

Oracle® GlassFish Server 3.1-3.1.1 Release Notes

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Oracle GlassFish Server 3.1–3.1.1 Release Notes

GlassFish Server 3.1–3.1.1 provides a lightweight, modular server for the development of Java Platform Enterprise Edition (Java EE) 6 applications and Java Web Services. It delivers enterprise performance, scalability, and reliability.

For production deployments, consider Oracle GlassFish Server with [Oracle Premier Support for Software](#). Premier Support helps lower the total cost and risk of owning your Oracle solutions, improve the return from your IT investment, and optimize the business value of your IT solutions. Benefits of Premier Support include product updates and enhancements, global reach, lifetime support, ecosystem support, and proactive, automated support.

These *Oracle GlassFish Server 3.1–3.1.1 Release Notes* provide late-breaking information about GlassFish Server 3.1 and 3.1.1 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 3.1 and 3.1.1 releases, and descriptions and workarounds for known issues and limitations.

Refer to this document prior to installing, configuring, or using GlassFish Server 3.1 or 3.1.1 software. Consult this document periodically to view the most up-to-date product information.

- “Revision History” on page 6
- “What’s New in the GlassFish Server 3.1.1 Release?” on page 6
- “What’s New in the GlassFish Server 3.1 Release?” on page 8
- “Hardware and Software Requirements” on page 15
- “Known Issues” on page 19
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- “GlassFish Server Documentation Set” on page 64
- “Features Available Only in the Full Platform Profile” on page 65
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- “Java EE 6 SDK” on page 68
- “How to Report Problems and Provide Feedback” on page 68
- “Additional Resources” on page 69
- “Third-Party Web Site References” on page 69

- [“Accessibility Features” on page 69](#)

Revision History

This section lists the revision history for the *Oracle GlassFish Server 3.1–3.1.1 Release Notes*.

TABLE 1–1 Revision History

Date	Description of Changes
February 2011	Initial release of Oracle GlassFish Server 3.1
March 2011	Added explanations of additional new features, updated requirements information, added items to Known Issues section.
April 2011	Version 3.1 documentation library refresh; edits throughout, and many items added to Known Issues section.
June 2011	Added topics related to the version 3.1.1 product update release.

What's New in the GlassFish Server 3.1.1 Release?

In addition to the version 3.1 features listed in [“What’s New in the GlassFish Server 3.1 Release?” on page 8](#), the GlassFish Server 3.1.1 update release includes over 400 bug fixes and the following new features:

- [“Environment and Component Changes” on page 6](#)
- [“Embedded GlassFish Server” on page 7](#)
- [“Expanded Loadbalancer Plug-In Support of Web Servers” on page 7](#)
- [“New asadmin Subcommands for Secure Admin” on page 7](#)
- [“Enterprise OSGi Support” on page 8](#)
- [“Support for JDBC 4.1” on page 8](#)

Environment and Component Changes

The GlassFish Server 3.1.1 release includes the following updates:

TABLE 1–2 GlassFish Server 3.1.1 Environment and Component Changes

New Feature Area	New Feature
Operating Systems	AIX 6.1/7.1, Solaris 11 Express
Java Development Kit	SDK bundles with JDK 7
Integrated Development Environments	Netbeans 7.0.1, Eclipse 3.6.x
Updated Libraries	Weld, JSF, EclipseLink, Metro/Woodstox, Jersey, HK2, Grizzly, Shoal, Update Center, GlassFish Server Message Queue

TABLE 1-2 GlassFish Server 3.1.1 Environment and Component Changes (Continued)

New Feature Area	New Feature
HTTP session persistence	Support for Coherence*Web; see Using Coherence*Web with GlassFish Server (http://download.oracle.com/docs/cd/E18686_01/coh.37/e18690/glassfish.htm)

Embedded GlassFish Server

The `org.glassfish.embeddable.*` API is officially supported. See the [Oracle GlassFish Server 3.1 Embedded Server Guide](#).

Embedded GlassFish Server enables you to use GlassFish Server as a library. Embedded GlassFish Server also enables you to run GlassFish Server inside any Virtual Machine for the Java platform (Java Virtual Machine or JVM machine).

Expanded Loadbalancer Plug-In Support of Web Servers

GlassFish Server 3.1.1 supports the following web servers:

- 64-bit loadbalancer plug-in available on Solaris (SPARC and x86) and Linux supports:
 - Oracle iPlanet Web Server 7.0 Update 9+
 - Apache HTTP server 2.2.x
 - Oracle HTTP server 11.1.1.4+
- 32-bit loadbalancer plug-in available on AIX supports:
 - Oracle iPlanet Web Server 7.0 Update 9+
 - Apache HTTP server 2.2.x
 - Oracle HTTP server 11.1.1.4+
- 32-bit loadbalancer plug-in available on Windows supports:
 - Oracle iPlanet Web Server 7.0 Update 9+
 - Microsoft IIS 7.5+

New `asadmin` Subcommands for Secure Admin

This release includes several new secure admin subcommands.

The `enable-secure-admin-principal(1)` subcommand instructs GlassFish Server to accept admin requests when accompanied by an SSL certificate with the specified distinguished name (DN). In this way, as long as you know the DN of a certificate you can use it for SSL/TLS certificate authentication, even if the certificate is not in the truststore or part of a trusted chain.

The `enable-secure-admin-internal-user(1)` subcommand instructs all servers in the domain to authenticate to each other, and to authorize admin operations submitted to each other, using an existing admin user name and password rather than SSL certificates. You might want to use the `enable-secure-admin-internal-user(1)` subcommand if your use case favors the use of a user name and password combination over the use of SSL certificates and aliases.

This release also includes the associated `disable` and `list` subcommands for these features.

Enterprise OSGi Support

GlassFish Server now supports deployment of OSGi-enabled enterprise Java applications. Refer to [Chapter 13, “Developing OSGi-enabled Java EE Applications,”](#) in *Oracle GlassFish Server 3.1 Application Development Guide* for more information.

Support for JDBC 4.1

Because GlassFish Server 3.1.1 supports JDK 7, support for JDBC 4.1 is available in GlassFish Server 3.1.1. JDBC 4.1 drivers can be installed in GlassFish Server 3.1.1 to make use of the new features.

What's New in the GlassFish Server 3.1 Release?

Oracle GlassFish Server 3.1 is the world's first full implementation of the Java Platform, Enterprise Edition (Java EE) 6 specification. GlassFish Server 3.1 delivers a flexible, lightweight and extensible Java EE 6 platform. Completely supported for commercial deployment, GlassFish Server 3.1 delivers a small footprint, fully featured, and production-ready Java EE application server.

The following topics are addressed here:

- [“GlassFish Server 3.1 Productivity Benefits”](#) on page 8
- [“Key Technology Enhancements”](#) on page 10

If you will be using the GlassFish Server 3.1.1 update release, also be sure to see [“What's New in the GlassFish Server 3.1.1 Release?”](#) on page 6.

GlassFish Server 3.1 Productivity Benefits

The following sections briefly summarize some of the important new productivity benefits provided by GlassFish Server 3.1.

- [“Flexible, Extensible, and Customizable”](#) on page 8
- [“Enhancing Developer Productivity”](#) on page 9
- [“Production Readiness”](#) on page 9
- [“GlassFish Server Control”](#) on page 9
- [“Oracle GlassFish Server and Oracle Fusion Middleware”](#) on page 10

Flexible, Extensible, and Customizable

GlassFish Server 3.1 offers significant enhancements:

- Embedded API for a tightly integrated solution with EJB support
- RESTful administration API to enable new - or integrate with - network services
- Develop custom administration features and expose them through the web console, command line tool, and RESTful API.

- The ability to re-brand the user interface for a seamless user experience

Enhancing Developer Productivity

GlassFish Server 3.1 delivers a new, efficient model for developing and deploying production-level applications. Developers can begin with just the Web Profile and grow to the full Java EE 6 platform when needed. Because GlassFish Server runs on the OSGi runtime, modular features can be added as necessary. It also keeps the footprint as small as possible by loading only modules required to service deployed applications, improving startup time and reducing resource utilization. Smaller downloads, faster startup times, and reduced memory footprints are only some of the capabilities that help developers deliver applications more efficiently. GlassFish Server also provides multiple developer tooling options, including support for Eclipse and NetBeans. GlassFish Server supports developers' favorite tools: GUI and command line interface (CLI), Maven, Ant, RESTful API, and others.

When combined with Eclipse or NetBeans, GlassFish Server can significantly improve iterative development. Instead of six time-consuming steps (edit, save, compile, package, deploy, re-populate session data), the same process is reduced to three steps (edit, save, and refresh browser). `Active Redeploy` allows session data in HTTP session and stateful EJBs to be retained across application deployments, eliminating the need to repopulate the session data when deploying new code to test. Application-scoped resources enable developers to limit the scope of resources to a deployed application.

The Java EE 6 platform improves developer productivity by supporting the use of annotations in place of XML configuration, simplifying packaging of business components, and enabling the construction of more Plain Old Java Objects (POJOs). The result is getting more done in less time with fewer artifacts to manage over time.

In addition, GlassFish Server includes multi-language support and is available in the following languages: English, French, German, Spanish, Japanese, Simplified Chinese, Traditional Chinese, Korean and Brazilian Portuguese.

Production Readiness

- Management of clusters containing many instances from a centralized web based console
- Dynamic configuration of live clusters
- High availability for JAX-WS, JMS, EJB; `Active Redeploy` that retains EJB/HTTP session state on redeploy
- Oracle Portfolio Integration: Oracle Coherence, Oracle Web Services Manager, Oracle Access Manager, Oracle WebLogic Server compatibility and interoperability

GlassFish Server Control

GlassFish Server Control is a suite of tools that improves manageability of production deployments.

- Monitoring Scripting Client enables custom monitoring scripts using finegrained probes

- Domain Backup and Recovery enables scheduled, automated backups of a live domain server
- Performance Tuner enables up to a 300% performance improvement over out-of-the-box configuration
- Active Cache for GlassFish enables out-of-the-box replacement of inmemory replication with Coherence for more robust, flexible high availability
- Out-of-the-box Oracle Access Manager integration to enable single sign-on of applications and services
- Load Balancer Web Server Plugin & Installer for balancing load across cluster instances and smart failover on instance failure.

Oracle GlassFish Server and Oracle Fusion Middleware

Oracle GlassFish Server 3.1 is part of the Oracle Fusion Middleware application grid portfolio and is ideally suited for applications requiring lightweight infrastructure with the most upto-date implementation of enterprise Java, Java EE 6, and Java Web Services infrastructure.

Oracle GlassFish Server complements Oracle WebLogic Server, which is designed to run the broader portfolio of Oracle Fusion Middleware and large-scale enterprise applications.

