



# Sun GlassFish Communications Server Quick Start Guide



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

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# Preface

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This Quick Start Guide provides basic procedures to start the server and deploy an application.

This preface contains information about and conventions for the entire GlassFish Communications Server documentation set.

## GlassFish Communications Server Documentation Set

The Uniform Resource Locator (URL) for Sun GlassFish Communications Server documentation is <http://docs.sun.com/coll/1343.8>. For an introduction to GlassFish Communications Server, refer to the books in the order in which they are listed in the following table.

TABLE P-1 Books in the GlassFish Communications Server Documentation Set

Book Title	Description
<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 GlassFish Communications Server product.
<i>Installation Guide</i>	Installing the software and its components.
<i>Application Deployment Guide</i>	Deployment of applications and application components to the GlassFish Communications 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 GlassFish Communications 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.
<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.

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

Book Title	Description
<i>Administration Guide</i>	System administration for the GlassFish Communications 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 GlassFish Communications Server configuration file, <code>domain.xml</code> .
<i>Reference Manual</i>	Utility commands available with the GlassFish Communications Server; written in man page style. Includes the <code>asadmin</code> command line interface.

## Related Documentation

For documentation about other stand-alone Sun 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)

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

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

## 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 GlassFish Communications Server.	Solaris™ and Linux installations, non-root user: <i>user's-home-directory/SUNWappserver</i> Other Solaris and Linux installations, root user: <code>/opt/SUNWappserver</code> Windows, all installations: <code>SystemDrive:\Sun\AppServer</code>

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

Placeholder	Description	Default Value
<i>domain-root-dir</i>	Represents the directory containing all domains.	<i>install-dir/domains/</i>
<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/) (<http://www.sun.com/documentation/>)
- [Support](http://www.sun.com/support/) (<http://www.sun.com/support/>)
- [Training](http://www.sun.com/training/) (<http://www.sun.com/training/>)

## Searching Sun Product Documentation

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```
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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# Quick Start for Basic Features

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Welcome to the *Quick Start Guide*. This guide provides a set of sample procedures that you can use to get started with the GlassFish Communications Server.

Before using the procedures in this document you must have already installed the GlassFish Communications Server software.

This section contains the following topics:

- “[Application Server Administration Tools](#)” on page 11
- “[Starting the Server](#)” on page 13
- “[Where to Go Next](#)” on page 18

## Application Server Administration Tools

To enable administrators to manage server instances and clusters running on multiple hosts, Application Server provides these tools:

- The Admin Console, a browser-based graphical user interface (GUI)
- Command-line tools, such as the `asadmin` utility. See [Table 1–1](#) for the complete list of command-line tools available with Application Server.

These tools connect to a server called the *Domain Administration Server*, a specially designated Application Server instance that intermediates in all administrative tasks. The Domain Administration Server (DAS) provides a single secure interface for validating and executing administrative commands regardless of which interface is used.

The Application Server software offers a variety of command-line tools for performing administrative functions, in addition to the Admin Console. To launch a tool, type the name of the tool in a command window. [Table 1–1](#) lists tools by name in the first column and describes them in the second column.

TABLE 1-1 Command-Line Tools

Name of Tool	Description
appclient	Launches the Application Client Container and invokes the client application packaged in the application Java archive (JAR) file.
asadmin	Launches the GlassFish Communications Server administration tool that provides a set of subcommands for configuring the GlassFish Communications Server software.
asant	Launches the Jakarta Ant tool, so that you can automate repetitive development and deployment tasks.
asapt	Compiles Java sources with Java EE annotations. The tool automatically invokes the <code>wsimport</code> command.
asupgrade	GlassFish Communications Server administration tool for upgrading the GlassFish Communications 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-appclient	Packages the application client container libraries and JAR files.
schemagen	Creates a schema file for each namespace referenced in your Java classes.
verifier	<p>Validates the Java EE deployment descriptors with the DTDs.</p> <p>This tool also provides a graphical user interface. To see the GUI, specify the <code>-u</code> option.</p> <p>Some Windows systems launch a driver verifier utility with the same name. To launch the GlassFish Communications Server verifier, you must be in the <code>install-dir/bin</code> directory.</p>
wscompile	Takes the service definition interface and generates the client stubs or server-side skeletons for JAX-RPC; or generates a Web Services Description Language (WSDL) description for the provided interface.
wsdeploy	Generates an implementation-specific, ready-to-deploy WAR file for web services applications that use JAX-RPC.
wsген	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: header fault</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 you have an environment variable called PATH that points to the *install-dir/bin/* directory.
- You can run the `asadmin` subcommands by prefixing `asadmin` with every sub command or by entering the `asadmin` prompt (type `asadmin` and hit Return) in the *install-dir/bin/* directory.

