Eclipse GlassFish Release Notes, Release 7

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Eclipse GlassFish

Release Notes

Release 7

Contributed 2018 - 2022

These Release Notes provide late-breaking information about Eclipse GlassFish 7 software and documentation. Also included are a summary of new product features in the 7 release, and descriptions and workarounds for known issues and limitations.

Eclipse GlassFish Release Notes, Release 7

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Preface

This documentation is part of the Java Enterprise Edition contribution to the Eclipse Foundation and is not intended for use in relation to Java Enterprise Edition or Orace GlassFish. The documentation is in the process of being revised to reflect the new Jakarta EE branding. Additional changes will be made as requirements and procedures evolve for Jakarta EE. Where applicable, references to Jakarta EE or Java Enterprise Edition should be considered references to Jakarta EE.

Please see the Title page for additional license information.

This preface contains information about and conventions for the entire Eclipse GlassFish (Eclipse GlassFish) documentation set.

Eclipse GlassFish 7 is developed through the GlassFish project open-source community at https://github.com/eclipse-ee4j/glassfish. The GlassFish project provides a structured process for developing the Eclipse GlassFish platform that makes the new features of the Jakarta EE platform available faster, while maintaining the most important feature of Jakarta EE: compatibility. It enables Java developers to access the Eclipse GlassFish source code and to contribute to the development of the Eclipse GlassFish.

The following topics are addressed here:

- Eclipse GlassFish Documentation Set
- Related Documentation
- Typographic Conventions
- Symbol Conventions
- Default Paths and File Names

Eclipse GlassFish Documentation Set

The Eclipse GlassFish documentation set describes deployment planning and system installation. For an introduction to Eclipse GlassFish, refer to the books in the order in which they are listed in the following table.

Book Title	Description
Release Notes	Provides late-breaking information about the software and the documentation and includes a comprehensive, table-based summary of the supported hardware, operating system, Java Development Kit (JDK), and database drivers.

Book Title	Description
Quick Start Guide	Explains how to get started with the Eclipse GlassFish product.
Installation Guide	Explains how to install the software and its components.
Upgrade Guide	Explains how to upgrade to the latest version of Eclipse GlassFish. This guide also describes differences between adjacent product releases and configuration options that can result in incompatibility with the product specifications.
Deployment Planning Guide	Explains how to build a production deployment of Eclipse GlassFish that meets the requirements of your system and enterprise.
Administration Guide	Explains how to configure, monitor, and manage Eclipse GlassFish subsystems and components from the command line by using the `asadmin`(1M) utility. Instructions for performing these tasks from the Administration Console are provided in the Administration Console online help.
Security Guide	Provides instructions for configuring and administering Eclipse GlassFish security.
Application Deployment Guide	Explains how to assemble and deploy applications to the Eclipse GlassFish and provides information about deployment descriptors.
Application Development Guide	Explains how to create and implement Java Platform, Enterprise Edition (Jakarta EE platform) applications that are intended to run on the Eclipse GlassFish. These applications follow the open Java standards model for Jakarta EE components and application programmer interfaces (APIs). This guide provides information about developer tools, security, and debugging.
Add-On Component Development Guide	Explains how to use published interfaces of Eclipse GlassFish to develop add-on components for Eclipse GlassFish. This document explains how to perform only those tasks that ensure that the add-on component is suitable for Eclipse GlassFish.
Embedded Server Guide	Explains how to run applications in embedded Eclipse GlassFish and to develop applications in which Eclipse GlassFish is embedded.
High Availability Administration Guide	Explains how to configure Eclipse GlassFish to provide higher availability and scalability through failover and load balancing.
Performance Tuning Guide	Explains how to optimize the performance of Eclipse GlassFish.
Troubleshooting Guide	Describes common problems that you might encounter when using Eclipse GlassFish and explains how to solve them.
Error Message Reference	Describes error messages that you might encounter when using Eclipse GlassFish.

