



Sun Java System Application Server 10 Quick Start Guide



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Enterprise Server Overview

The *GlassFish Enterprise Server 10TP2 Quick Start Guide* provides basic instructions for quickly getting up and running with GlassFish Enterprise Server 10TP2 software. This guide provides basic instructions for the most common Enterprise Server tasks, including starting and configuring the Enterprise Server, deploying applications, getting started with using NetBeans™, jRuby, and Eclipse technologies, and setting up load balancing and failover.

This chapter provides a basic introduction to GlassFish Enterprise Server core concepts, features, and components.

Note – This document does not provide comprehensive reference information or advanced procedures for working with GlassFish Enterprise Server. Refer to the other documents listed in on the [Enterprise Server Documentation Home Page](#) for more comprehensive information and instructions.

This chapter includes the following topics:

- “Installing Enterprise Server Software” on page 6
- “Enterprise Server Core Concepts” on page 6
- “Enterprise Server Administration Tools” on page 9
- “How To Proceed” on page 11

For information about conventions used in this document, see the [Documentation Conventions](#) page.

Installing Enterprise Server Software

Install the GlassFish Enterprise Server software before continuing with this document. See the [Enterprise Server Installation Guide](#) for complete Enterprise Server installation instructions.

GlassFish Enterprise Server 10TP2 software is available from [Enterprise Server — V3 Technology Preview](#) page.

Enterprise Server Core Concepts

The GlassFish Enterprise Server is an open source, plugin-based, Java EE 5 application server that provides enterprise class features like advanced administration and monitoring, clustering, high availability database (HADB) and load balancing support, and a bundled Java DB database engine.

- “Enterprise Server Features” on page 6
- “Enterprise Server Components” on page 8
- “Enterprise Server Update Center” on page 8
- “For More Information” on page 8

Enterprise Server Features

Enterprise Server implements the newest features of the Java EE 5 platform, including JavaServer Pages (JSP) 2.1, JavaServer Faces (JSF) 1.2, Servlet 2.4, Enterprise JavaBeans 3.0, Java API for Web Services (JAX-WS) 2.0, Java Architecture for XML Binding (JAXB) 2.0, Web Services Metadata for the Java Platform 1.0, among others.

In addition to implementing the core Java 5 EE technologies, this 10TP2 release provides the following features:

- GlassFish Nucleus**
 - HK2
 - Grizzly
 - Logging
 - Configuration
 - Security
- Web Container**
 - Servlet 2.5
 - JSP 2.1
 - JSF 1.2
 - jMaki 1.x

-
- Scripting**
 - PHP support
 - jRuby support
 - Business Tier**
 - Java Persistence API 1.0 Support
 - Java Transaction API
 - JDBC Connection Pooling
 - Java Connector Architecture 1.5
 - Security**
 - SSL infrastructure
 - File and JDBC realms
 - Container Authentication and Authorization
 - SPIs to support Metro
 - Management**
 - Deployment of Web modules, PHP, and jRuby
 - Application Management
 - Edit/Manage servlet init parameters and env entry
 - Start/Stop support
 - Web Tier configuration (support for PHP/jRuby/CGI)
 - Administration CLI and GUI support for:
 - Deployment
 - HTTP service configuration
 - Web container
 - JDBC
 - Administration CLI internal support (CTS harness requirement to run TCKs for Servlet, JSP, JSE, JPA, JCA and JTA)
 - Update Center
 - CLI support for downloading additional content
 - Easy-to-use GUI
 - Standalone Installer based on IPS
 - NetBeans Plugin**
 - Development and deployment support for Web, PHP, jRuby applications
 - Eclipse Plugin**
 - Development and deployment support for Web, PHP, and jRuby applications
 - Downloadable Components**
 - Metro
 - Jersey
 - PHP runtime
 - jRuby runtime

Enterprise Server Components

For the purposes of this *Quick Start Guide* and your initial interactions with the Enterprise Server, there are six Enterprise Server components you will work with:

Server Engine	Framework in which Web domains are hosted, and Web applications and services are deployed, monitored, and maintained
Database Engine	Back-end data store used by Web applications and services
Administration Console	Browser-based tool for configuring, managing, deploying, and monitoring domains, database back end, Web applications, and Web services
Command-line Interface (CLI)	Command—line interface for configuring, managing, deploying, and monitoring domains, database back end, Web applications, and Web services
Server Plugins	Web applications, services, and scripting components plugged into the server framework
Sample Applications	Included with the Enterprise Server distribution to demonstrate deployment, management, and other server features.