## Starting the Server

A *domain* is a collection of configuration data, deployed applications, and machines with a designated administrator. The domain definition describes and can control the operation of several applications, stand-alone application server instances, and clusters, potentially spread over multiple machines. When GlassFish Communications Server is installed, a default domain called `domain1` is always installed. You work with the default domain in this guide.

If you choose to install GlassFish Communications Server with clustering capabilities, a cluster called `default-cluster` associated with the default converged load balancer called `cluster-1b` are created on `domain1`.

This topic provides instructions for the following basic tasks: starting the default domain, logging into the Admin Console, examining the log files, and creating the node agent. The steps are presented in the order that you should complete them.

- [“To Start the Domain on Solaris and Linux” on page 13](#)
- [“To Start the Domain on Windows” on page 14](#)
- [“To Log On to the Admin Console” on page 15](#)
- [“To View the Domain Administration Server Log File” on page 16](#)
- [“To Create and Start the Node Agent” on page 16](#)
- [“To Add Cluster Support to a Domain” on page 17](#)
- [“To Start the Bundled Java DB Server” on page 18](#)

### ▼ To Start the Domain on Solaris and Linux

Before you begin, ensure that the PATH variable in your system points to *install-dir/bin*. To start the Domain Administration Server, start the default domain, `domain1`.

- **Start the server by entering this command:**

```
asadmin start-domain domain1
```

When you are prompted for the user, admin password, and the master password, enter your user name and the passwords that you provided during installation.

When the start up process is complete, the following message appears:

```
Domain domain1 started
```

Each domain has a corresponding profile: enterprise, cluster, or developer. domain1 is created with the default profile, which is defined in the AS\_ADMIN\_PROFILE variable defined in the asadminenv.conf file. For more information on the three profiles see TBD link. If domain1 was created with developer profile, when you log in to the Admin Console, you cannot use features such as clustering and node agents. To use clusters and server instances, You need to have installed GlassFish Communications Server with clustering option or use the create-domain command to create a domain with cluster profile. For information on creating domains, type asadmin create-domain --help or see the create-domain man page.

## ▼ To Start the Domain on Windows

To start the Domain Administration Server, start the default domain, domain 1.

- 1 From the Explorer window or desktop, right click My Computer.
- 2 Choose Properties to display the System Properties dialog.
- 3 Click the Advanced tab.
- 4 Click Environment Variables.
- 5 In the User variables section:
  - If a PATH variable exists, verify that *install-dir\bin* exists in the path: *install-dir\bin;other\_entries*. If *install-dir\bin* does not exist in the PATH variable, add it.
  - If a PATH variable is not present, click New. In Variable Name, type PATH. In Variable Value, type the path to the server's bin directory: *install-dir\bin*. Click OK to commit the change.
- 6 Add a new environment variable AS\_ADMIN\_USER and set it to the Administrative User Name that you assigned during installation.
- 7 Click OK to commit the change and close the remaining open windows.
- 8 Start the GlassFish Communications Server by clicking the Start Admin Server option within the Programs menu.
- 9 When a command prompt window opens to prompt you for the admin password and the master password, enter the passwords that you provided during installation.

A window appears with a message telling that you the server is starting:

---

```
Starting Domain domain1, please wait.  
Log redirected to domain_dir\domain1\logs\server.log...
```

When the startup process has completed, you see an additional message:

```
Domain domain1 started.  
Press any key to continue ...
```

Each domain has a corresponding profile: enterprise, cluster, or developer. domain1 is created with the default profile, which is defined in the AS\_ADMIN\_PROFILE variable defined in the asadminenv.conf file. For more information on the three profiles see the TBD link. If domain1 was created with developer profile, when you log in to the Admin Console, you cannot use features such as clustering and node agents. To use clusters and server instances, You need to have installed GlassFish Communications Server with clustering option or use the create-domain command to create a domain with cluster profile. For information on creating domains, type asadmin create-domain --help or see the create-domain man page

- 10 Press a key to close the message window.