Book Title	Description
Reference Manual	Provides reference information in man page format for Eclipse GlassFish administration commands, utility commands, and related concepts.
Message Queue Release Notes	Describes new features, compatibility issues, and existing bugs for Open Message Queue.
Message Queue Technical Overview	Provides an introduction to the technology, concepts, architecture, capabilities, and features of the Message Queue messaging service.
Message Queue Administration Guide	Explains how to set up and manage a Message Queue messaging system.
Message Queue Developer's Guide for JMX Clients	Describes the application programming interface in Message Queue for programmatically configuring and monitoring Message Queue resources in conformance with the Java Management Extensions (JMX).
Message Queue Developer's Guide for Java Clients	Provides information about concepts and procedures for developing Java messaging applications (Java clients) that work with Eclipse GlassFish.
Message Queue Developer's Guide for C Clients	Provides programming and reference information for developers working with Message Queue who want to use the C language binding to the Message Queue messaging service to send, receive, and process Message Queue messages.

Related Documentation

The following tutorials explain how to develop Jakarta EE applications:

- Your First Cup: An Introduction to the Jakarta EE Platform. For beginning Jakarta EE programmers, this short tutorial explains the entire process for developing a simple enterprise application. The sample application is a web application that consists of a component that is based on the Enterprise JavaBeans specification, a JAX-RS web service, and a JavaServer Faces component for the web front end.
- The Jakarta EE Tutorial. This comprehensive tutorial explains how to use Jakarta EE platform technologies and APIs to develop Jakarta EE applications.

Javadoc tool reference documentation for packages that are provided with Eclipse GlassFish is available as follows.

- The Jakarta EE specifications and API specification is located at https://jakarta.ee/specifications/.
- The API specification for Eclipse GlassFish 7, including Jakarta EE platform packages and

nonplatform packages that are specific to the Eclipse GlassFish product, is located at https://glassfish.org/docs/.

For information about creating enterprise applications in the NetBeans Integrated Development Environment (IDE), see the NetBeans Documentation, Training & Support page.

For information about the Derby database for use with the Eclipse GlassFish, see the Derby page.

The Jakarta EE Samples project is a collection of sample applications that demonstrate a broad range of Jakarta EE technologies. The Jakarta EE Samples are bundled with the Jakarta EE Software Development Kit (SDK) and are also available from the repository (`https://github.com/eclipse-ee4j/glassfish-samples`).

Typographic Conventions

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

Typeface	Meaning	Example
`AaBbCc123`	The names of commands, files, and directories, and onscreen computer output	Edit your `.login` file. Use `ls a` to list all files. `machine_name% you have mail.`

`AaBbCc123`	What you type, contrasted with onscreen computer output	`machine_name% su`
		
		`Password:`

AaBbCc123	A placeholder to be replaced with a real name or value	The command to remove a file is `rm` filename.
AaBbCc123	Book titles, new terms, and terms to be emphasized (note that some emphasized items appear bold online)	Read Chapter 6 in the User's Guide. A cache is a copy that is stored locally. Do not save the file.

Symbol Conventions

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

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.

Default Paths and File Names

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

Placeholder	Description	Default Value
as-install	Represents the base installation directory for Eclipse GlassFish. In configuration files, as-install is represented as follows: `${com.sun.aas.installRoot}`	• Installations on the Oracle Solaris operating system, Linux operating system, and Mac OS operating system: user's-home-directory`/glassfish7/glassfish` • Installations on the Windows operating system: SystemDrive`:\glassfish7\glassfish`

Placeholder	Description	Default Value
as-install-parent	Represents the parent of the base installation directory for Eclipse GlassFish.	• Installations on the Oracle Solaris operating system, Linux operating system, and Mac operating system: user's-home-directory`/glassfish7` • Installations on the Windows operating system: SystemDrive`:\glassfish7`
domain-root-dir	Represents the directory in which a domain is created by default.	as-install`/domains/`
domain-dir	Represents the directory in which a domain's configuration is stored. In configuration files, domain-dir is represented as follows: `${com.sun.aas.instanceRoot}`	domain-root-dir/domain-name
instance-dir	Represents the directory for a server instance.	domain-dir/instance-name

1 Eclipse GlassFish 7 Release Notes

To Be Done

This page must be updated before the release!

Eclipse GlassFish provides a lightweight, modular server for the development of Java Platform Enterprise Edition (Jakarta EE) 8 applications. It is the Reference Implementation for Jakarta EE. It delivers a highly productive platform for developing with the latest Jakarta EE technologies.