Oracle GlassFish Server 3.1 release improves application portability by offering support for WebLogic web deployment descriptors, and shared runtime components like JPA, JAX-RS, JAXB, JAX-WS. Oracle GlassFish Server 3.1 provides certified interoperability with Oracle Fusion Middleware Products including: Oracle Internet Directory, Oracle Virtual Directory, Oracle Coherence, Oracle Web Services Manager, and Oracle Access Manager.

Key Technology Enhancements

The following sections provide more detail about the key technology enhancements and new features in GlassFish Server 3.1.

The following topics are addressed here:

- [“Extending Java EE 6 with Clustering” on page 10](#)
- [“Load Balancing Support” on page 11](#)
- [“JMS and Message Queue Broker” on page 12](#)
- [“DAS Backup and Recovery” on page 12](#)
- [“Deployment” on page 13](#)
- [“Security” on page 13](#)
- [“Logging Service” on page 14](#)

Extending Java EE 6 with Clustering

GlassFish Server 3.1 is based on the Java EE 6 Reference Implementation and is the first application server to support the full Java EE 6 platform and the new Java EE 6 Web Profile, which is designed specifically for Web applications.

The Java EE 6 platform is backward compatible, so existing Java EE applications will continue to run on the newer platform. Extensive support for clustering across the entire product provides production grade reliability, scalability, fault tolerance and performance for GlassFish Server applications. This support extends from the installer to administration functions, and from native Web server plug-ins to Metro Web Services, JMS and stateful EJBs. These capabilities allow application clusters to be provisioned dynamically and adjusted on the fly, and makes it possible for administrators to redeploy or upgrade applications to meet user demand without service interruption. A single GlassFish Server domain server can manage up to 100 instances, supporting multiple clusters simultaneously.

The enhanced GlassFish Server 3.1 clustering infrastructure includes the following features:

- High availability and scalability through failover load balancing. See the [Oracle GlassFish Server 3.1-3.1.1 High Availability Administration Guide](#) for more information. Load Balancing support is also discussed more in the following section.
- Replacement of node agents with GlassFish Server nodes, as described in [Chapter 3, “Administering GlassFish Server Nodes,”](#) in [Oracle GlassFish Server 3.1-3.1.1 High Availability Administration Guide](#).
- Support for using secure shell (SSH) configurations for centralized administration, as described in [Chapter 2, “Setting Up SSH for Centralized Administration,”](#) in [Oracle GlassFish Server 3.1-3.1.1 High Availability Administration Guide](#).
- Support for clusters, clustered server instances, and standalone server instances, as described in [Chapter 4, “Administering GlassFish Server Clusters,”](#) in [Oracle GlassFish Server 3.1-3.1.1 High Availability Administration Guide](#) and [Chapter 5, “Administering GlassFish Server Instances,”](#) in [Oracle GlassFish Server 3.1-3.1.1 High Availability Administration Guide](#).
- Name configurations, as described in [Chapter 6, “Administering Named Configurations,”](#) in [Oracle GlassFish Server 3.1-3.1.1 High Availability Administration Guide](#).

Load Balancing Support

As mentioned in the previous section, Oracle GlassFish Server 3.1 supports clusters and clustered server instances, which provide excellent performance, load balancing failover and recovery, and transaction security.

An important aspect of clustering support in GlassFish Server 3.1 is that clustered configurations can be optimized by means of performance tuning and load balancing tools in a number of command-line subcommands. In addition, the GlassFish Loadbalancer Plug-In makes it easy to configure your Web server to work with Oracle GlassFish Server.

Complete details about configuring load balancing in GlassFish Server 3.1 are provided in the [Oracle GlassFish Server 3.1-3.1.1 High Availability Administration Guide](#).

JMS and Message Queue Broker

GlassFish Server 3.1 includes the following JMS and Message Queue Broker enhancements:

- **Automatically managed JMS hosts embedded in standalone instances**

By default, for each standalone instance GlassFish Server creates and manages a Message Queue broker embedded in the instance to provide JMS messaging. See [Chapter 17, “Administering the Java Message Service \(JMS\),”](#) in *Oracle GlassFish Server 3.1 Administration Guide* for more information.

- **Automatically managed Message Queue broker clusters to support GlassFish Server clusters**

By default, GlassFish Server creates and manages a Message Queue broker cluster for a GlassFish Server cluster, assigning one Message Queue broker to each GlassFish Server cluster instance. See [“Using Message Queue Broker Clusters With GlassFish Server”](#) in *Oracle GlassFish Server 3.1-3.1.1 High Availability Administration Guide* for more information.

- **Using GenericJMSRA for WebLogic JMS**

New instructions on how to configure the Generic Resource Adapter for JMS so Glassfish Server applications can exchange messages with WebLogic JMS. See [“Using GenericJMSRA with WebLogic JMS”](#) in *Oracle GlassFish Server 3.1 Administration Guide* for more information.

- **GenericJMSRA for IBM WebSphere MQ**

New instructions on how to configure Generic Resource Adapter for JMS so Glassfish Server applications can exchange messages with WebSphere Message Queue. See [“Using GenericJMSRA with IBM WebSphere MQ”](#) in *Oracle GlassFish Server 3.1 Administration Guide* for more information.

DAS Backup and Recovery

Enhanced domain backup and recovery features in GlassFish Server 3.1 include:

- **Domain backup to a specified location**

You can now specify where domain backups are stored, and so support IT best practices such as off-host backups. See [“To Back Up a Domain”](#) in *Oracle GlassFish Server 3.1 Administration Guide* for more information.

- **Automated domain backups on live domains**

Oracle GlassFish Server 3.1, you can now create backup configurations that automatically back up live domains on a scheduled basis. Note that this feature is not available in GlassFish Server Open Source Edition. See [“Setting Up Automatic Backups of a Domain”](#) in *Oracle GlassFish Server 3.1 Administration Guide* for more information.

Deployment

A number of deployment enhancements have been introduced in GlassFish Server 3.1:

- **Support for deployment to a cluster.**

The `--target` options on the `asadmin` deployment subcommands have been restored from v2.1, as have the `*-application-ref` subcommands. For more information, see [Appendix A, “The asadmin Deployment Subcommands,”](#) in *Oracle GlassFish Server 3.1 Application Deployment Guide*.

- **Support for rolling application upgrades**

See Chapter 9, “Upgrading Applications Without Loss of Availability,” in *Oracle GlassFish Server 3.1-3.1.1 High Availability Administration Guide* for more information about rolling upgrades for applications deployed on GlassFish Server.

- **Partial support for WebLogic Server deployment descriptors**

See “WebLogic Server Deployment Descriptor Support in GlassFish Server” in *Oracle GlassFish Server 3.1 Application Deployment Guide* for more information.

- **Application-scoped resources**

See “Application-Scoped Resources” in *Oracle GlassFish Server 3.1 Application Deployment Guide* for more information.

- **Transparent JDBC connection pool reconfiguration (no redeployment needed)**

See “Transparent JDBC Connection Pool Reconfiguration” in *Oracle GlassFish Server 3.1 Application Deployment Guide* for more information.

- **OSGi bundle deployment**

See “OSGi Bundle Deployment Guidelines” in *Oracle GlassFish Server 3.1 Application Deployment Guide* for more information.

- **New deployment descriptor elements**

See [Appendix B, “GlassFish Server Deployment Descriptor Files,”](#) in *Oracle GlassFish Server 3.1 Application Deployment Guide* for more information.

Security

An entirely new *Oracle GlassFish Server 3.1 Security Guide* has been written for GlassFish Server 3.1. Some of the important new security features covered in this guide include:

- **Managing Administrative Security with secure administration**

The secure administration feature, referred to as secure admin, allows you to secure all administrative communication between the domain administration server (DAS), any remote instances, and administration clients such as the `asadmin` utility, the administration console, and REST clients. Secure admin provides a secure environment in which you can be confident that rogue users or processes cannot intercept or corrupt administration traffic

or impersonate legitimate GlassFish Server components. See [Chapter 5, “Managing Administrative Security,”](#) in *Oracle GlassFish Server 3.1 Security Guide* for more information.

- **Custom Authentication of Client Certificate in SSL Mutual Authentication** GlassFish Server extends the Certificate realm to allow custom authentication and group assignment based on the client certificate received as part of SSL mutual (two-way) authentication. You can now use a convenient abstract base class to configure a JAAS LoginModule for the Certificate realm. See [“Custom Authentication of Client Certificate in SSL Mutual Authentication”](#) in *Oracle GlassFish Server 3.1 Security Guide* for more information.
- **Working With the `server.policy` Policy File** Each GlassFish Server domain has its own global Java SE policy file, named `server.policy`. This section describes the structure of this file, provides information about the default permissions, and details how you can change the default permissions. See [“Working With the `server.policy` Policy File”](#) in *Oracle GlassFish Server 3.1 Security Guide* for more information.
- **Dynamic Reconfiguration** Administrative commands that you execute on the domain administration server (DAS) must either be replicated on the effected server instances, or on all server instances that are part of the cluster. Dynamic reconfiguration refers to using the `--target` operand to subcommands to make a change to a server instance (if the user-specified target is a server instance), or all server instances that are part of the cluster (if the user-specified target is a cluster). See [“Dynamic Reconfiguration”](#) in *Oracle GlassFish Server 3.1 Security Guide* for more information.
- **Support for PAM realm**
GlassFish Server now supports Pluggable Authentication Module (PAM) realms. A PAM realm allows applications deployed on GlassFish Server to authenticate users against a native Unix (Solaris/Linux/Mac OS) users list. See [“Overview of Authentication Realms”](#) in *Oracle GlassFish Server 3.1 Security Guide* for more information.
- **Interoperability with Oracle Identity Management**
The OAM Security Provider enables GlassFish Server administrators to use Oracle Access Manager to control user access to business applications. The OAM Security Provider for GlassFish Server is a JSR 196 Server Authentication Module (SAM) that provides authentication, authorization (optional), and single sign-on across JavaEE Web applications that are deployed on GlassFish Server. See [Chapter 7, “Integrating Oracle Access Manager,”](#) in *Oracle GlassFish Server 3.1 Security Guide* for more information.

Logging Service

Enhancements to logging features in GlassFish Server 3.1 include:

- **Support for configuring logging properties for individual configurations, server instances, or clusters.**

The `--target` options for the `asadmin` logging subcommands have been restored from v2.1. See [“Logging Targets”](#) in *Oracle GlassFish Server 3.1 Administration Guide* for more information.

- Support for collecting log files into a ZIP archive.
A new `asadmin collect-log-files` subcommand enables you to obtain and view log files for an instance or cluster even when it is not currently running. See “[Viewing Log Records](#)” in *Oracle GlassFish Server 3.1 Administration Guide* for more information.

Hardware and Software Requirements

This section lists the requirements that must be met before installing GlassFish Server 3.1 or 3.1.1 software.

