IIOP port | 3700 |
| IIOP/SSL port | 3820 |
| IIOP/SSL port with mutual authentication | 3920 |

Starting and Stopping the Default Domain

When you install Enterprise Server, a default domain named `domain1` is created. The following procedures describe how to start and stop `domain1` when it is the only domain. For information about starting and stopping a domain when there are multiple domains, see [Chapter 3, “Administering Domains,”](#) in *Sun GlassFish Enterprise Server v3 Administration Guide*.

▼ To Start the Default Domain

Before You Begin Enterprise Server software must be installed before you start the domain.

- **To start the default domain, use the `start-domain` command:**

`as-install/bin/asadmin start-domain`

The command starts the default domain, `domain1`.

▼ To Stop the Default Domain

- **To stop the default domain, use the `asadmin stop-domain` command:**

`as-install/bin/asadmin stop-domain`

The command stops the default domain, `domain1`.

Tip – To determine whether a domain is running, use the `asadmin list-domains` command:

`as-install/bin/asadmin list-domains`

Starting and Stopping the Database Server

A database server is not started by default when you start the Enterprise Server domain. If your applications require a database back end, you must start and stop the database server manually.

The following procedures describe how to start and stop the Java DB server that is bundled with Enterprise Server. For information about starting and stopping other database servers, see the documentation for your specific product.

For the list of database products supported in this release, see the [Sun GlassFish Enterprise Server v3 Release Notes](#).

For more information about database connectivity, see [Chapter 14, “Administering Database Connectivity,”](#) in *Sun GlassFish Enterprise Server v3 Administration Guide*.

▼ To Start the Java DB Server

Before You Begin At least one Enterprise Server domain must be started before you start the database server.

- Use the `asadmin start-database` command.

The general form for the command is:

```
as-install/bin/asadmin start-database --dbhome directory-path
```

For example, to start the Java DB server from its default location:

```
as-install/bin/asadmin start-database --dbhome as-install-parent/javadb
```

▼ To Stop the Java DB Server

- Use the `asadmin stop-database` command:

```
as-install/bin/asadmin stop-database
```

Starting the Administration Console

The Enterprise Server Administration Console provides a browser interface for configuring, administering, and monitoring Enterprise Server.

▼ To Start the Administration Console

Before You Begin At least one Enterprise Server domain must be started before you start the Administration Console.

- 1 **To start the Administration Console, type the URL in your browser.**

The default URL for the Administration Console is:

```
http://localhost:4848
```

- 2 **If prompted, log in to the Administration Console.**

You will be prompted to log in if you chose to require an administration password at the time Enterprise Server was installed.

See Also Refer to the Administration Console online help for additional information.

Deploying and Undeploying Applications

The process of configuring and enabling applications to run within the Enterprise Server framework is referred to as *deployment*.

This section explains how to deploy, list, and undeploy applications. The following topics are addressed here:

- “Obtaining a Sample Application” on page 8
- “Deploying an Application From the Command Line” on page 8
- “Deploying an Application Using the Administration Console” on page 9
- “Deploying an Application Automatically” on page 11

Obtaining a Sample Application

The procedures in this section use the `hello.war` sample application.

▼ To Obtain the Sample Application

- 1 To download a copy of the `hello.war` sample application, go to <https://glassfish.dev.java.net/downloads/quickstart/hello.war>.
- 2 Save the `hello.war` file in the directory of your choice. This directory is referred to as *sample-dir*.

Deploying an Application From the Command Line

You can deploy applications from the command line using the `asadmin deploy` command.

▼ To Deploy the Sample Application From the Command Line

Before You Begin

The sample application must be available before you start this task. To download the sample, see “Obtaining a Sample Application” on page 8. At least one Enterprise Server domain must be started before you deploy the sample application.

- 1 Use the `asadmin deploy` command.

The general form for the command is:

```
as-install/bin/asadmin deploy war-name
```

To deploy the `hello.war` sample, the command is:

```
as-install/bin/asadmin deploy sample-dir/hello.war
```

- 2 Access the `hello` application by typing the following URL in your browser:

```
http://localhost:8080/hello
```


The application's start page is displayed, and you are prompted to type your name.

Hi, my name is Duke. What's yours?

3 Type your name and click Submit.

The application displays a customized response, giving you a personal Hello.

See Also See [deploy\(1\)](#) for more information about the deploy command.

See the *Sun GlassFish Enterprise Server v3 Application Deployment Guide* for more information about deploying applications from the command line.

▼ To List Deployed Applications From the Command Line

- Use the `asadmin list-applications` command:

```
as-install/bin/asadmin list-applications
```

▼ To Undeploy the Sample Application From the Command Line

- Use the `asadmin undeploy` command.