For any issue or information on Eclipse GlassFish, see the https://glassfish.org/.

These Release Notes provide late-breaking information about Eclipse GlassFish 7 software and documentation. These Release Notes include summaries of supported hardware, operating environments, and JDK and JDBC/RDBMS requirements. Also included are a summary of new product features in the 7 release, and descriptions and workarounds for known issues and limitations.

Refer to this document prior to installing, configuring, or using Eclipse GlassFish 7 software. Consult this document periodically to view the most up-to-date product information.

- "Revision History"
- "What's New in the Eclipse GlassFish 7 Release?"
- "Hardware and Software Requirements"
- "Known Issues in Eclipse GlassFish 7"
- "Restrictions and Deprecated Functionality"
- "Documentation Errata"
- "Features Available Only in the Full Platform"
- "Jakarta EE Standards Support"
- "Jakarta EE SDK"
- "How to Report Problems and Provide Feedback"
- "Additional Resources"

Revision History

This section lists the revision history for these Release Notes.

Table 1-1 Revision History

Date	Description of Changes
September 2017	Eclipse GlassFish 7.

What's New in the Eclipse GlassFish 7 Release?

GlassFish is the Reference Implementation for Jakarta EE. Jakarta EE 10 introduces … To Be Done

Eclipse GlassFish 7 includes the following new and updated Jakarta EE standards.

New Features

- To Be Done

Updated

- To Be Done

For a complete list of the Jakarta EE technologies included in Eclipse GlassFish 7, see Jakarta EE Standards Support.

The main thrust of the Eclipse GlassFish 7 release is to provide an application server for developers to explore and begin exploiting the new and updated technologies in the Jakarta EE 10 platform. Thus, the following features of Eclipse GlassFish were not a focus of this release:

- Clusters and centralized management of standalone instances
- High availability features
- Upgrade
- Embedded Server

These features are included in the release, but they may not function properly with some of the new features added in support of the Jakarta EE 10 platform.

Hardware and Software Requirements

This section lists the requirements that must be met before installing Eclipse GlassFish Release 7 software.

The following topics are addressed here:

- Required JDK Versions

- Required Disk Space
- Required Free Ports
- Message Queue Broker Requirements
- Paths and Environment Settings for the JDK Software

Required JDK Versions

Eclipse GlassFish Release 7 requires Oracle JDK 8 Update 144 or later.

Also be sure to see Paths and Environment Settings for the JDK Software for important JDK configuration instructions.

It is recommended that any machine that is hosting a Eclipse GlassFish DAS or server instance have a minimum of 1 GB RAM.

Required Disk Space

The download sizes for Eclipse GlassFish 7 vary depending on the package you choose. The following are the approximate sizes of the ZIP packages for the Full and Web profiles:

- Full `*.zip`: 114 MB (136 MB unzipped)
- Web `*.zip`: 64.9 MB (82.9 MB unzipped)

The installation sizes will vary depending on your configuration, but the approximate amount of disk space used by Eclipse GlassFish 7 is as follows:

- Full: 138 MB
- Web: 84.4 MB

Required Free Ports

You must have sixteen unused ports available for the ports Eclipse GlassFish uses. The installation program automatically detects ports that are in use and suggests currently unused ports for the default settings. The initial default port assignments are listed in the following table. If these default port numbers are in use, the installation program assigns a randomly selected port number from the dynamic port range. The selected port number might not be the next available port number.

Table 1-2 Default Port Assignments for Eclipse GlassFish 7

Port Number	Usage
4848	Administration Console
8080	HTTP
8081	HTTPS
8686	Pure JMX clients
3700	IIOP
3820	IIOP/SSL
3920	IIOP/SSL with mutual authentication
22	SSH port
9009	Java debugger
7676	JMS provider
Auto-generated from the operating system's dynamic port range	Message Queue TCP port
Auto-generated from the operating system's dynamic port range	Message Queue Admin port
9090	GMS TCP start port
9200	GMS TCP end port
Auto-generated between GMS TCP start and end ports	GMS listener port
Auto generated between 2048 and 49151	GMS multicast port

In some situations, such as when multiple domains are running on a single host, port conflicts can arise in the auto-generated ports used by Message Queue and the GMS. To avoid these conflicts, you can configure the JMS host and the GMS to use specific ports.