The following topics are addressed here:

- “[Supported Platforms, JDK Versions, Browsers, mod_jk, and JDBC Drivers and Databases](#)” on page 15
- “[System Virtualization Support](#)” on page 15
- “[Required Disk Space](#)” on page 16
- “[Required Free Ports](#)” on page 16
- “[Message Queue Broker Requirements](#)” on page 17
- “[Important Patch Information](#)” on page 17
- “[Paths and Environment Settings for the JDK Software](#)” on page 17

Supported Platforms, JDK Versions, Browsers, mod_jk, and JDBC Drivers and Databases

Certification matrices containing complete information about supported operating environments, hardware, JDK versions, browsers, mod_jk, and JDBC drivers and databases for GlassFish Server are available in the following locations:

- [GlassFish Server 3.1.1 Certification Matrix \(http://www.oracle.com/technetwork/middleware/ias/downloads/glassfish31cert-matrix-444569.xls\)](http://www.oracle.com/technetwork/middleware/ias/downloads/glassfish31cert-matrix-444569.xls)
- [GlassFish Server 3.1 Certification Matrix \(http://www.oracle.com/technetwork/middleware/ias/downloads/glassfish31cert-matrix-328538.xls\)](http://www.oracle.com/technetwork/middleware/ias/downloads/glassfish31cert-matrix-328538.xls)

Also be sure to see “[Paths and Environment Settings for the JDK Software](#)” on page 17 for important JDK configuration instructions.

Note – It is recommended that any machine that is hosting a GlassFish Server DAS or server instance have a minimum of 1 GB RAM. The GlassFish Server Performance Tuner should also be used on each of these machines to optimize the server configuration for the particular hardware. Refer to the Performance Tuner online help in the GlassFish Server Administration Console and the *Oracle GlassFish Server 3.1 Performance Tuning Guide* for more information.

System Virtualization Support

System virtualization is a technology that enables multiple operating system (OS) instances to execute independently on shared hardware. Functionally, software deployed to an OS hosted in a virtualized environment is generally unaware that the underlying platform has been

virtualized. Oracle performs testing of its Java-based products on select system virtualization and OS combinations to help validate that the Oracle products continue to function on properly sized and configured virtualized environments as they do on non-virtualized systems.

For information about Oracle support for Oracle Java-based products in virtualized environments, see [Supported Virtualization and Partitioning Technologies for Oracle Fusion Middleware](#). In particular, refer to the section titled, “Oracle Branded Sun Product Releases Support.”

Required Disk Space

The download sizes for GlassFish Server 3.1-3.1.1 vary depending on the package you choose. The following are the approximate sizes of the multilingual (ML) executable and ZIP packages for the Full and Web profiles:

- Full, ML, .exe: 67 MB
- Web, ML, *.exe: 38 MB
- Full, ML, *.zip: 102 MB (133 MB unzipped)
- Web, ML, *.zip: 65 MB (90 MB unzipped)

The installation sizes will vary depending on your configuration, but the approximate amount of disk space used by a GlassFish Server 3.1-3.1.1 is as follows:

- Full: 250 MB
- Web: 150 MB

Required Free Ports

You must have seventeen unused ports available for the ports GlassFish Server 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 1-3 Default Port Assignments for GlassFish Server 3.1-3.1.1

Port Number	Usage
4848	Administration Console
8080	HTTP
8081	HTTPS
8686	Pure JMX clients
3700	IIOP
3820	IIOP/SSL

TABLE 1-3 Default Port Assignments for GlassFish Server 3.1-3.1.1 (Continued)

Port Number	Usage
3920	IIOP/SSL with mutual authentication
22	SSH port
9009	Java debugger
6666	OSGi shell telnet port
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 32000	GMS multicast port

Message Queue Broker Requirements

GlassFish Server 3.1-3.1.1 is now bundled with Message Queue (MQ) Broker 4.5. Refer to the [Oracle GlassFish Server Message Queue 4.5 Release Notes](#) for complete information about MQ Broker requirements.

Important Patch Information

If you are using the Solaris 10 operating system, you must apply all relevant patches or patch clusters that are listed on the [My Oracle Support \(https://support.oracle.com\)](https://support.oracle.com) site.

Paths and Environment Settings for the JDK Software

Ensure that your JDK configuration settings on all local and remote GlassFish Server 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 Correct Java Version” on page 18
- “Use the JDK Binaries” on page 18
- “Set the JAVA_HOME Environment Variable” on page 18

- [“Set Other Environment Variables As Necessary” on page 18](#)

Use the Correct Java Version

Ensure that the version of Java used on all local and remote GlassFish Server hosts meets the requirements specified in [“Supported Platforms, JDK Versions, Browsers, mod_jk, and JDBC Drivers and Databases” on page 15](#).

Use the JDK Binaries

The following binary files that are used with GlassFish Server 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 GlassFish Server installation or configuration procedures, set the `JAVA_HOME` environment variable on the GlassFish Server 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 GlassFish Server 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 GlassFish Server is installed on the remote server by means of a ZIP file package rather than a self-extracting installer run in GUI mode. This is because the GUI installer gives you the option to specifically choose your Java version, whereas you do not have that option when simply 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 `as-install-parent/glassfish/config/asenv.conf` file.

Known Issues

This section describes known issues and any available workarounds for Oracle GlassFish Server 3.1 and 3.1.1 software.

These known issues and workarounds are divided into these sections:

- “Known Issues in GlassFish Server 3.1.1” on page 19
- “Known Issues in GlassFish Server 3.1” on page 28
- “Known Issues in GlassFish Server 3.1 Fixed in 3.1.1” on page 50

Known Issues in GlassFish Server 3.1.1

Issues in GlassFish Server 3.1.1 also apply to GlassFish Server 3.1 unless otherwise stated.

The following topics are addressed here:

- “restart-instance takes a long time on Solaris 11 (sun.security.pkcs11.SunPKCS11 (15537))” on page 20
- “Accept multiple certs for admin authentication (16437)” on page 20
- “tcp-no-delay attribute in Http is not working (16902)” on page 20
- “Invoking GF installer on AIX 6.1 with JDK6 64 bit gives Warning (16667)” on page 21
- “(JDK) NLS: Crashed when tried to install the bundle in ko locale (16699)” on page 21
- “PKG_CLIENT_READ_TIMEOUT is too small (16999)” on page 21
- “Unable to set -server JVM options (16770)” on page 22
- “cannot remote deploy large wars (15773)” on page 22
- “AIX. RichAccess stress test. Multiple ArrayIndexOutOfBoundsException and NPE in server.log files (16707)” on page 23
- “Fail to install the bundle named with -jdk7 when unset JAVA_HOME in solaris 11 Express x86 (16698)” on page 23
- “Non-persistent timers are incorrectly canceled in a clustered environment (17060)” on page 24
- “asadmin timeout from HA short execution on AIX (16960)” on page 24
- “Could not upgrade from ogs-3.1-windows-ml.exe to ogs-3.1.1-b05-windows-ml.exe in Windows 7 x86 (16700)” on page 24
- “Unable to restart Embedded GlassFish Server instance once a remote EJB is deployed (16916)” on page 25
- “EJB Timer Service is not loaded correctly after Embedded GlassFish Server restart (16230)” on page 25
- “list-secure-admin-principals and list-secure-admin-internal-users both incorrectly prompt for a command operand (17005)” on page 26
- “Switching log levels persistently breaks logging service (17037)” on page 26
- “Stopping Embedded GlassFish Server leaves several daemon threads running (11088)” on page 27

- “Administration Guide on Patching in a Closed Network Incorrectly Lists 3.0.1 Patches (13422800)” on page 27
- “Embedded EJB container returns null reference when META-INF/beans.xml is in the classpath (16285)” on page 27

restart - instance takes a long time on Solaris 11 (sun.security.pkcs11.SunPKCS11) (15537)

Description

The `asadmin restart - domain` and `restart - instance` subcommands intermittently hang on Solaris 11 systems. This is caused by native Security SPI code in the JDK. This issue does not occur on operating systems other than Solaris 11.

Workaround

None. This issue does not cause any problems other than the occasional long wait for the subcommand to complete.

For the complete report about this issue, see [GLASSFISH-15537](#).

Accept multiple certs for admin authentication (16437)

Description

If you enabled secure admin for a GlassFish Server 3.1 domain, the domain remains enabled for secure admin when you install GlassFish Server 3.1.1.

However, GlassFish Server 3.1.1 uses a stronger technique to make sure that servers in one domain do not accidentally communicate with servers in another domain.

Workaround

Your updated GlassFish Server 3.1.1 domain does not use the improved domain isolation technique until you run the following command once:

```
asadmin> enable-secure-admin
```

You do not need to specify any other arguments with the command, even if you did so when you first enabled secure admin on your GlassFish Server 3.1 domain. GlassFish Server 3.1.1 automatically begins using the better algorithm from that point on.

For the complete report about this issue, see [GLASSFISH-16437](#).

tcp-no-delay attribute in Http is not working (16902)

Description

The `tcp-no-delay` attribute for HTTP type network listeners is not working properly. Setting this attribute as follows has no effect:

```
asadmin> set server-config.network-config.protocols.protocol.http-listener-1.http.tcp-no-delay=true
```

Workaround

Set the `tcpNoDelay` property of the HTTP service instead, as follows:

```
asadmin> set server-config.http-service.property.tcpNoDelay=true
```

This enables `tcpNoDelay` for all network listeners.

For the complete report about this issue, see [GLASSFISH-16902](#).

Invoking GF installer on AIX 6.1 with JDK6 64 bit gives Warning (16667)**Description**

When the GlassFish Server installer is invoked on the AIX 6.1 platform with the 64-bit version of JDK 6, the following warning is displayed on the screen:

```
Warning: Could not detect OS Architecture, falling back to os.arch [Architecture=ppc64]
```

Workaround

None. This warning is harmless and can be ignored.

(JDK) NLS: Crashed when tried to install the bundle in ko locale (16699)**Description**

Installation of the Solaris x86 SDK bundle fails in the `ko` and `zh_TW` locales.

Workaround

GlassFish Server users can install the ZIP distribution or temporarily switch to an unaffected locale. SDK users can install using the Update Center or temporarily switch to an unaffected locale.

PKG_CLIENT_READ_TIMEOUT is too small (16999)**Description**

Installation of the Update Center sometimes times out and fails.

Workaround

If Update Center installation fails in the installer or when running `pkg` or `update tool` from the command line, enter the following from the command line:

```
> set PKG_CLIENT_CONNECT_TIMEOUT=300
> set PKG_CLIENT_READ_TIMEOUT=300
> glassfish3\bin\update tool
```

Unable to set -server JVM options (16770)

Description

GlassFish Server misinterprets the following command:

```
asadmin> create-jvm-options -server
```

The command is interpreted as if the following command had been entered, using the short options for `--secure` and `--echo`:

```
asadmin> create-jvm-options -se
```

Workaround

To specify a JVM option that could be mistaken for one or more `asadmin` command short options, use a double dash before the JVM option. For example:

```
asadmin> create-jvm-options -- -server
```

This double dash tells the `asadmin` command to stop parsing its own short options and start parsing subcommand options.

cannot remote deploy large wars (15773)

Description

Note – This issue applies only to administrative clients sending administration messages to the domain administration server (DAS). It does not apply to end-user clients sending messages to applications.