## ▼ To Log On to the Admin Console

The Admin Console is a browser interface that simplifies a variety of administration and configuration tasks. It is commonly used to:

- Deploy and undeploy applications
- Enable, disable, and manage applications
- Configure resources and other server settings
- Select and view log files

- 1 Type this URL in your browser:

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

If the browser is on a different system than the server, replace the *localhost* variable with the name of the system that the Domain Admin Server is running on.

4848 is the Admin Console's default port number. If you changed the port number during the installation or if you have created a domain with another port number, use that number instead.

---

**Note** – If a popup window appears with a message such as Website Certified by an Unknown Authority, click OK.

This message appears because your browser does not recognize the self-signed certificate that the Domain Administration Server uses to service the Admin Console over the secure transmission protocol.

---

- 2 When the Log in window appears, enter the admin user name and password.**

The default user name is admin and password is adminadmin.

- 3 Click Login.**

In the left pane, select what you want to manage from the tree provided. In the right pane, various administrative tasks are listed under the Common Tasks heading.

## ▼ To View the Domain Administration Server Log File

GlassFish Communications Server instances and the Domain Administration Server produce annotated logs on the file system. By default, all errors, warnings or useful informative messages are logged.

- 1 From the Common Tasks list in the right pane, click Search Log Files to launch a new browser window for Log Viewer.**

- 2 In the Log Viewer window, select “server” from the Instance Name drop-down list and click Search.**

The Domain Administration Server’s recent log file entries are displayed.

- 3 Scan the messages and look for any WARNING or SEVERE messages indicating that problems were encountered during server startup.**

You can close Log Viewer at any time. After you create clusters and deploy applications, examine log files if any of the operations failed. Use Log Viewer to view the log files of any running GlassFish Communications Server instance in the domain.

## ▼ To Create and Start the Node Agent

A *node agent* is a lightweight process running on each machine that participates in an Application Server administrative domain. The node agent is responsible for starting and stopping server instances on the host. It also communicates with the Domain Administration Server to create new Application Server instances.

---

**Note** – You can use node agents only on domains with the cluster or enterprise profile. If you are running only a developer domain, you need to create a domain with cluster profile before you can create and use node agents. For information on creating domains, type `asadmin create-domain - -help` or see the create-domain man page.

---

One node agent is needed on a machine for each Application Server administrative domain that the machine belongs to.



- 1 In a terminal window, type this command:** `asadmin create-node-agent --user admin nodeagentname`

The `create-node-agent` command uses the default value `localhost` for `--host` and `4848` for `--port` to identify the Domain Administration Server (DAS) or target domain on which the node agent is created. Provide appropriate values for the `--host` option and `--port` option, to specify a target domain for the node agent.
- 2 In a terminal window, type this command:** `asadmin start-node-agent --user admin nodeagentname`

Ensure that the DAS(`domain1`) is running before you start the node agent. Check the server .log file of a cluster instance to identify problems related to starting node agents or cluster instances.
- 3 When you are prompted, provide the master password or hit the Return key to accept the default master password, change it.**

The node agent starts and connects with the DAS.

After the node agent has been started once, you can view it in the Admin Console by clicking `Node Agents > nodeagent1`.

**Next Steps** In this section you started the Domain Administration Server and confirmed that it is running. You also logged in to the Admin Console and used the Log Viewer. You started the node agent. You can stop the Quick Start trail here if you do not wish to continue, or you can go on to the next section.

## ▼ To Add Cluster Support to a Domain

You can use the Admin Console to add cluster support to a developer domain.

- 1 Log on to the Admin Console. For instructions, see [“To Log On to the Admin Console” on page 15](#).**
- 2 From the left pane, click Application Server.**
- 3 Click the Add Cluster Support button in the General tab.**
- 4 The Add Cluster Support page appears. Review the information on this page and click OK.**
- 5 In the Restart Required Page, click the Stop Instance button to stop the domain.**

- 6 Log in to the machine where the domain is installed and run the following command:** `install-dir/bin/asadmin list-domains`. **Verify that the domain was stopped.**
- 7 Run the following command:** `install-dir/bin/asadmin start-domain <domain-name>`  
The restarted domain supports clustering.

**More Information** Troubleshooting

If the restarted domain does not show clustering capabilities, stop the domain, reboot the machine on which the domain is installed, and restart the domain as shown in step 7.