To Configure Specific Ports for a JMS Host

When you create a JMS Host, Eclipse GlassFish automatically selects ports for the JMS provider (called the portmapper port in Message Queue terminology), the Message Queue TCP port and the Message Queue admin port.

To provide specific values for these ports, use the `--mqport` and `--property` options when creating the JMS host:

```
asadmin> create-jms-host --mqhost hostName --mqport portNumber \
--mquser adminUser --mqpassword adminPassword --target glassfishTarget \
--property imq\\.jms\\.tcp\\.port=tcpPort:imq\\.admin\\.tcp\\.port=adminPort \
jms-host-name
```

`--mqport portNumber`

This option specifies the JMS provider port number.

`--property imq\\.jms\\.tcp\\.port=tcpPort:imq\\.admin\\.tcp\\.port=``adminPort`

The `imq.jms.tcp.port` and `imq.admin.tcp.port` properties specify the TCP port and the admin port numbers. The double backslashes (`\\`) are used in the `--properties` option to escape the dots in the property names.

To Configure Specific GMS Ports for a Cluster

When you create a cluster, Eclipse GlassFish automatically selects a port for GMS multicast that does not conflict with the GMS multicast port of any other cluster in the domain. Additionally, when you start a cluster, the GMS automatically selects an available port in a specific range for its TCP listener.

If two or more domains are running on the same host, configure the clusters in the domains to ensure that no GMS port conflicts can arise among the clusters. To avoid possible port conflicts, use the `--multicast` and `--properties` options when creating the cluster:

```
asadmin> create-cluster --multicastport multicast-port \
--properties GMS_TCPSTARTPORT=start-port:GMS_TCPENDPORT=end-port \
cluster-name
```

`--multicastport multicast-port`

This option specifies the port number for the GMS to use for UDP multicast.

`--properties GMS_TCPSTARTPORT=start-port:GMS_TCPENDPORT=``end-port`

The `GMS_TCPSTARTPORT` and `GMS_TCPENDPORT` properties specify the range of port numbers the GMS is to use when selecting an available port for its TCP listener.

Though you can create a cluster, there is no support for configuration, as this has not been tested.

Message Queue Broker Requirements

Eclipse GlassFish 7 is now bundled with Message Queue (MQ) Broker 5.1.1. Refer to the `Open Message Queue Release Notes` for complete information about MQ Broker requirements.

Paths and Environment Settings for the JDK Software

Ensure that your JDK configuration settings on all local and remote Eclipse GlassFish hosts adhere to the guidelines listed below. Failure to adhere to these guidelines can cause various problems that may be difficult to trace.

The following topics are addressed here:

- Use the JDK Binaries
- Set the `JAVA_HOME` Environment Variable
- Set Other Environment Variables As Necessary

Use the JDK Binaries

The following binary files that are used with Eclipse GlassFish must come from the JDK software, not the Java Runtime Environment (JRE) software:

- `java`
- `keytool`

To meet this requirement, ensure that the `bin` directory for the JDK software precedes the `bin` directory for the JRE software in your path.

Set the `JAVA_HOME` Environment Variable

Before performing any Eclipse GlassFish installation or configuration procedures, set the `JAVA_HOME` environment variable on the Eclipse GlassFish host machine to point to the correct Java version. Also be sure to add the `JAVA_HOME/bin` directory to the `PATH` variable for your environment. The `JAVA_HOME` variable must be set on all local and remote Eclipse GlassFish hosts.

Set Other Environment Variables As Necessary

All remote `asadmin` subcommands require the correct version of Java to be available on the affected remote machine. For example, when creating a cluster or server instance on a remote machine, the

remote machine uses its local default Java installation, not the Java installation that is on the DAS. Errors will therefore occur if the remote machine uses the wrong Java version.

Depending on the remote subcommand, the errors may not occur when the subcommand is executed, but may occur later, when interacting with a configuration or resource created or modified by the subcommand. For example, when creating a clustered server instance on a remote machine, the error may only first appear when you attempt to deploy an application on that server instance.