By default, when you enable secure admin, the GlassFish Server DAS does not use SSL client certificate authentication to verify the identify of administration clients (such as the `asadmin` utility, browsers, or IDEs). Instead, the administrative user typically provides a username and password which authorize performance of administrative operations. To enable admin request SSL client certificate support in the DAS, set the following system property to `true`:

```
org.glassfish.admin.DASCheckAdminCert
```

This does not disable username and password authentication. It simply adds client SSL certificate-based authentication as another alternative the DAS can use.

If you perform the following steps, then GlassFish Server might report communication errors related to SSL:

1. Enable secure admin for the domain.
2. Enable admin request SSL client certificate support as just described.

3. Use an administration client that is not configured to send an SSL client certificate for authentication.
4. Upload a moderate or large file as part of deployment.

This can happen if the upload is in progress when the GlassFish Server DAS requests certificate information from the administration client. This happens only if the client was not configured to use an SSL certificate.

Workaround

To enable admin request SSL client certificate support and deploy a large file, first upload the file manually to the system where the DAS is running or store the file in a shared file system that both your system and the DAS system can access. Then do not specify `--upload=true` when you deploy the application. The DAS finds the file without uploading it, so the certificate negotiation between the DAS and the administration client can complete normally.

AIX. RichAccess stress test. Multiple ArrayIndexOutOfBoundsException and NPE in server.log files (16707)

Description

The following exception may occur occasionally when the web container tries to clean up expired sessions. This is due to a bug in the IBM JDK.

```
java.lang.ArrayIndexOutOfBoundsException
at java.util.AbstractCollection.toArray(AbstractCollection.java:353)
at org.apache.catalina.session.ManagerBase.findSessions(ManagerBase.java:907)
at org.apache.catalina.session.PersistentManagerBase.processExpires(PersistentManagerBase.java:602)
```

A support ticket has been filed with IBM (PMR# 79545,756,000) but no fix is yet available.

Workaround

None. If the above exception occurs, the expired sessions are cleaned up when the method `PersistentManagerBase.processExpires` is called again later. The application continues to work.

Fail to install the bundle named with -jdk7 when unset JAVA_HOME in solaris 11 Express x86 (16698)

Description

The `java_ee_sdk-6u3-b05-jdk7-solaris-x86-ml.sh` bundle is not installed if the `JAVA_HOME` or `PATH` environment variable is not set properly.

Workaround

Do one of the following:

- Add `/usr/jdk/instances/jdk1.6.0/bin`, the actual JDK installation location, to the `PATH`.
- Add the directory for a stand-alone JDK installation to the `PATH`.
- Set `JAVA_HOME` to `/usr/jdk/instances/jdk1.6.0`.
- Run the `/usr/sbin/pkg developer/java/jdk` command from the root (`/`) directory. If this command reports that the `developer/java/jdk` package is not installed, install that package before installing GlassFish Server.

Non-persistent timers are incorrectly canceled in a clustered environment (17060)

Description

If you attempt to create a non-persistent timer (through `TimerService` or the `@Schedule` annotation) and deploy it to a clustered environment, the timer is canceled before the first time it is run. GlassFish Server looks at the database to see if the timer is there, doesn't see it, and then cancels it. Non-persistent timers aren't stored in the database, so the canceling shouldn't happen.

Workaround

Add the system property `com.sun.ejb.timer.ReadDBBeforeTimeout=false` to stop GlassFish Server from checking the database before running the timer.



Caution – This might have negative ramifications if the cluster also contains persistent timers.

asadmin timeout from HA short execution on AIX (16960)

Description

During High Availability testing on AIX, the Domain Admin Server (DAS) freezes and requires a complete restart.

Workaround

An IBM patch can be downloaded from <https://www-304.ibm.com/support/docview.wss?uid=isglfixinfo117990>.

Could not upgrade from `ogs-3.1-windows-ml.exe` to `ogs-3.1.1-b05-windows-ml.exe` in Windows 7 x86 (16700)

Description

Upgrading from `ogs-3.1-windows-ml.exe` to `ogs-3.1.1-b05-windows-ml.exe` in Windows 7 x86 may produce the error, `Unsupported Upgrade Path`.

Workaround

Convert the `domain.xml` file to native encoding before upgrading. Follow these steps:

1. Back up the `domain.xml` file.
2. Run the following commands:

```
native2ascii domain.xml domain.xml.ascii
native2ascii -reverse -encoding UTF-8 domain.xml.ascii domain.xml
```

3. Run the `asupgrade` command under `c:\glassfish311\glassfish\bin\`.
4. Run the following commands:

```
native2ascii -encoding UTF-8 domain.xml domain.xml.ascii
native2ascii -reverse domain.xml.ascii domain.xml
```

Unable to restart Embedded GlassFish Server instance once a remote EJB is deployed (16916)

Description

Code that performs these steps fails with ORB and EJB container exceptions at the restart step:

1. Start embedded GlassFish Server.
2. Deploy a remote EJB application.
3. Undeploy the application.
4. Stop the server.
5. Restart the server.
6. Redeploy the application.

Workaround

Perform these steps:

1. Start embedded GlassFish Server.
2. Deploy a remote EJB application.
3. Undeploy the application.
4. Stop the server using the `dispose` method.
5. Restart the host virtual machine (JVM).
6. Recreate the embedded GlassFish Server instance.
7. Redeploy the application.

EJB Timer Service is not loaded correctly after Embedded GlassFish Server restart (16230)

Description

Code that performs these steps fails at the redeploy step:

1. Start embedded GlassFish Server.
2. Deploy an application that uses the EJB Timer Service.
3. Undeploy the application.

4. Stop the server.
5. Restart the server.
6. Redeploy the application.

Workaround

Perform these steps:

1. Start embedded GlassFish Server.
2. Deploy an application that uses the EJB Timer Service.
3. Undeploy the application.
4. Stop the server using the `dispose` method.
5. Restart the host virtual machine (JVM).
6. Recreate the embedded GlassFish Server instance.
7. Redeploy the application.

list-secure-admin-principals and list-secure-admin-internal-users both incorrectly prompt for a command operand (17005)

Description

The `list-secure-admin-principals` and `list-secure-admin-internal-users` subcommands of `asadmin` both incorrectly prompt for a command operand.

Workaround

Use the following commands instead:

```
asadmin get "secure-admin.secure-admin-principal.*"  
asadmin get "secure-admin.secure-admin-internal-user.*"
```

Switching log levels persistently breaks logging service (17037)

Description

Changing log levels in the Administration Console causes logging to stop. This is because the level of the `com.sun.enterprise.server.logging.GFFileHandler` logger is changed to OFF.

Workaround

Fix the `com.sun.enterprise.server.logging.GFFileHandler` logger level using the following command:

```
asadmin set-log-levels com.sun.enterprise.server.logging.GFFileHandler=ALL
```

Specify the `--target` option for a server instance other than the domain administration server (DAS).

Stopping Embedded GlassFish Server leaves several daemon threads running (11088)

Description

After you stop embedded GlassFish Server, some daemon threads continue to run. Some of these threads don't exit until the virtual machine (JVM) exits. Restarting embedded GlassFish Server repeatedly in the same JVM can cause Out of Memory errors.

Workaround

Restart the JVM.

Administration Guide on Patching in a Closed Network Incorrectly Lists 3.0.1 Patches (13422800)

Description

The list of patches in “[To Configure a Local Repository Server Inside a Closed Network](#)” in *Oracle GlassFish Server 3.1 Administration Guide* is outdated.

Workaround

The correct list of patches should be:

Operating System	Patch ID
sunos-sparc	147902
sunos-i386	147903
linux-i386	147904
windows-i386	147907
aix-powerpc	147905
mac-universal	147906

Embedded EJB container returns null reference when META-INF/beans.xml is in the classpath (16285)

Description

A mismatch of ant.jar versions between GlassFish Server and NetBeans (or the junit classpath) can cause the embedded EJB container to fail with the following message:

```
SEVERE: Exception while loading the app : java.lang.IncompatibleClassChange Error:
org.apache.tools.ant.listener.MailLogger and org.apache.tools.ant.listener.MailLogger$Values
disagree on InnerClasses attribute
com.google.common.collect.ComputationException: java.lang.IncompatibleClassChangeError:
```

org.apache.tools.ant.listener.MailLogger and org.apache.tools.ant.listener.MailLogger\$Values disagree on InnerClasses attribute at
 com.google.common.collect.ComputingConcurrentHashMap.compute(ComputingConcurrentHashMap.java:218)

Or the following warning:

```
"WARNING: multiple versions of ant detected in path for junit
jar:file:/opt/netbeans-6.9.1/java/ant/lib/ant.jar!/org/apache/tools/ant/Project.class"
```

Workaround

When running GlassFish Server in embedded mode, replace `ant.jar` (in `as-install/modules`) with the one from the `junit` classpath or NetBeans, or temporarily rename or remove this file. Restore this file to the original when running GlassFish Server in nonembedded mode.

Known Issues in GlassFish Server 3.1

The following topics are addressed here:

- “[OWSM] Interop Metro-WLS:NPE WSSECURITYTOKEN NULL for WSSE:SECURITYTOKENREFERENCE (Issue 9716247)” on page 30
- “[JDK_Issue] Performance degradation caused by invoking `setSoLinger` or `setReuseAddress` (Issue 7109)” on page 30
- “[JDK_Issue] IO exception: invalid argument during longevity test (Issue 7529)” on page 30
- “File permissions on domain `/applications` directory can cause `NullPointerException` (Issue 6545)” on page 31
- “[Open Installer] Option `-l` to relocate log files ignored on Windows (Issue 10693)” on page 31
- “Issues occur with ZIP distribution if UAC enabled on Windows Vista (Issue 10755)” on page 31
- “[Open Installer] Start menus not displayed and then empty on Windows Vista (Issue 5087)” on page 32
- “Standalone Update Tool fails with segmentation fault on Solaris (Issue 11222)” on page 32
- “Java EE 6 Managed Bean support not available in app clients launched using Java Web Start (Issue 11257)” on page 32
- “Warning messages when invoking `appClient` script on Mac OS X with Apple Java implementation (Issue 8644)” on page 32
- “Unable to open installation log files using links on the Summary screen on Linux and Mac OS (Issue 6621)” on page 33
- “`updateTool` command does not work if you reinstall into the same install directory on Windows (Issue 8233)” on page 33
- “Problems debugging JPA (Issue 11274)” on page 33
- “There doesn't appear to be any explanation about the `classpath-prefix` and `classpath-suffix` in the GF 3.x documentation (Issue 16082)” on page 34
- “Windows startup menu shows single entry on multiple installation of Glassfish 3.1 (7002744)” on page 34
- “Critical JRockit Issues (7020176)” on page 34