The general form for the command is:

```
as-install/bin/asadmin undeploy war-name
```

For *war-name*, use the literal `hello`, not the full `hello.war` name.

For the `hello.war` example, the command is:

```
as-install/bin/asadmin undeploy hello
```

See Also See [undeploy\(1\)](#) for more information about the undeploy command.

Deploying an Application Using the Administration Console

You can deploy applications by using the graphical Administration Console.

▼ To Deploy the Sample Application Using the Administration Console

Before You Begin

The sample application must be available before you start this task. To download the sample, see [“Obtaining a Sample Application” on page 8](#). At least one Enterprise Server domain must be started before you deploy the sample application.

- 1 Launch the Administration Console by typing the following URL in your browser:**
`http://localhost:4848`
- 2 Click the Applications node in the tree on the left.**
The Applications page is displayed.
- 3 Click the Deploy button.**
The Deploy Applications or Modules page is displayed.
- 4 Select Packaged File to be Uploaded to the Server, and click Browse.**
- 5 Navigate to the location in which you saved the `hello.war` sample, select the file, and click Open.**
You are returned to the Deploy Applications or Modules page.
- 6 Specify a description in the Description field, for example:**
`hello`
- 7 Accept the other default settings, and click OK.**
You are returned to the Applications page.
- 8 Select the check box next to the `hello` application and click the Launch link to run the application.**
The default URL for the application is:
`http://localhost:8080/hello/`

See Also Refer to the Administration Console online help for additional information.

▼ **To View Deployed Applications in the Administration Console**

- 1 Launch the Administration Console by typing the following URL in your browser:**
`http://localhost:4848`
- 2 Click the Applications node in the tree on the left.**
Expand the node to list deployed applications. Deployed applications are also listed in the table on the Applications page.

▼ To Undeploy the Sample Application Using the Administration Console

- 1 Launch the Administration Console by typing the following URL in your browser:

`http://localhost:4848`

- 2 Click the Applications node in the tree on the left.
The Applications page is displayed.
- 3 Select the check box next to the `hello` sample application.
- 4 Remove or disable the application.
 - To remove the application, click the Undeploy button.
 - To disable the application, click the Disable button.

See Also Refer to the Administration Console online help for additional information.

Deploying an Application Automatically

You can deploy applications automatically by placing them in the `as-install/domains/domain-name/autodeploy` directory, where *domain-name* is the name of the domain for which you want to configure automatic deployment. For this example, use the default domain, `domain1`:

`as-install/domains/domain1/autodeploy`

▼ To Deploy the Sample Application Automatically

Before You Begin The sample application must be available before you start this task. To download the sample, see [“Obtaining a Sample Application”](#) on page 8.

- Copy the application WAR file to the `as-install/domains/domain-name/autodeploy` directory.
`cp sample-dir/hello.war as-install/domains/domain-name/autodeploy`

Use `copy` instead of `cp` on Windows systems.

Enterprise Server automatically discovers and deploys the application. The default URL for the application is:

`http://localhost:8080/hello/`

▼ To Undeploy the Sample Application Automatically

- 1 Change to the domain's `autoDeploy` directory.

```
cd as-install/domains/domain-name/autoDeploy
```

- 2 Use the `rm` command to undeploy and remove the application.

```
rm hello.war
```

Use `del` instead of `rm` on Windows systems.

Updating and Extending an Existing Installation

Enterprise Server provides an administrative tool called Update Tool that enables you to install updates and add-on components to your existing Enterprise Server installation. Update Tool can be accessed as a standalone graphical tool from the command line or as a browser-based graphical tool from the Administration Console. For more information about Update Tool, see “Update Tool” in *Sun GlassFish Enterprise Server v3 Administration Guide*.

▼ To Access the Graphical Update Tool From the Command Line

- Use the `updatetool` command:

```
as-install-parent/bin/updatetool
```

If Update Tool is not installed, you will be prompted to install it. Install the tool if desired, then use the `updatetool` command to start the tool. Extensive online help is available from the tool's Help menu.

See Also A command-line interface is also available for Update Tool. The command-line interface uses the `pkg` command and enables you to perform most of the tasks provided by the graphical version. For more information about the `pkg` command, see [Chapter 10, “Extending Enterprise Server,”](#) in *Sun GlassFish Enterprise Server v3 Administration Guide*.

▼ To Access Update Tool Using the Administration Console

Before You Begin At least one Enterprise Server domain must be started before you launch the Administration Console.

- 1 **Launch the Administration Console by typing the following URL in your browser:**
`http://localhost:4848`
- 2 **Click the Update Tool node in the tree on the left.**

See Also Refer to the Administration Console online help for additional information.