This issue is more likely to be encountered when Eclipse GlassFish is installed on the remote server by means of a ZIP file package as you do not have the option to specifically choose your Java version while unzipping a ZIP file.

Depending on what shell is invoked via SSH on the remote host, the `JAVA_HOME` and `PATH` environment variables may need to be explicitly set in `.bashrc`, `.cshrc`, or some other shell configuration file. This configuration file may differ from the one that is used when you log in to the machine, such as `.profile`.

Alternatively, you can specifically set the Java path with the `AS_JAVA` property in the in the as-install`/config/asenv.conf` file.

Known Issues in Eclipse GlassFish 7

This section describes known issues and any available workarounds for Eclipse GlassFish 7 software.

The following topics are addressed here:

- JAXB and JAX-WS no longer part of Jakarta EE platform
- Resource validation property is enabled in the JVM option for deployment
- Update Tool and pkg Command no longer part of Eclipse GlassFish
- Java DB has been replaced by Apache Derby

JAXB and JAX-WS no longer part of Jakarta EE platform

Description

Jakarta XML Binding (previous JAXB) and Jakarta XML Web Services (previouly JAX-WS) are part of Jakarta EE platform, but as optional technologies. However, the jars are packaged in GlassFish.

These jars are present only in the full profile of GlassFish and not part of web profile.

Workaround

None

Resource validation property is enabled in the JVM option for deployment

Description

A new JVM option for deployment - deployment.resource.validation is introduced in Eclipse GlassFish 7. This property is set to True by default so that each resource is validated during deployment time. This ensures that all resources are created beforehand. This property is applicable for administration server as well as instances when clusters are involved.

However, for deployment of applications containing embedded resource adapter, a connector resource is created after deployment. For the deployment of such applications to succeed, the server(s) must be started with this property set to false. For more information on JVM deployment options see `Administering JVM Options.`

Workaround

In case you do not want the resource validation to take place during the deployment, you can set this property value to False.

Update Tool and pkg Command no longer part of Eclipse GlassFish

Description

In previous releases, you could update your Eclipse GlassFish software using the pkg command and the Update tool. Since the recent release of Eclipse GlassFish does not require the use of these features, they have been removed from the Eclipse GlassFish installation.

Workaround

No workaround.

Java DB has been replaced by Apache Derby

Description

In the previous releases, Java DB was used as the database for Eclipse GlassFishs. With the release of Eclipse GlassFish 7, Apache Derby 10.13.1.1 has replaced Java DB as the database for Eclipse GlassFishs.

Workaround

No workaround.

Restrictions and Deprecated Functionality

This section describes restrictions and deprecated functionality in Eclipse GlassFish 7.

The following topics are addressed here:

- `asadmin` Subcommands
- Deprecated, Unsupported, and Obsolete Options
- Applications That Use Apache Derby
- No Support for Client VM on Windows AMD64
- Metro Reliable Messaging in `InOrder` Delivery Mode

`asadmin` Subcommands

In Eclipse GlassFish 7, it is recommended that utility options of the `asadmin` command precede the subcommand. Utility options are options that control the behavior of the `asadmin` utility, as distinguished from subcommand options. Use of the following options after the subcommand is deprecated.

- `--host`

- `--port`
- `--user`
- `--passwordfile`
- `--terse`
- `--secure`
- `--echo`
- `--interactive`

Deprecated, Unsupported, and Obsolete Options

Options in Table 1-3 are deprecated or no longer supported, or are obsolete and are ignored.

Table 1-3 Deprecated, Unsupported, and Obsolete Options for `asadmin` and Subcommands

Option	Affected Subcommands
`--acceptlang`	Unsupported for the `create-virtual-server` subcommand.
`--acls`	Unsupported for the `create-virtual-server` subcommand.
`--adminpassword`	Unsupported for all relevant subcommands. Use `--passwordfile` instead.
`--autoapplyenabled`	Obsolete for the `create-http-lb` subcommand.
`--autohadb`	Obsolete for the `create-cluster` subcommand.
`--autohadboverride`	Obsolete for the `start-cluster` subcommand and the `stop-cluster` subcommand
`--blockingenabled`	Unsupported for the `create-http-listener` subcommand.
`--configfile`	Unsupported for the `create-virtual-server` subcommand.
`--defaultobj`	Unsupported for the `create-virtual-server` subcommand.
`--defaultvs`	Deprecated for the `create-http-listener` subcommand. Use `--default-virtual-server` instead.
`--description`	Obsolete for the `restore-domain` subcommand.
`--devicesize`	Obsolete for the `create-cluster` subcommand.
`--haadminpassword`	Obsolete for the `create-cluster` subcommand.
`--haadminpasswordfile`	Obsolete for the `create-cluster` subcommand.
`--haagentport`	Obsolete for the `create-cluster` subcommand.