- “New Grizzly integration required for `http://java.net/jira/browse/GRIZZLY-970` (15909)” on page 35
- “ReleaseNotes: document Restart Required issues (Umbrella issue 16040)” on page 35
- “[UB]org.osgi.framework.BundleException during shutdown after upgrade (15441)” on page 36
- “Update coordinates failure with `enable-security-admin` (7017384)” on page 36
- “Man page for `list-supported-cipher-suites` (15998)” on page 37
- “Description of `create-jacc-provider` references JSR196 but the command has nothing to do with JSR196 and JAAS (15999)” on page 37
- “`lazy-init` attribute missing from admin console Edit IIOP Listener page (15975)” on page 38
- “`RMIConnectorStarter` constructs invalid URLs with a literal IPv6 address (15937)” on page 39
- “man-page-review umbrella issue (15929)” on page 39
- “[UB]Release note security permissions required for CDI applications (15456)” on page 40
- “`build 40 : list-jmsdest for cluster1` not working, it just hangs” on page 41
- “`Create Resource Adapter Config` is throwing an exception if JMS is already started (15571)” on page 41
- “[Release Note]Samples. at ant all output was seen URL for samples that don't have a web client (12264)” on page 42
- “`Domain.xml: setting protocol.http-listener-1.http.max-connections` set in 1 or -1 (16025)” on page 42
- “Intermittent issue : Left tree not refreshed when new elements are added/removed in IE and firefox (15997)” on page 43
- “[UB][regression] `jpaRLCreateEMF` failure on sybase (15763)” on page 43
- “Admin Console: intermittent Blank Screen (15633)” on page 43
- “Caching JMS session in a session bean causes errors when invoked by a MDB when under load (15558)” on page 44
- “Domain fails to stop after console loaded (with secure admin enabled) (15482)” on page 44
- “Modifying keyfile path in a newly created config does not properly list the users (15429)” on page 44
- “[BigApps] [STRESS] ~17 occurrences of "EOFException" warnings coming from JMS (15424)” on page 45
- “Mysql ping fails when additional properties are not deleted (14547)” on page 45
- “If TS resource had been changed, tables are not created after server restart (13873)” on page 46
- “GlassFish/Grizzly not able to accept new request if a remote client hangs (6963818)” on page 46
- “`restore-domain` from a config only backup will corrupt the domain directory (7026114)” on page 46
- “JSF `PhaseListener` executed for each virtual host (15809)” on page 47
- “could not find Factory: `javax.faces.context.FacesContextFactory` (16061)” on page 47
- “`NullPointerException` when accessing OSGi web application (15985)” on page 48
- “GlassFish installer needs to prompt user to set MQ admin password (12305750)” on page 48

[OWSM] Interop Metro-WLS:NPE WSSECURITYTOKEN NULL for WSSE:SECURITYTOKENREFERENCE (Issue 9716247)**Description**

There is an issue with web services communication between GlassFish Server Metro and Oracle WebLogic Server when using the Oracle Web Services Manager (OWSM) `wss11_saml_token_with_message_protection_service_policy` policy.

Workaround

The fix for this problem is in Oracle WebLogic Server 11.1.1.4.0. See the [Oracle WebLogic](#) product page for more information.

[JDK_Issue] Performance degradation caused by invoking `setSoLinger` or `setReuseAddress` (Issue 7109)**Description**

When the `setSoLinger` method or the `setReuseAddress` method is invoked, performance is degraded and the following exception is thrown:

```
[#|2009-01-26T00:33:56.325-0800|WARNING|sun-appserver9.1|
javax.enterprise.system.container.web|_ThreadID=17;
_ThreadName=SelectorReaderThread-8084;
_RequestID=11ae0030-c392-4217-8408-cfa7efe0a879;|setSoLinger
exception
java.net.SocketException: Invalid argument
```

This issue is caused by an issue with the JDK software. This issue is resolved in JDK version 7.

Workaround

None.

For the complete report about this issue, see [GLASSFISH-7109](#).

[JDK_Issue] IO exception: invalid argument during longevity test (Issue 7529)**Description**

During an HTTP longevity test, the following exception is thrown 42 hours into the run:

```
[#|2009-04-05T17:41:26.537-0700|SEVERE|glassfish|javax.enterprise.system.core|
_ThreadID=15;_ThreadName=Thread-1;|doSelect
exception
java.io.IOException: Invalid argument
```

The instance and application are still accessible during the run.

This issue is caused by an issue with the JDK software. This issue is resolved in JDK version 7.

Workaround

None.

For the complete report about this issue, see [GLASSFISH-7529](#).

File permissions on domain /applications directory can cause NullPointerException (Issue 6545)**Description**

If a domain's /applications directory restricts access, or if you use directory deployment from a restricted directory, the server cannot read the files in the expanded directory. A NullPointerException error occurs during deployment.

Workaround

Change the file access settings for such directories to grant the server permission to read the directory contents.

For the complete report about this issue, see [GLASSFISH-6545](#).

[Open Installer] Option -l to relocate log files ignored on Windows (Issue 10693)**Description**

Option -l to relocate log files is ignored when used with options -a and -s and the log files are created in the default location.

Workaround

None.

For the complete report about this issue, see [GLASSFISH-10693](#).

Issues occur with ZIP distribution if UAC enabled on Windows Vista (Issue 10755)**Description**

Some features will not work well on Windows Vista with User Account Control (UAC) enabled. One example is the Administration Console, which cannot be launched.

Workaround

Disable UAC and reboot.

For the complete report about this issue, see [GLASSFISH-10755](#).

[Open Installer] Start menus not displayed and then empty on Windows Vista (Issue 5087)**Description**

The Start menu group for GlassFish Server is not displayed after installation is first completed. If you log out and then log back in, the menu group is displayed but it is empty.

Workaround

None.

For the complete report about this issue, see [GLASSFISH-5087](#).

Standalone Update Tool fails with segmentation fault on Solaris (Issue 11222)**Description**

The standalone Update Tool started with the `update tool` command fails with a segmentation fault on Solaris when installing add-on components.

Workaround

Ensure that your system conforms to the standalone Update Tool patch requirements as defined in the [Update Center Release Notes](#).

Update Tool functionality in the Administration Console uses a different Java-based Update Center API and is not affected by this issue.

For the complete report about this issue, see [GLASSFISH-11222](#).

Java EE 6 Managed Bean support not available in app clients launched using Java Web Start (Issue 11257)**Description**

When using Java Web Start to launch an application client, any managed beans in the application client will not be recognized.

Workaround

Launch the application client using the `appClient` script. Managed beans in the application client will be supported normally.

For the complete report about this issue, see [GLASSFISH-11257](#).

Warning messages when invoking `appClient` script on Mac OS X with Apple Java implementation (Issue 8644)**Description**

When you invoke the `appClient` script on Mac OS X systems with Java from Apple installed, the following stack trace is seen twice (only the first few lines are shown here):

```

Intentionally suppressing recursive invocation exception!
java.lang.IllegalStateException: recursive invocation
    at java.lang.ClassLoader.initSystemClassLoader(ClassLoader.java:1394)
    at java.lang.ClassLoader.getSystemClassLoader(ClassLoader.java:1377)
    at sun.security.jca.ProviderConfig$1.run(ProviderConfig.java:64)
    ...

```

Workaround

None needed.

Despite the warning messages, the client will be launched successfully and run normally. These errors are from an issue in the Apple Java implementation.

For the complete report about this issue, see [GLASSFISH-8644](#).

Unable to open installation log files using links on the Summary screen on Linux and Mac OS (Issue 6621)

Description

Installation log files cannot be opened by clicking the links on the Summary page that displays at the end of the installation process in the graphical installer.

Workaround

Access the files manually. The names of the installation log and summary files are *timestamp-install.log* and *timestamp-install-summary.html*. On Linux and Mac systems these files are generated under the *\$TMP* directory.

For the complete report about this issue, see [GLASSFISH-6621](#).

updateTool command does not work if you reinstall into the same install directory on Windows (Issue 8233)

Description

If you reinstall GlassFish Server (with Update Tool) in the same installation directory with the same defaults and invoke Update Tool using the `updateTool` command, you receive a message saying that Update Tool is not installed and are asked if you want to install it. This occurs on Windows systems only.

Workaround

Following uninstallation, manually remove the remaining `.org*` directory before reinstalling.

For more information this issue, see [GLASSFISH-8233](#).

Problems debugging JPA (Issue 11274)

Description

Debugging JPA is difficult because of limited messages from the server.

Workaround

Add the property `org.eclipse.persistence.session.level=INFO` to the `logging.properties` file. You can then use the Administration Console to control EclipseLink loggers.

For the complete report about this issue, see [GLASSFISH-11274](#).

There doesn't appear to be any explanation about the classpath-prefix and classpath-suffix in the GF 3.x documentation (Issue 16082)

Description

In previous GlassFish Server versions, the JVM options provided a `classpath-prefix` and `classpath-suffix` attributes that made it possible to add JAR files or directories either in front of, or after the application server's system classpath. These options are no longer present in GlassFish Server 3.1.

Starting with GlassFish Server v3 Preview, after switching to OSGi, the `classpath-prefix` and `classpath-suffix` options have been labeled “do not use.”

Workaround

The `classpath-prefix` was typically used to substitute another package for one of the GlassFish Server packages, for example if a newer one was available. This same result can be achieved by using the Java Endorsed Standards Override Mechanism or on a per-application basis with the `--libraries` option for the `deploy` subcommand. These are documented in the [Oracle GlassFish Server 3.1 Application Development Guide](#). The Java Optional Package Mechanism, which is documented in this guide, does what `classpath-suffix` used to do.

Windows startup menu shows single entry on multiple installation of Glassfish 3.1 (7002744)

Description

Windows Start Menu shows a single GlassFish Server even when multiple GlassFish Server installations are installed.

Workaround

None. When running GlassFish Server from the Start menu, the most recent installation starts. Similarly, when uninstalling from the Start menu, the last installed version is uninstalled.

Critical JRockit Issues (7020176)

Description

There are two critical JRockit issues when running longevity tests (24x7) on GlassFish Server 3.1. The issues are documented at:

- https://bug.oraclecorp.com/pls/bug/webbug_print.show?c_rptno=11070336

- https://bug.oraclecorp.com/pls/bug/webbug_print.show?c_rptno=11070336

The GlassFish Server certification matrix has been updated and JRockit has been removed. However, the installer UI still has an image that mentions JRockit support as a new feature.

Workaround

None JRockit is not supported on GlassFish Server 3.1.

New Grizzly integration required for <http://java.net/jira/browse/GRIZZLY-970> (15909)

Description

There is a known security vulnerability with Grizzly when running Java Runtime Environment 6 versions prior to Update 24. See <http://java.net/jira/browse/GRIZZLY-970> for details.

Workaround

Use Java Runtime Environment 6 update 24 or greater to avoid the vulnerability. Oracle has released a security alert for this issue. For instructions on how to resolve it, see http://blogs.oracle.com/security/2011/02/security_alert_for_cve-2010-44.html.