Removing Enterprise Server v3 Software

The following procedure describes how to remove the software using the command line.

▼ To Remove Enterprise Server Software

Before You Begin Stop all domains and other related processes, including command prompts using the installation directory or its subdirectories, the Update Tool notifier process if present, and any applications using Java SE files.

For more information about performing these tasks, see [Chapter 2, “Uninstalling Sun GlassFish Enterprise Server v3,”](#) in *Sun GlassFish Enterprise Server v3 Installation Guide*.

- 1 **Change to the *as-install-parent* directory, which contains the uninstallation program.**
- 2 **Run the uninstallation program and remove the software.**
 - **UNIX, Linux, or Mac OS X systems: Type `./uninstall.sh`**
If necessary, grant execute permissions to the uninstall file before executing it: `chmod +x ./uninstall.sh`
 - **Windows systems: Type `uninstall.exe`**
- 3 **Examine the contents of the remaining installation directories and remove any files or directories that you do not want, including hidden directories prefixed with a dot.**

For More Information

Additional resources are available to help you learn more about Enterprise Server v3 and related technologies.

The following resources are addressed here:

- [“Product Documentation” on page 14](#)

- “GlassFish Communities” on page 14
- “Tutorials” on page 14
- “Java EE 6 Samples” on page 15

Product Documentation

Comprehensive product documentation is available and includes the following.

- *Sun GlassFish Enterprise Server v3 Release Notes*: Latest details about new features, known issues, and tips for installing and working with Enterprise Server software.
- [Enterprise Server Documentation \(http://docs.sun.com/coll/1343.9\)](http://docs.sun.com/coll/1343.9): Collection of guides that document Enterprise Server features and functions.
- [Enterprise Server Screencasts \(http://wiki.glassfish.java.net/Wiki.jsp?page=Screencasts\)](http://wiki.glassfish.java.net/Wiki.jsp?page=Screencasts): Collection of video recordings that demonstrate various features and provide examples for working with Enterprise Server and related technologies.
- [Enterprise Server FAQs \(http://wiki.glassfish.java.net/Wiki.jsp?page=GlassFishFAQIndex\)](http://wiki.glassfish.java.net/Wiki.jsp?page=GlassFishFAQIndex): Frequently asked questions covering a variety of Enterprise Server topics.

GlassFish Communities

The following resources will help you connect with other users, learn more about Enterprise Server, and get help if needed.

- [GlassFish User Forum \(http://forums.java.net/jive/forum.jspa?forumID=56\)](http://forums.java.net/jive/forum.jspa?forumID=56): Public online discussion forum that provides community support and tips for working with Enterprise Server.
- [GlassFish Wiki \(http://wiki.glassfish.java.net/\)](http://wiki.glassfish.java.net/): Community site that provides a wide range of information related to Enterprise Server.
- [GlassFish Documentation Project \(https://glassfish.dev.java.net/docs/project.html\)](https://glassfish.dev.java.net/docs/project.html): Documentation community site that provides details about Enterprise Server documentation and how you can participate.
- [GlassFish Quality Community \(https://glassfish.dev.java.net/quality/portal/\)](https://glassfish.dev.java.net/quality/portal/): Quality community site focused on testing and improving Enterprise Server.

Tutorials

The following tutorials provide working examples and detailed instructions for creating enterprise applications for the Java EE 6 platform.

- *Your First Cup: An Introduction to the Java EE Platform*: Provides a short tutorial for beginning Java EE programmers that shows how to develop a simple enterprise application from scratch. The sample application consists of four main components: a JAX-RS RESTful web service, an enterprise bean, a Java Persistence API entity, and a web application created with JavaServer™ Faces Facelets technology.
- *The Java EE 6 Tutorial, Volume I*: Provides a beginner's guide to developing enterprise applications for Enterprise Server. The tutorial includes working examples and instructions for creating applications with Java EE 6 technologies, including Java Servlets, JavaServer Faces, Facelets, RESTful Web Services, Enterprise JavaBeans™, Java Persistence API, Contexts and Dependency Injection for the Java EE platform, and more. The document is also available through Update Tool.
- *The Java EE 6 Tutorial, Volume II*: Includes everything in *The Java EE 6 Tutorial, Volume I* and adds advanced topics, additional technologies, and case studies. The document is available to registered users of Enterprise Server and also at http://www.sun.com/offers/details/java_ee6_tutorial.xml.

Java EE 6 Samples

The sample applications demonstrate Java EE 6 technologies. The samples are available through Update Tool and also as part of the Java EE 6 SDK distributions. The SDK distributions are available from the [Java EE downloads page \(http://java.sun.com/javaee/downloads/index.jsp\)](http://java.sun.com/javaee/downloads/index.jsp).