Option	Affected Subcommands
`--haproperty`	Obsolete for the `create-cluster` subcommand.
`--hosts`	Obsolete for the `create-cluster` subcommand.
`--ignoreDescriptorItem`	Replaced by the all lowercase option `--ignoredescriptoritem` in the `set-web-context-param` subcommand and the `set-web-env-entry` subcommand.
`--mime`	Unsupported for the `create-virtual-server` subcommand.
`--password`	Unsupported for all remote subcommands. Use `--passwordfile` instead.
`--path`	Unsupported for the `create-domain` subcommand. Use `--domaindir` instead.
`--portbase`	Obsolete only for the `create-cluster` subcommand. This option is still valid in other subcommands such as `create-domain`, `create-instance`, and `create-local-instance`.
`--resourcetype`	Unsupported for all relevant subcommands. Use `--restype` instead.
`--retrievefile`	Obsolete for the `export-http-lb-config` subcommand.
`--setenv`	Obsolete for the `start-instance` subcommand.
`--target`	Obsolete only for the following subcommands: • `create-connector-connection-pool` • `create-resource-adapter-config` • `delete-connector-connection-pool` • `delete-connector-security-map` • `delete-jdbc-connection-pool` • `delete-resource-ref` Replaced by an operand in the `list-custom-resources` subcommand and the `list-jndi-entries` subcommand.

Applications That Use Apache Derby

The directory location of Apache Derby in Eclipse GlassFish 7 has changed from its location in previous installations. Suppose that you have deployed applications that use Apache Derby databases in your previous server installation, and you upgrade your existing installation to Eclipse GlassFish 7. If you run the `asadmin start-database` command and successfully start Apache Derby, you could run into problems while trying to run applications that were deployed on your previous server installation.

To solve this problem, you can copy the `databases` directory from your previous installation to as-install/`databases`. Make sure the database is not running when you do this.

Alternatively, you can perform these steps:

1. Use the `asadmin start-database` command with the `--dbhome` option pointing to the `databases` directory in the older version of Apache Derby. For example:

   ```
   asadmin start-database --dbhome c:\glassfish\databases
   ```

2. After upgrade, start Eclipse GlassFish 7.

No Support for Client VM on Windows AMD64

By default, the Eclipse GlassFish DAS uses the Client VM to achieve best startup and deployment performance. If you are using Windows AMD64, edit the `domain.xml` file to remove the line `<jvm-options>-client<jvm-options>`. In this case, JVM ergonomics chooses the appropriate kind of VM for the given platform. Note that server instances use the Server VM by default.

For more information about platform support, see Ergonomics in the 5.1 Java Virtual Machine.

Metro Reliable Messaging in `InOrder` Delivery Mode

The Metro Reliable Messaging in `InOrder` Delivery mode has not been tested for high availability in Eclipse GlassFish 7. The feature may work, but it has not been formally tested and is therefore not a supported feature.

No Support for Kerberos on AIX

Eclipse GlassFish 7 does not support Kerberos on the AIX platform.

For the complete report about this issue, see `Issue-16728`

Documentation Errata

This section describes documentation errata.

- Upgrading to Eclipse GlassFish Is Not Necessary

Upgrading to Eclipse GlassFish Is Not Necessary

The Eclipse GlassFish Administration Guide discusses upgrading Eclipse GlassFish to Eclipse GlassFish. Eclipse GlassFish 4.x is only an open source release, so this upgrade is not necessary.