Enterprise Server Update Center

The GlassFish Enterprise Server Update Center is a convenient GUI-based for getting the latest versions of Enterprise Server and various plugins, extensions, and related applications. There is also a command-line interface for all Update Center functions.

The Update Center can be launched with the `asupgrade` command in the Enterprise Server `install-dir/bin` directory, or from the Enterprise Server administration console GUI.

For More Information

The GlassFish Enterprise Server is an open source community project, so there are numerous sources of additional information available to you.

Enterprise Server Project Page	The GlassFish Enterprise Server Project home page is your starting point for Enterprise Server downloads, documentation, wikis, and forums.
Enterprise Server Documentation	Complete Enterprise Server documentation is available on the Enterprise Server Documentation Home Page .
Enterprise Server Wiki	The Enterprise Server wiki is a community site that includes a wide range of topics related to Enterprise Server.

Enterprise Server FAQs	Several FAQs are available on the Enterprise Server FAQ pages.
Enterprise Server User Forums	The Enterprise Server user forums provide community support and tips for working with Enterprise Server.
Enterprise Server Screenshots	A rapidly growing collection of screenshots demonstrate numerous features and examples for working with Enterprise Server and related projects.
Java EE 5 Tutorial	The Java EE 5 Tutorial provides extensive instructions, examples, and sample code for working with all Java platform core technologies.

Enterprise Server Administration Tools

GlassFish Enterprise Server provides three means for configuring, running, and managing the Enterprise Server:

- A Web browser-based administration console
- A set of command—line tools (see [Table 1-1](#)), the centerpiece of which is `asadmin`, which incorporates all features of the browser-based administration console
- Programmatic Java Management Extensions (JMX™) APIs

These tools connect to a special Enterprise Server instance called the *Domain Administration Server* (DAS). The DAS provides a single secure interface for validating and executing administrative commands regardless of which interface is used.

In the context of Enterprise Server configuration, a *domain* is a collection of configuration data, deployed applications, and machines with a designated administrator. The domain definition is encoded in a simple XML text file, and describes and can control the operation of several applications, standalone Enterprise Server instances and clusters, potentially spread over multiple machines. When the DAS is installed, a default domain called *domain1* is always installed.

TABLE 1-1 Enterprise Server Command-Line Tools

Tool	Description
<code>appclient</code>	Launches the Application Client Container and invokes the client application packaged in the application Java archive (JAR) file
<code>asadmin</code>	Launches the Enterprise Server administration tool and provides a set of subcommands for configuring the Enterprise Server software
<code>asant</code>	Launches the Jakarta Ant tool, so that you can automate repetitive development and deployment tasks

TABLE 1-1 Enterprise Server Command-Line Tools (Continued)

Tool	Description
asapt	Compiles Java sources with Java EE annotations; automatically invokes the <code>wsimport</code> command
asupgrade	Administration tool for upgrading the Enterprise Server software
capture-schema	Extracts schema information from a database and produces a schema file that the server can use for Container Managed Persistence (CMP)
jspc	Compiles JSP pages
package-applient	Packages the application client container libraries and JAR files
schemagen	Creates a schema file for each namespace referenced in your Java classes
verifier	Validates the Java EE deployment descriptors with the DTDs; also provides a graphical user interface when used with the <code>-u</code> option Note: Some Microsoft Windows systems launch a driver verifier utility with the same name. To launch the Enterprise Server verifier, you must be in the <code>install-dir/bin</code> directory.
wscompile	Generates client stubs or server-side skeletons for JAX-RPC from associated service definition interfaces; generates a Web Services Description Language (WSDL) description for the associated interface
wsdeploy	Generates an implementation-specific, ready-to-deploy WAR file for Web services applications that use JAX-RPC
wsgen	Reads a Web service endpoint class and generates all the required artifacts for Web service deployment and invocation
wsimport	Generates JAX-WS portable artifacts, such as service endpoint interfaces (SEIs), services, exception classes mapped from the <code>wsdl:fault</code> and <code>soap:headerfault</code> tags, asynchronous response beans derived from the <code>wsdl:message</code> tag, and JAXB generated value types
xjc	Transforms, or binds, a source XML schema to a set of JAXB content classes in the Java programming language