## ▼ To Start the Bundled Java DB Server

The GlassFish Communications Server includes a bundled Java DB server. To start it, use the following procedure:

- 1 Make sure that you are logged in as the user that installed the database.**
- 2 Run `asadmin start-database`.**  
For more information on the `start-database` command, see the command's help or the `start-database man` page.

## Where to Go Next

The next steps of the *Quick Start Guide* are available in the following chapters.

- [Chapter 2, “Working with Clusters and Instances”](#)  
Steps for creating a sample cluster. Skip to the next chapter if you are running a domain with developer profile.
- [Chapter 3, “Deploying an Application”](#)  
Steps for deploying a sample web application. If you are using a domain with cluster capabilities, you can perform the steps for deploying an enterprise application to a cluster.

Other resources for learning and using GlassFish Communications Server are available. They include:

- Product details at `install-dir/docs-ee/about.html`.
- Sample applications at `install-dir/samples`

## Working with Clusters and Instances

---

This chapter describes how to use the default cluster and create instances that run on the cluster. This chapter assumes that you are running a domain with cluster profile.

A *cluster* is a group of server instances (typically on multiple hosts) that share the same configurations, resources, and applications. A cluster facilitates load balancing across server instances and high availability through failover. You can create clusters spanning multiple machines and manage them with the help of the node agent process on each machine.

The default cluster is created if you chose to install GlassFish Communications Server with clustering capabilities. If you have not chosen clustering capabilities, you can choose to create a domain with cluster profile or add clustering support to your existing domain. This chapter has the following sections:

- [“Creating and Starting Instances on the Default Cluster” on page 19](#)
- [“Viewing Ports for Clustered Server Instances” on page 21](#)

### Creating and Starting Instances on the Default Cluster

This section explains how to create two GlassFish Communications Server instances and start it on the default cluster created on a domain with clustering capabilities. This section covers the following topics:

- [“To Create and Start Instances on a Cluster Using the Admin Console” on page 19](#)
- [“To Create and Start Instances on a Cluster Using CLI Commands” on page 20](#)

#### ▼ To Create and Start Instances on a Cluster Using the Admin Console

For simplicity, the cluster runs completely within one machine. This procedure creates the sample cluster on the same host on which the DAS is running.

**Before You Begin** You must have already started the node agent, as described in “[To Create and Start the Node Agent](#)” on page 16. When you specify instances during cluster creation, associate the instance with a running node agent for the machine on which you want the instance to run. If the node agent is not running, the instance will not start. Node agent and instance names must be unique across clusters that are created in a domain.

- 1 **Log in to the Administration Console at `http://localhost:portnumber` if you have not already done so.**

Replace the *localhost* variable with the name of the system that the Domain Administration Server is running on. Replace *portnumber* with the port number of the cluster domain, `domain1`.

- 2 **On the left pane, click the Clusters tab.**
- 3 **Click `default-cluster`. The General Information for this cluster appears.**

---

**Note** – In the General tab on the right hand pane, ensure that the Heartbeat Enabled checkbox is selected. You need GMS service to be running to be able to use the converged load balancer.

---

- 4 **On the right pane, click the Instances tab.**
- 5 **Click the New button twice to create two entries to specify two instances for the cluster.**
- 6 **Type `instance1`. In the Node Agent field, `nodeagent1` is selected by default.**
- 7 **Click OK.**
- 8 **Type `instance2`. In the Node Agent field, `nodeagent1` is selected by default.**
- 9 **Click OK.**
- 10 **To start `default-cluster`, click the General tab and click the Start Cluster button.**

The two instances are started by default when you start the cluster. This figure shows `default-cluster` and two instances running on this cluster.