For the complete report about this issue, see [GLASSFISH-15909](#).

ReleaseNotes: document Restart Required issues (Umbrella issue 16040)

Description

There are a number of configuration functions for which a server restart is required, and a number for which a restart is not required. However, the underlying component modules for the functions listed below are not correctly prompting the user about the restart requirements. These incorrect or missing restart prompts occur regardless of whether the given function is performed from the command line or through the Administration Console.

This is an umbrella issue for the sub-issues listed below. The URL for the JIRA query that you can use to display all these sub-issues is <http://java.net/jira/secure/IssueNavigator.jspa?mode=hide&requestId=10358>.

- [GLASSFISH-16100](#): Restart required for java mail session debug change, exception in server.log
- [GLASSFISH-16013](#): RestartRequired: changing http port does not trigger restart required message for a standalone instance
- [GLASSFISH-16010](#): Restart Required: After changing JMS Type server instance is not reported as requiring restart
- [GLASSFISH-15758](#): Restart Required status for remote instances does not get reset even when instance is restarted.
- [GLASSFISH-15638](#): Show "restart required" status when IIOP service configuration / port is changed

- [GLASSFISH-15635](#): [UB]Show "restart required" status when a new resource is created or deleted
- [GLASSFISH-15629](#): [UB]Show "restart required" status when JDBC connection pool properties are changed
- [GLASSFISH-15619](#): [UB]show "restart required" status when connector connection pool properties are changed
- [GLASSFISH-15517](#): "Restart Required" when no changes are made to JVM options
- [GLASSFISH-15507](#): [UB]DOC: Server restart is required after secure-admin is enabled or disabled
- [GLASSFISH-14515](#): [UB]Restart not required for changes in resources
- [GLASSFISH-3850](#): Changing default realm does not indicate that a server restart required
- [GLASSFISH-15987](#): Display Restart Required when a system-property which is referenced by a jvm-option is changed. This issue exists in GlassFish Server 3.1 but has been fixed in GlassFish Server 3.1.1.

Workaround

Restart the DAS after performing any of the functions listed above.

For the complete report about this issue, see [GLASSFISH-16040](#).

[UB]org.osgi.framework.BundleException during shutdown after upgrade (15441)

Description

When shutting down a server that was started with the `java -jar` command, a large number of exceptions may sometimes be displayed in the console. Shutting down a server that was started with the `--verbose` option also causes this error.

Workaround

These are harmless exceptions and can be ignored. The errors are only displayed in the console when the server that is being shut down was started in either `--verbose` mode or by using the `java -jar` command. Also note that the `--upgrade` option implies `--verbose`, so shutting down a server that was started with the `--upgrade` option may also produce this error.

For the complete report about this issue, see [GLASSFISH-15441](#).

Update coordinates failure with `enable-security-admin` (7017384)

Description

The `asadmin update-admin-server-coordinates` subcommand fails if `secure-admin` is enabled.

Workaround

Either disable `secure-admin`, or use the `--adminport` option with the `update-admin-server-coordinates` subcommand to explicitly set the port you want to use.

For more information, see [enable-secure-admin\(1\)](#).

Man page for `list-supported-cipher-suites` (15998)

Description

The example in the man page for the `list-supported-cipher-suites` subcommand lists the Kerberos cipher (`*_KRB5_*`) suites, but the Kerberos suites are not supported in GlassFish Server 3.1.

Workaround

None. This is a documentation error. Kerberos cipher suites are not supported in GlassFish Server 3.1.

Description of `create-jacc-provider` references JSR196 but the command has nothing to do with JSR196 and JAAS (15999)

Description

The subcommand description in `create-jacc-provider` man page references JSR196 and JAAS but the subcommand has nothing to do with those specifications. In addition, there is a typographical error in the subcommand example. Finally, the subcommand description for the `delete-jacc-provider` should be reworded.

Workaround

These man page errors will be corrected in the next GlassFish Server release. In the meantime, note the following:

- The subcommand description in `create-jacc-provider` man page should read as follows:

The `create-jacc-provider` subcommand creates a JSR-115-compliant Java Authorization Contract for Containers (JACC) provider that can be used for the authorization of applications running in GlassFish Server. The JACC provider is created as a `jacc-provider` element within the `security-service` element in the domain's `domain.xml` file.

The default GlassFish Server installation includes two JACC providers, named `default` and `simple`. Any JACC providers created with the `create-jacc-provider` subcommand are in addition to these two default providers. The default GlassFish Server JACC providers implement a simple, file-based authorization engine that complies with the JACC specification. The `create-jacc-provider` subcommand makes it possible to specify additional third-party JACC providers.

Any number of `jacc-provider` elements can be created under the `security-service` but the GlassFish Server runtime will use only one of them at any given time. The `jacc` attribute on the `security-service` points to the name of the provider that is currently in use by GlassFish Server. Any change to the `jacc` attribute (to make it point to a different `jacc-provider`) would require a server restart. This command is supported in remote mode only.

- The `create-jacc-provider` subcommand sample should read:

```
asadmin> create-jacc-provider
--policyproviderclass com.sun.enterprise.security.provider.PolicyWrapper
--policyconfigfactoryclass com.sun.enterprise.security.provider.PolicyConfigurationFactoryImpl
```

- The subcommand description in `delete-jacc-provider` man page should read as follows:

The JACC provider used by GlassFish Server for authorization is specified by the `jacc` attribute in the `security-service` configuration element. If you are deleting the provider pointed to by the `jacc` attribute, ensure that the attribute value is also changed to the name of some other `jacc-provider` that exists under the `security-service`. Any change to the `jacc` attribute for a running service requires a server restart.

lazy-init attribute missing from admin console Edit IIOP Listener page (15975)

Description

It is not possible to set the `lazy-init` value for an IIOP listener from either the GlassFish Server Administration Console or the command line. Even the `asadmin set` command cannot be used to change the value.

Workaround

Currently, the only workaround for this issue is to edit the `domain.xml` file directly. For example, the `domain.xml` file could contain a property similar to the following:

```
<iiop-listener port="3700" id="orb-listener-1" address="0.0.0.0"
lazy-init="true"></iiop-listener>
```

In this example, the `lazy-init` property is enabled, and it can be disabled by changing the `lazy-init` value to `false`.

Note that `lazy-init` is disabled by default, so the `domain.xml` file could contain an `iiop-listener` element similar to the following:

```
<iiop-listener port="3700" id="orb-listener-1" address="0.0.0.0"></iiop-listener>
```

In this case, to enable `lazy-init`, you would add the following property to the `iiop-listener` element:

```
lazy-init="true"
```

For the complete report about this issue, see [GLASSFISH-15975](#).

RMICConnectorStarter constructs invalid URLs with a literal IPv6 address (15937)

Description

When using GlassFish Server 3.1 on a system that uses IPv6 addressing, and there is a need to make the JMX service listen on a specific IPv6 address, and the address is specified as a literal IPv6 address, the `RMICConnectorStarter` class constructs an invalid URL in the start method.

For example, if your `domain.xml` contains the following:

```
<jmx-connector port="8686" address="e80::216:3eff:fe3e:4c35" security-enabled="false"
auth-realm-name="admin-realm" name="system"></jmx-connector>
```

The server will not open the JMX RMI port successfully and exceptions will be reported in the log file.

Workaround

The recommended workaround for this problem is to not use a literal address. Instead, define a name for the address, either in DNS or the `hosts` file, and then use that name as the value for the address for the JMX listener.

An alternate workaround is to enclose the address value in square braces. For example, use:

```
<jmx-connector port="8686" address="[e80::216:3eff:fe3e:4c35]" security-enabled="false"
auth-realm-name="admin-realm" name="system"></jmx-connector>
```



Caution – This issue is planned to be fixed in either a 3.1 patch or a subsequent GlassFish Server release. This alternate workaround will cause the system to operate incorrectly when the issue is fixed. The square braces will need to be removed after the fix is applied.

For the complete report about this issue, see [GLASSFISH-15937](#).

man-page-review umbrella issue (15929)

Description

During the final GlassFish Server 3.1 development phase, fixes were made to a number of man pages after the man pages had already been localized. For users of non-EN locales, these corrections will not appear in the man pages, but are correctly displayed in the *Oracle GlassFish Server 3.1-3.1.1 Reference Manual*.

This is an umbrella issue that includes the following man page review issues:

- GLASSFISH-15875 man-page-review: `list-admin-objects`, `list-connector-resources`, `list-jndi-resources`
- GLASSFISH-15958 man page: webtier CLIs

- GLASSFISH-15878 man-page-review : create-jdbc-connection-pool
- GLASSFISH-15877 man-page-review : remove the section "Application Scoped Resources" from multiple resource man-pages
- GLASSFISH-15879 man-page-review : note about resource-ref in multiple resource related commands
- GLASSFISH-15962 Man page for update-node-config is wrong about SSH nodes
- GLASSFISH-15876 man-page-review : list-connector-resources, list-jndi-resources
- GLASSFISH-15873 man-page-review : delete-resource-adapter-config
- GLASSFISH-15872 man-page : flush-connection-pool, ping-connection-pool
- GLASSFISH-15874 man-page-review : delete-connector-resource, delete-jdbc-resource, delete-jndi-resource
- GLASSFISH-15566 change-master-password --help has wrong content
- GLASSFISH-15485 Error in man pages for restart-local-instance, start-local-instance, stop-local-instance
- GLASSFISH-15867 documentation of create-system-properties has inconsistencies
- GLASSFISH-15919 man-page-review: jms CLIs
- GLASSFISH-3198 Synopsis for asadmin help create-custom-resource wrong
- GLASSFISH-15564 create-http-health-checker man page error
- GLASSFISH-15956 man page: remove --upgrade option from start-local-instance
- GLASSFISH-15947 Remove --upgrade from start-local-instance man page

Workaround

The correct man pages are displayed in GlassFish Server distributions for the EN locale, and will be available for all locales in GlassFish Server 3.2. In the meantime, users of non-EN 3.1 locales should refer to the *Oracle GlassFish Server 3.1-3.1.1 Reference Manual* for the latest subcommand usage instructions.

For the complete report about this issue, see [GLASSFISH-15929](#).

[UB]Release note security permissions required for CDI applications (15456)

Description

It is necessary to grant additional permissions to CDI-enabled Java EE applications that are deployed in a GlassFish Server 3.1 domain or cluster for which security manager is enabled. These additional permissions are not required when security manager is disabled.