Note –

- To run these command-line tools on Windows, ensure that your system PATH points to the Enterprise Server `install-dir/bin/` directory.
- You can run the `asadmin` subcommands by prefixing `asadmin` with every subcommand or by entering the `asadmin` shell environment (type `asadmin` and press Return) in the Enterprise Server `install-dir/bin/` directory.

How To Proceed

After completing the basic procedures explained in this document, there are several topics in particular you may want to learn about next.

Configuring Clusters [***\[Link TBD\]](#)

Deploying Applications [***\[Link TBD\]](#)

Configuring HADB [***\[Link TBD\]](#)

Configuring Load Balancers [***\[Link TBD\]](#)

Configuring Monitoring [***\[Link TBD\]](#)

Using Enterprise Server Software

This chapter explains how to get started with a basic set of Enterprise Server tasks. The following topics are included in this chapter:

- “Starting and Stopping the Default Domain” on page 13
- “Starting and Stopping the Bundled Java DB Server” on page 14
- “Using the Administration Console GUI” on page 15
- “Deploying and Undeploying Applications” on page 16

Note – The instructions in this chapter use UNIX/Linux-standard forward slashes (/) for directory path separators in commands and file names. If you are running Enterprise Server on a Microsoft Windows system, be sure to use backslashes (\) instead; for example:

UNIX/Linux	<code>install-dir/bin/asadmin</code>
Windows	<code>install-dir\bin\asadmin</code>

Starting and Stopping the Default Domain

By default, when you install Enterprise Server, a default domain named `domain1` is created.

▼ To Start the Default Domain

Before You Begin Make sure that you have installed [Java JDK 6 Update 5](#) on the system on which Enterprise Server is installed, and that the JDK `bin` directory is in your system `PATH`. See the [Enterprise Server Installation Guide](#) for Enterprise Server 10TP2 installation instructions.

- **Run the `startserv` script.**

`install-dir/bin/startserv`

- **Alternatively, you can use the `asadmin` command:**

`install-dir/bin/asadmin start-domain domain1`

Either of these commands starts the default domain, `domain1`.

▼ To Stop the Default Domain

- **Run the `stopserv` script.**

`install-dir/bin/stopserv`

- **Alternatively, you can use the `asadmin` command:**

`install-dir/bin/asadmin stop-domain domain1`

Either of these commands stops the default domain, `domain1`.

Starting and Stopping the Bundled Java DB Server

Enterprise Server is bundled by default with a Java DB server implementation, although you can use any JDBC-compliant database engine. The database is not started by default when you start Enterprise Server, so if you have applications need a database backend, you need to start the database server manually.

▼ To Start the Java DB Server

The instructions in this procedure describe how to start the Java DB server that is bundled with Enterprise Server, but they apply for the most part to any database you want to use.

Note – At least one Enterprise Server domain must be started *before* starting the database server.

- **Use the `asadmin start-database` command.**

The general form for the command is:

`install-dir/bin/asadmin start-database --dbhome directory_path`

By default, for the Java DB bundled with Enterprise Server:

`install-dir/bin/asadmin start-database --dbhome install-dir/glassfish/javadb`

▼ To Stop the Java DB Server

- Use the `asadmin stop-database` command.

The general form for the command is:

```
install-dir/bin/asadmin start-database
```

For the Java DB bundled with Enterprise Server:

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

Using the Administration Console GUI

The Enterprise Server administration console GUI (hereafter referred to as the *admin console*) provides a graphical, browser-based means for configuring, maintaining, and monitoring the Enterprise Server and your domains.