## ▼ **To Create and Start Instances on a Cluster Using CLI Commands**

- 1 **Create two instances under the cluster, `default-cluster`, by running the following commands:**

- `asadmin create-instance --user admin --passwordfile adminpassword.txt --host localhost -port 4848 --cluster default-cluster --nodeagent nodeagent1 --systemproperties "JMX_SYSTEM_CONNECTOR_PORT=8687:IIOP_LISTENER_PORT=3330:IIOP_SSL_LISTENER_PORT=444 MUTUALAUTH_PORT=5550:HTTP_LISTENER_PORT=1110:HTTP_SSL_LISTENER_PORT=2220" instance1`
  - `asadmin create-instance --user admin --passwordfile adminpassword.txt --host localhost -port 4848 --cluster default-cluster --nodeagent nodeagent1 --systemproperties "JMX_SYSTEM_CONNECTOR_PORT=8688:IIOP_LISTENER_PORT=3331:IIOP_SSL_LISTENER_PORT=444 MUTUALAUTH_PORT=5551:HTTP_LISTENER_PORT=1111:HTTP_SSL_LISTENER_PORT=2221" instance2`
- 2 Start the cluster and its instances by running the following command:** `asadmin start-cluster --user admin --passwordfile adminpassword.txt --host localhost --port 4848 default-cluster`
- The two instances are started by default.
- See TBD link for detailed information on creating and configuring clusters and node agents.

## Viewing Ports for Clustered Server Instances

### ▼ To View Ports for Clustered Server Instances

You can view the ports numbers and override the default values for a clustered server instance. By default, the HTTP ports are 38081 for `instance1` and 38080 for `instance2`. If these ports were busy on your machine when you created these clusters, or if you had already assigned these ports to other instances and clusters, different port numbers were assigned.

To view the port numbers and optionally override the default values, follow these steps:

- 1 In the left pane, expand Clusters and click `default-cluster` to display the General Information page for clusters.**
- 2 Click the Instances tab to display `instance1` and `instance2`, the instances that you created.**
  - a. Click `instance1` to examine this instance.**

The HTTP and HTTPS ports assigned to the instance are displayed in the HTTP Ports field. This figure shows the ports for `instance1`.



b. Repeat these steps for instance2.

**Next Steps** In this section you have created a simple cluster on a single machine. You can also create clusters spanning multiple machines using the same basic steps (as long as you have the software installed and a node agent running on each machine).

## Deploying an Application

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This chapter explains how to deploy an application. If you are running a domain with developer profile, see “[Deploying a Sample Web Application](#)” on page 24. If you are running a domain with cluster profile, see “[Deploying the Sample Enterprise Application to a Cluster](#)” on page 26.

This chapter presents the following sections:

- “[Deploying a Sample SIP Module](#)” on page 23
- “[Deploying a Sample Web Application](#)” on page 24
- “[Deploying the Sample Enterprise Application to a Cluster](#)” on page 26
- “[To Verify Application Deployment](#)” on page 27

### Deploying a Sample SIP Module

#### ▼ To Deploy the CallSetup Application Using Admin Console

- 1 Log in to the Admin Console if you have not already done so.
- 2 Click **Converged SIP Modules**.  
You can see the list of deployed web applications, if any.
- 3 Click **Deploy**.
- 4 Select the **Local Packaged File or Directory that is Accessible to Application Server** option.
- 5 Browse to the *install-dir*/samples/sipservlet/CallSetup/ directory.
- 6 Choose `CallSetup.sar`.

7 If you are running a domain with clustering capabilities, you need to specify a target. In the **Targets** section of the page, select `default-cluster` from the **Available** list, and click **Add to move it to the Selected list**

8 **Click OK.**

The application appears in the **Converged SIP Modules** list.

9 To verify that it was deployed properly, point your browser to the following location:  
**`http://hostname:HTTPport/CallSetup/RegistrationBrowserServlet`.**

The default HTTP port is 8080.

#### **More Information** Deploying Applications Using CLI Commands

You can deploy applications using the `asadmin deploy` command. You can also use the `asant` commands for deployment. For detailed information on deploying applications see TBD link.

## Deploying a Sample Web Application

These procedures assume that you are running a domain with developer profile.

### ▼ **To Deploy the Hello Application Using Autodeploy**

The Hello application is contained in a Web ARchive (WAR) file in the `samples/quickstart` directory. Packaged applications can also be in the form of a Java ARchive (JAR) or Enterprise ARchive (EAR) file.

Alternatively, you can download this application from  
<https://glasfish.dev.java.net/downloads/quickstart/hello.war>.

Copying to a domain's `autodeploy` directory lets you put a pre-packaged application into use immediately, with minimal effort.

1 **Find** `install-dir/samples/quickstart/hello.war` **or download from**  
<https://glasfish.dev.java.net/downloads/quickstart/hello.war>.