Upgrading may not work for Eclipse GlassFish 7

Features Available Only in the Full Platform

The following features of Eclipse GlassFish 7 are available only in the Full Platform:

- EJB features that make up the full EJB 3.2 API, such as remote EJB components, message-driven beans, web service EJB endpoints, and the EJB Timer Service

  The EJB 3.2 Lite specification is supported in the Web Profile. This specification allows enterprise beans within web applications and includes support for local stateless session beans, stateful session beans, and singleton session beans.

- Application Client Container
- JMS resources
- Web services

  In the Web Profile, a servlet or EJB component cannot be a web service endpoint. The `sun-web.xml` and `sun-ejb-jar.xml` elements that are related to web services are ignored.

- Message security
- JavaMail resources

Connector modules that use only outbound communication features and work-management that does not involve inbound communication features are supported in the Web Profile. Other connector features are supported only in the Eclipse GlassFish 7 full platform.

Jakarta EE Standards Support

Table 1-4 lists the Jakarta EE standards implemented in Eclipse GlassFish 7. The table also indicates the distributions in which the implementation of a standard is available.

- X indicates that the implementation is available in the distribution.

- - indicates that the implementation is not available in the distribution.

Table 1-4 Jakarta EE Standards Implementations in Eclipse GlassFish 7

Jakarta EE Standard	Version	Eclipse GlassFish 7 Full Platform	Eclipse GlassFish 7 Web Profile
Jakarta EE Specification	10	X	X
Activation	2.1	X	-
Security	3.0	X	X
Batch	2.1	X	-
Concurrency	3.0	X	-
JSON Processing	2.1	X	X
JSON Binding	3.0	X	X
WebSocket	2.1	X	X
Servlet	6.0	X	X
Server Pages	3.1	X	X
Expression Language	5.0	X	X
Debugging Support for Other Languages	2.0	X	X
Standard Tag Library	3.0	X	X
MVC	2.1	X	X
JavaServer Faces	4.0	X	X
Annotations	2.1	X	X
Transactions	2.0	X	X
Persistence	3.1	X	X
Managed Beans	2.0	X	X
Interceptors	2.0	X	X
Dependency Injection	2.0	X	X
Contexts and Dependency Injection	3.0	X	X
Enterprise Beans	4.0	X	-
RESTful Web Services	4.0	X	X
Bean Validation	3.0	X	X

Jakarta EE Standard	Version	Eclipse GlassFish 7 Full Platform	Eclipse GlassFish 7 Web Profile
Connectors	2.1	X	X*
XML Web Services	4.0	X	-
SOAP With Attachements	3.0	X	-
XML Binding	4.0	X	-
Enterprise Web Services	2.0	X	-
Web Services Metadata	3.0	X	-
Messaging	3.1	X	-
Mail	2.1	X	-
Authentication	3.0	X	X
Authorization	2.1	X	-
Deployment	1.7	X	-
Management	1.1	X	-
XML RPC	1.1	X	-
XML Registries	1.0	X	-

* Standalone Connector 1.7 Container only.

Building on these standards, Eclipse GlassFish 7 provides a number of extensions, including the following:

- Ajax (asynchronous JavaScript and XML): Retrieves and displays new data for a portion of a web page without affecting the rest of the page.
- Metro: A web services stack that implements Java Architecture for XML Binding (JAXB) and Java APIs for XML Web Services 2.3 (JAX-WS 2.3).
- Grizzly: A framework for building scalable and robust servers using New I/O (NIO) APIs, which make scaling to thousands of users possible. The ability to embed components that support HTTP, Bayeux Protocol, Java Servlet API, and Comet is provided.

How to Report Problems and Provide Feedback

If you have problems with Eclipse GlassFish 7, provide feedback through one of the following mechanisms:

- Eclipse GlassFish forum (https://javaee.groups.io/g/glassfish) — A variety of Eclipse GlassFish community for various interests and feedback
- GlassFish Issue tracker (https://github.com/javaee/glassfish/issues) — Eclipse GlassFish project dashboards and issue tracking database

Additional Resources

Useful information can be found at the following locations:

- Eclipse GlassFish Community (https://github.com/eclipse-ee4j/glassfish)
- Oracle Developer Information (http://www.oracle.com/technetwork/index.html)
- Oracle product documentation (http://www.oracle.com/technetwork/indexes/documentation/index.html)