Note – In the Enterprise Server 10TP2 release, the admin console is not installed by default, but is instead installed when you invoke it for the first time after installing Enterprise Server.

▼ To Launch the Admin Console

Before You Begin Make sure at least one Enterprise Server domain is started, as described in “[To Start the Default Domain](#)” on page 13.

- 1 **Open the admin console URL in a browser window.**

The default URL for the admin console is:

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

You are prompted to install the admin console.

- 2 **Enter a proxy host and proxy port, if necessary, and then click *OK* to start the installation.**

- 3 **When the installation is complete, refresh the browser page to launch the admin console.**

- 4 **Log in to the console.**

By default the user name is `admin` and the password is `adminadmin`. It is recommended that you change this as soon as possible. To change the default password:

- a. *****[TBD]**

- 5 **Refer to the *****[Link TBD]** and to the online help for instructions on using the admin console.**

Deploying and Undeploying Applications

Enterprise Server 10TP2 includes several sample applications that you can use to familiarize yourself with how Enterprise Server works.

There are *****[TBD]** sample applications included with Enterprise Server:

- *****[TBD]**
- *****[TBD]**

The process of configuring and enabling an application to run within the Enterprise Server framework is referred to as *deployment*. You can deploy applications in three ways:

- From the command line with the `asadmin deploy` command
- From the admin console
- By placing the application in the `install-dir/domains/domain_name/autodeploy` directory

Applications can be packaged for deployment in three different formats:

- Web ARchive (WAR)
- Java ARchive (JAR)
- Enterprise ARchive (EAR)

The remainder of this chapter explains how to deploy, list, and undeploy applications.

- “To Deploy the *****[TBD]** Application From the Command Line” on page 16
- “To List Deployed Applications From the Command Line” on page 17
- “To Undeploy the *****[TBD]** Application From the Command Line” on page 17
- “To Deploy the *****[TBD]** Application From the Admin Console” on page 17
- “To View Deployed Applications in the Admin Console” on page 17
- “To Undeploy the *****[TBD]** Application From the Admin Console” on page 17
- “To Deploy an Application Using Autodeploy” on page 17
- “To Undeploy an Autodeployed Application” on page 18

▼ To Deploy the *****[TBD]** Application From the Command Line

- Use the `asadmin deploy` command.

The general form for the command is:

```
install-dir/bin/asadmin deploy app_name
```

To deploy the *****[TBD]** application, the command is:

```
install-dir/bin/asadmin deploy ***[TBD]
```


▼ To List Deployed Applications From the Command Line

- Use the `asadmin list-applications` command:

install-dir/bin/asadmin list-applications

▼ To Undeploy the *****[TBD]** Application From the Command Line

- Use the `asadmin undeploy` command.

The general form for the command is:

install-dir/bin/asadmin undeploy --name app_name

▼ To Deploy the *****[TBD]** Application From the Admin Console

- *****[TBD]**

▼ To View Deployed Applications in the Admin Console

- *****[TBD]**

▼ To Undeploy the *****[TBD]** Application From the Admin Console

- *****[TBD]**

▼ To Deploy an Application Using Autodeploy

- Copy the application JAR, WAR, or EAR to the *install-dir/domains/domain_name/autodeploy* directory.

The application is automatically discovered and started by Enterprise Server.

▼ **To Undeploy an Autodeployed Application**

- **Delete the application from the domain's autodeploy directory.**

Configuring Container Technologies

In addition to Web applications packaged in JAR, WAR, and EAR formats, Enterprise Server can be configured to work with NetBeans, jRuby, and Eclipse technologies. This chapter provides a brief introduction to configuring each of these technologies to work with Enterprise Server

- “Working With NetBeans” on page 19
- “Working With jRuby” on page 19
- “Working With Eclipse” on page 19

Working With NetBeans

***[TBD]

Working With jRuby

***[TBD]

Working With Eclipse

***[TBD]