2 **Copy** `hello.war` **to the** `install-dir/domains/domain1/autodeploy/` **directory.**



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**Tip** – On Windows, you can create a shortcut to the `autodeploy` directory on your desktop, and then drag and drop the `hello.war` file onto the shortcut.

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When the server has finished deploying the application, it creates a file named `hello.war_deployed` in the `autodeploy` directory. Depending on the speed of your system, the process can take a few seconds. Until that file appears, a 404-File Not Found error occurs when you try to visit the application page.

- 3 Access this URL to visit the application page:** `http://hostname:hostname/hello`.

You see the application's first page, which prompts you to fill in your name:

- 4 Type your name and click Submit.**

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

## ▼ To Deploy the Hello Application Using Admin Console

- 1 Open the Admin Console in a web browser if you have not done so already.**

- 2 In the left pane, click the Applications node to expand it.**

- 3 Click Web Applications.**

You can see the list of deployed web applications, if any.

- 4 Click Deploy.**

- 5 You can use the Hello application bundled with the GlassFish Communications Server or you upload the sample you have downloaded from**

<https://glasfish.dev.java.net/downloads/quickstart/hello.war>. Do one of the following:

- **Select the option called Local packaged file or directory that is accessible to Application Server and click Browse Files. Navigate to the `install-dir/samples/quickstart` directory and select `hello.war`.**

- 6 If you have downloaded the Hello application Select the Package file to upload to the GlassFish Communications Server option and click Browse. Navigate to the directory to which you have downloaded the application.**

- 7 Click OK.**

The application appears in the Web Applications list.

- 8 To verify that it was deployed properly, in the Web Applications page, select the Hello application and click Launch.

#### More Information Deploying Applications Using CLI Commands

You can deploy applications using the `asadmin deploy` command. You can also use the `asant` commands for deployment. For detailed information on deploying applications see TBD link.

## Deploying the Sample Enterprise Application to a Cluster

These procedures assume that you are running a domain with cluster profile. The procedures in this chapter assume that you have already created a cluster called `default-cluster`, as described in [Chapter 2, “Working with Clusters and Instances.”](#) This section uses the `clusterjsp` sample application to demonstrate HTTP load balancing capabilities.

### ▼ To Deploy the Sample Enterprise Application Using Admin Console

- 1 Click the Home button or click Common Tasks on the left pane to go to the Common Tasks page, if you are not there already.
- 2 On the right pane, under Common Tasks, click Deploy Enterprise Application (.ear).
- 3 If application server is installed on your local machine, click Browse in the Packaged File to Upload text box, and navigate to `install-dir/samples/ee-samples/highavailability/apps/clusterjsp/clusterjsp.ear`. If you are accessing Admin Console remotely with Communications Server installed on another machine, click Browse in the Local packaged file or directory that is accessible from the Application Server text box. Navigate to `install-dir/samples/quickstart/clusterjsp/clusterjsp.ear`.
- 4 In the Targets section of the page, select `default-cluster` from the Available list, and click Add to move it to the Selected list.
- 5 Click OK.

The `clusterjsp` application is now deployed to `default-cluster`. Before you launch this application, you need to start the instances in the cluster.

## More Information Deploying Applications Using CLI Commands

You can deploy applications using the `asadmin deploy` command. See the `deploy man` page in the Reference Manual. You can also use the `asant` commands for deployment. For detailed information on deploying applications see *Deploying Modules and Applications in the Application Deployment Guide*.

## ▼ To Verify Application Deployment

### 1 Type the following URL in your browser:

```
http://hostname:port/clusterjsp
```

Replace the *hostname* variable with the name of the system that the Domain Admin Server is running on.

Replace the *port* variable with the value of `HTTP-LISTENER-PORT` for `instance1`. This example uses `http://localhost:38081/clusterjsp`.

### 2 Add some session attribute data.

### 3 Examine the Session and Host information displayed. For example:

- Executed From Server: *localhost*
- Server Port Number: 38081
- Executed Server IP Address: 198.19.255.255
- Session Created: Tue Aug 23 15:26:07 PDT 2005

### 4 Add some session data and click the Add to Session button.

### 5 Repeat this procedure for instance `instance2` by typing this URL in your browser:

```
http://localhost:38080/clusterjsp
```

**Next Steps** Congratulations! You have completed this section of the *Quick Start Guide*. You can stop the Quick Start trail here if you do not wish to proceed to the steps on load balancing.