Workaround

To deploy CDI-enabled Java EE applications in a GlassFish Server 3.1 domain or cluster for which security manager is enabled, add the following permissions to the applications:

```
grant codeBase "file:${com.sun.aas.instanceRoot}/applications/[ApplicationName]" {
    permission java.lang.reflect.ReflectPermission "suppressAccessChecks";
};
```

For example, for a CDI application named `foo.war`, add the following permissions to the `server.policy` file, restart the domain or cluster, and then deploy and use the application.

```
grant codeBase "file:${com.sun.aas.instanceRoot}/applications/foo" {
    permission java.lang.reflect.ReflectPermission "suppressAccessChecks";
};
```

See “Changing Permissions for an Application” in *Oracle GlassFish Server 3.1 Application Development Guide* for instructions on modifying application permissions. See “Enabling and Disabling the Security Manager” in *Oracle GlassFish Server 3.1 Application Development Guide* for instructions on enabling and disabling security manager. For the complete report about this issue, see [GLASSFISH-15456](#).

build 40: list-jmsdest for cluster1 not working, it just hangs

Description

Listing JMS physical destinations causes the DAS to hang if the MQ Broker for the instance is not started. This issue occurs in both the Administration Console and when using the `asadmin list-jmsdest` subcommand.

Workaround

All JMS destination subcommands, including `list-jmsdest`, `create-jmsdest`, `delete-jmsdest`, and `flush-jmsdest` requires the MQ broker for the instance to be running. For more information, see the *Oracle GlassFish Server Message Queue 4.5 Release Notes*.

Create Resource Adapter Config is throwing an exception if JMS is already started (15571)

Description

Creating a JMSRA resource adapter configuration and setting the thread pool to `http-thread-pool` generates an exception in the `server.log`.

Workaround

GlassFish Server 3.1 provides Grizzly-based and ORB-based thread pool implementations. By default, the `create-resource-adapter-config` subcommand takes a `thread-pool ID` parameter that is based on an ORB thread pool. When a *thread-pool* is initialized, the ORB thread pool manager verifies that the *thread-pool* is not already being used by the Grizzly thread pool manager. The *thread-pool* is initialized only if Grizzly is not already using the configuration.

For more information, see [Chapter 15, “Administering the Object Request Broker \(ORB\)”](#) in *Oracle GlassFish Server 3.1 Administration Guide*. For the complete report about this issue, see [GLASSFISH-15571](#).

[Release Note]Samples. at ant all output was seen URL for samples that don't have a web client (12264)

Description

When running the GlassFish Server sample files, the output generated by the `ant all` command displays deployment URLs even for applications that do not have a Web client. For example, the `criteriaQuery` and `hello-jaxws2.2` sample applications do not have a Web client, but `ant all` still generates `deploy-url` messages for them, similar to the following:

```
Application deployed at http://localhost:8080/criteriaQuery
Application deployed at http://localhost:8080/hello-jaxws2.2
```

Workaround

This is a simple message string error, and does not affect the functionality of the samples. Ignore this message for applications that do not have a Web client and corresponding URL.

For the complete report about this issue, see [GLASSFISH-12264](#).

Domain.xml: setting protocol.http-listener-1.http.max-connections set in 1 or -1 (16025)

Description

The man page for the `create-transport` man page states the following for the `--maxconnectionscount` option:

The maximum number of connections for the network listener that references this transport. A value of `-1` specifies no limit. The default value is `4096`.

However, because of a GlassFish Server bug, setting the `--maxconnectionscount` value to `-1` disables keep-alive for the connection.

Workaround

Use the following values for `--maxconnectionscount`:

`-1`

Currently does not correctly set the `--maxconnectionscount` to unlimited. Instead, specify some big number, up to `Integer.MAX_VALUE`.

`1`

Process one keep-alive request, and then close the connection after processing the second request on the same connection.

0

Disable keep-alive for the connection

For more information, see “Timeout” in *Oracle GlassFish Server 3.1 Performance Tuning Guide*. For the complete report about this issue, see [GLASSFISH-16025](#).

Intermittent issue : Left tree not refreshed when new elements are added/removed in IE and firefox (15997)

Description

When running the GlassFish Server Administration Console in some versions of Internet Explorer and Firefox, the node tree on the left side of the Administration Console is not always updated correctly when new elements are added to the server configuration. For example, the node tree may not update correctly after adding a new JDBC Pool, resource, or virtual server. This issue is not consistently reproducible and is very intermittent.

Workaround

Reload the Administration Console by pressing the Home button or the browser's reload button to update the values in the node tree.

For the complete report about this issue, see [GLASSFISH-15997](#).

[UB][regression] jpaRLCreateEMF failure on sybase (15763)

Description

When using the DataDirect driver with Sybase, inserting an entity that uses `GenerationType.IDENTITY` will fail. The problem is that the DataDirect driver creates a stored procedure for every parameterized prepared statement.

Workaround

Set the `PrepareMethod=direct` property on the corresponding datasource to change the default DataDirect behavior for handling prepared statements.

For the complete report about this issue, see [GLASSFISH-15763](#).

Admin Console: intermittent Blank Screen (15633)

Description

The Administration Console sometimes simply displays a blank screen even though the status bar in the browser window indicates that the page loading is complete. This can happen if you have been working in the Administration Console and then restart the server from the command line. This can also happen after upgrading or reinstalling GlassFish Server.

Workaround

This issue can usually be resolved by doing a Shift+Reload in your browser window. In some cases, particularly when the error occurs after a GlassFish Server upgrade or reinstallation, it may be necessary to clear your browser's cache, cookies, and active logins going back at least one day in the browser history.

For the complete report about this issue, see [GLASSFISH-15633](#).

Caching JMS session in a session bean causes errors when invoked by a MDB when under load (15558)**Description**

A stateless session bean should not save JMS connections or sessions in fields of the bean. Applications that do so may encounter errors.

Workaround

To avoid this issue, if a stateless session bean's business method requires the use of a JMS connection and session, then the business method should create the JMS connection and session, use it to send or receive messages, and then close the connection and session before returning.

For the complete report about this issue, see [GLASSFISH-15558](#).

Domain fails to stop after console loaded (with secure admin enabled) (15482)**Description**

Server fails to stop when in secure admin mode and the Administration Console has been loaded.

Workaround

This is just one of a number of issues that may occur when using a JDK version lower than 1.6.0_22. Ensure that you are using JDK 1.6.0_22 or later. See “[Hardware and Software Requirements](#)” on page 15 for complete information about GlassFish Server 3.1 JDK requirements.

For the complete report about this issue, see [GLASSFISH-15482](#).

Modifying keyfile path in a newly created config does not properly list the users (15429)**Description**

If an `asadmin set` subcommand is executed to change a `realm`-property for a realm that is already loaded (perhaps due to an earlier CLI command targeted at the realm), then the realm continues to behave as if the `set` subcommand was not executed.

Workaround

Restart GlassFish Server after using a set subcommand to change a property for a realm that has already been loaded.

For the complete report about this issue, see [GLASSFISH-15429](#).

[BigApps] [STRESS] ~17 occurrences of "EOFException" warnings coming from JMS (15424)

Description

Very occasionally, WARNING messages that state "java.io.EOFException: Trying to read 72 bytes. Already read 0 bytes" may be observed in the server log.

Workaround

If no other messages or exceptions are logged at the same time in either the server or broker logs these messages may be ignored.

For the complete report about this issue, see [GLASSFISH-15424](#).

MySQL ping fails when additional properties are not deleted (14547)

Description

Performing a MySQL ping after setting nonstandard for `mysql-pool`, the following error message is displayed:

```
Ping failed Exception - Access denied to execute this method :
setLargeRowSizeThreshold Please check the server.log for more details.
```

Workaround

Only set the standard documented properties for `mysql-pool`. These properties are as follows:

- "databaseName"
- "serverName"
- "port"
- "networkProtocol"
- "user"
- "password"
- "roleName"
- "datasourceName"

For more information, see "Configuration Specifics for JDBC Drivers" in *Oracle GlassFish Server 3.1 Administration Guide*. For the complete report about this issue, see [GLASSFISH-14547](#).

If TS resource had been changed, tables are not created after server restart (13873)**Description**

If an EJB Timer resource is changed after the EJB Timer Service is started on a previous resource, the EJB Timer table is not created after a server restart.

Workaround

The DAS must be restarted if any automatic timers are to be deployed. In addition, unless the EJB Timer table is created manually, the *domain-dir/generated/ejb-timer-service-app* marker file also needs to be removed.

For the complete report about this issue, see [GLASSFISH-13873](#).

GlassFish/Grizzly not able to accept new request if a remote client hangs (6963818)**Description**

When closing an idle or expired connection, Grizzly waits a period of time, called the *linger time*, for any pending data transmission to complete. If the client on the connection is not network accessible, GlassFish Server might appear to hang.

Workaround

Add the following JVM option to the configuration:

```
-Dcom.sun.enterprise.web.connector.grizzly.linger=-1
```

restore-domain from a config only backup will corrupt the domain directory (7026114)**Description**

When a domain is restored using a configuration-only backup, the contents of the domain's config directory are restored but the other contents of the directory are lost, thus corrupting the domain.

Workaround

Perform the following steps to restore a domain directory from a configuration-only backup.

The domain name to be restored in this example is named `domain1`. The configuration is restored to a temporary directory named `/tmp/domain1`. Once the configuration is restored, the old configuration is moved aside and the restored configuration is copied from the temporary directory to the domain directory.

1. Create a temporary directory to hold the restored configuration files for the domain.

For example:

- ```
mkdir /tmp/domain1
```
2. Restore the domain.
 

```
asadmin restore-domain --backupdir /tmp/das-backups --domaindir /tmp domain1
```
  3. Stop the domain.
  4. Change to the domain directory that is actually being restored.
 

```
cd domain-dir
```
  5. Rename the existing domain config directory.
 

For example:

```
mv config config-
```
  6. Copy the domain configuration from the /tmp directory into the real domain config directory.
 

```
cp /tmp/domain1 config
```

### JSF PhaseListener executed for each virtual host (15809)

#### Description

JSF 2.0 PhaseListeners are executed on each virtual server for any given request. In a multiple virtual server scenario, this means the PhaseListener is invoked multiple times, once for each VM.

The root cause of the problem, like most Mojarra-with-Virtual Server problems, is the invalidity of the assumption that there is always just one ServletContext per application per VM. In the case of  $N$  virtual servers, there are  $N$  ServletContext instances (and attendant lifecycle listener calls) per application per VM. For example, in a seven-node virtual server scenario, the PhaseListeners are invoked seven times.

#### Workaround

Create a custom LifecycleFactory instance that correctly handles the virtual server case. Details for doing this are provided in [http://java.net/jira/secure/attachment/44826/i\\_gf\\_15809-workaround.txt](http://java.net/jira/secure/attachment/44826/i_gf_15809-workaround.txt).

For the complete report about this issue, see [GLASSFISH-15809](#).

### could not find Factory: javax.faces.context.FacesContextFactory (16061)

#### Description

JSF/Seam 3 applications intermittently fail to start, generating an error message similar to the following:

```
WARNING: StandardWrapperValve[FacesServlet]: PWC1382: Allocate exception
for servlet FacesServlet
java.lang.IllegalStateException: Application was not properly initialized at
startup, could not find Factory: javax.faces.context.FacesContextFactory
```

This issue may occur when a JSF application does not register the Faces Servlet in the application's `web.xml` file. The `com.sun.faces.config.FacesInitializer` will attempt to initialize the JSF Servlet, which normally works without problem, except when Seam Faces is included in the application, which also tries to initialize the Servlet. This issue is not deterministic because of the random ordering of listeners by GlassFish Server.

### Workaround

Add the following code to the `web.xml` file for the application:

```
<servlet>
<servlet-name>Faces Servlet</servlet-name>
<servlet-class>javax.faces.webapp.FacesServlet</servlet-class>
<load-on-startup>1</load-on-startup>
</servlet>
```

For the complete report about this issue, see [GLASSFISH-16061](#).

### NullPointerException when accessing OSGi web application (15985)

#### Description

OSGi JSF applications appear to deploy correctly, but the first attempt to access the application through a Web browser generates a `NullPointerException` error. In addition, subsequent attempts to redeploy the application fail.

#### Workaround

This issue has been corrected in GlassFish Server 3.1.1. If using GlassFish Server 3.1, the workaround is to omit the `--type osgi` option when deploying the application with the `asadmin deploy` subcommand.

For example, the following command will generate the `NullPointerException`:

```
asadmin> deploy --type osgi --contextroot foo-web /foo_apps/foo-web.war
```

The error is not generated when the `--type osgi` option is omitted:

```
asadmin> deploy --contextroot foo-web /foo_apps/foo-web.war
```

For the complete report about this issue, see [GLASSFISH-15985](#).

### GlassFish installer needs to prompt user to set MQ admin password (12305750)

#### Description

GlassFish Server Message Queue (MQ) 4.5 and GlassFish Server 3.1 are now installed together through a common installation program. Prior versions of MQ and GlassFish Server were installed separately through their own installation programs.

The older MQ installation program prompted the user to set an MQ administrator password, but the GlassFish Server 3.1 installer does not. Instead, in GlassFish Server 3.1 with MQ 4.5, the default behavior at MQ instance startup is to generate content for a file-based user repository configuration file named `passwd`. By default, this file-based user repository is configured as the MQ repository to be used to authenticate client connections to the broker. The default `passwd` file contains the following user entries:

User Name	Password
admin	admin
guest	guest

These credentials may not match those used for the GlassFish Server administrator.

### Workaround

Ideally, the GlassFish Server administrator and MQ administrator should share the same user credentials because the two products are now the same. Functionality for setting the MQ administrator user name and password during product installation are planned for future versions of the GlassFish Server installer.

In the meantime, there are several post-installation workarounds, listed below, that you can perform on the MQ side with the `imqusermgr` User Manager utility to change or set the MQ administrator user name and password. In all cases, see [“User Manager Utility” in Oracle GlassFish Server Message Queue 4.5 Administration Guide](#) for more detailed information about this utility.

- **Change the credentials for an existing MQ Broker instance.**

Use the `imqusermgr` User Manager utility to administer MQ Broker passwords.

- **Set the credentials that will subsequently be used for all new MQ Broker instances.**

The instructions vary slightly, depending on whether you want to create a new MQ administrator user name or if the user name will remain unchanged.

- **If creating a new MQ administrator user name**

1. Delete the existing MQ administrator user name.

```
as-install-parent/mq/imqusermgr delete -u admin -c -varhome tmp-dir -s -f
```

2. Create the new MQ administrator user name.

```
as-install-parent/mq/imqusermgr add -u user-name -p password -c -varhome tmp-dir -s -f
```

- **If reusing the existing MQ administrator user name and only updating the password**

1. Update the administrator password.

```
as-install-parent/mq/imqusermgr update -u admin -p password -c -varhome tmp-dir -s -f
```

2. Move the MQ Broker `accesscontrol.properties` file to the GlassFish Server installation.

```
mv tmp-dir/instances/imqbroker/etc/accesscontrol.properties as-install-parent/mq/etc
```

### Known Issues in GlassFish Server 3.1 Fixed in 3.1.1

- “Win. Deployment with contextroot: Application [] contains no valid components (13774)” on page 50
- “[UB]Accessing encoded URLs throws 403: Forbidden (15709)” on page 51
- “injection points in one bean deployment archive cannot be satisfied by a bean in a separate bean archive, even when they are from libraries in the same module (web archive) (15721)” on page 52
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- “Column `APPLICATIONID` is missing from bundled SQL scripts for EJB timer table creation. (15986)” on page 53
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- “Cluster -> Resources tab: Should not include resources not included in the web distribution in the table dropdown (15925)” on page 58
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- “`@DSD` defined in EJBs bundled in a `.war` is not available for JPA during `prepare()` phase (15865)” on page 59

### Win. Deployment with contextroot: Application [] contains no valid components (13774)

#### Description

On Windows, under certain very specific conditions, deploying the same or different applications using the same app name can result in unexpected errors.

To encounter this problem all of the following conditions must be true:

- User deploys an application with name `appName`.
- One (or more) JAR files in the expanded `applications/appName` directory are locked as part of deployment or accessing the application, so that the JAR(s) are not removed during undeployment.
- The same or another application is later deployed with the same name.
- The new application does not contain the previously-locked JAR file in the same location.
- Some code in GlassFish searches all JARs in the application for some reason (for example, annotation detection, persistence unit searching, sniffer work to identify the type of application).

GlassFish Server treats the leftover file as part of the second application, even though it is not. This can cause various errors, most notably "Application [] contains no valid components."

### Workaround

1. Avoid deploying different applications using the same app name.
2. If you need to redeploy an application but have removed a file from the app and that file remains in the `applications/appName` directory tree even though you redeploy the app, consider deploying the revised app using a different app name.
3. If you see this error, restart the DAS (use the `asadmin stop-domain` subcommand or stop the domain using the Administration Console) and then deploy or redeploy the app.

For the complete report about this issue, see [GLASSFISH-13774](#).

### [UB]Accessing encoded URLs throws 403: Forbidden (15709)

#### Description

A 403: Forbidden error is displayed when browsing to an application that contains an encrypted URL and is deployed on Oracle Web Server 7 on Windows 2008.

This is not a GlassFish Server problem, but is caused by a Web Server fix that disallows URIs with a ":" value.

#### Workaround

Modify the `obj.conf` file for the Web Server, as follows:

Replace:

```
PathCheck fn="uri-clean"
```

With:

```
<Client type="-magnus-internal/lbplugin">
PathCheck fn="uri-clean"
</Client>
```

For the complete report about this issue, see [GLASSFISH-15709](#).

### **injection points in one bean deployment archive cannot be satisfied by a bean in a separate bean archive, even when they are from libraries in the same module (web archive) (15721)**

#### **Description**

The Bean Deployment Archive (BDA) visibility graph does not correctly implement the CDI and Java EE 6 specifications. Beans in `WEB-INF/lib` are made available to beans in `WEB-INF/classes`, but the converse is not true; that is, beans in `WEB-INF/classes` cannot be injected into `WEB-INF/lib` injection points. In addition, beans in one JAR in `WEB-INF/lib` cannot be injected into beans in a different JAR in the same `WEB-INF/lib`. According to the CDI and EE6 Platform specifications, both of these scenarios should work. This issue occurs because of the way Weld handles cyclic references among BDAs.

#### **Workaround**

This issue should be fixed in GlassFish Server 3.1.1. If using GlassFish Server 3.1, you can repackage the application such that either of the following conditions are met:

- Beans in `WEB-INF/classes` are not used or injected into classes bundled in `WEB-INF/lib/*.jar`
- All Beans are available as part of `WEB-INF/classes`; that is, collapse the bundled library in `WEB-INF/lib/*.jar` into `WEB-INF/classes`

For the complete report about this issue, see [GLASSFISH-15721](#).

### **Glassfish Installer does not update MQ config file (`imqenv.conf`) with values (15724)**

#### **Description**

The GlassFish Server Installer does not update the MQ configuration file (`imqenv.conf`) with appropriate system values (for example, `JDK_HOME` directory). This would be useful when MQ is run independently from GlassFish Server.

#### **Workaround**

Manually update the `imqenv.conf` file (located in the `MQ_HOME/etc` directory). The MQ executables will use the `java` that is in the user's `PATH`. The user can also specify another Java Runtime by setting `IMQ_DEFAULT_JAVAHOME` in the `imqenv.conf` file.

For example, on Unix:

```
IMQ_DEFAULT_JAVAHOME=/usr/jdk/jdk1.6.0
```

On Windows:

```
IMQ_DEFAULT_JAVAHOME=c:\path\to\jdk
```

For the complete report about this issue, see [GLASSFISH-15724](#).

### Remote EJBs fail with `ClassNotFoundException` in embeddable GlassFish (15775)

#### Description

This is a Thread context class loader issue. `GlassFish.start()` sets the context class loader to an internal class loader and does not reset it after the call is complete. As a consequence, the user's classes can no longer be loaded using the context class loader in the thread that starts the server.

#### Workaround

A possible workaround is to set the context class loader before looking up the remote EJB; for example:

```
GlassFish gf = GlassFishRuntime.bootstrap().newGlassFish();
gf.start();
gf.getDeployer().deploy(myapp);
ClassLoader oldCl = Thread.currentThread().getContextClassLoader();
try { Thread.currentThread().setContextClassLoader(getClass().getClassLoader());
 new InitialContext().lookup(myEJB); }
finally { Thread.currentThread().setContextClassLoader(oldCl); }
```

For the complete report about this issue, see [GLASSFISH-15775](#).

### Column `APPLICATIONID` is missing from bundled SQL scripts for EJB timer table creation. (15986)

#### Description

When creating a new EJB timer in GlassFish Server 3.1, the bundled timer table creation scripts generate corresponding `.sql` files that are missing the `APPLICATIONID` column.

The actual table for the timer is created automatically by the timer service on first deployment. The generated `.sql` files are for documentation purposes only, so this issue does not affect the EJB timer or the timer service in any way.

#### Workaround

None required. The `.sql` files generated by the timer creation scripts serve no direct functional purpose, but can be used as a reference point if you want to create a timer table yourself. To see the column definition as it should be, look at the corresponding `.sql` file for the actual timer table.

For the complete report about this issue, see [GLASSFISH-15986](#).

## create-jvm-options subcommand options incorrectly parsed by asadmin (16037)

### Description

The `asadmin` utility is incorrectly interpreting `create-jvm-options` subcommand options as `asadmin` utility options. As a result, attempts to create a JVM option, such as `-Xrs`, fail; for example:

```
asadmin> create-jvm-options -Xrs
Non-boolean option: X, not allowed in argument: -Xrs
Usage: asadmin [-H|--host <host(default:localhost)>]
 [-p|--port <port(default:4848)>] [-u|--user <user(default:admin)>]
 [-W|--passwordfile <passwordfile>]
 [-t|--terse[=<terse(default:false)>]]
 [-s|--secure[=<secure(default:false)>]]
 [-e|--echo[=<echo(default:false)>]]
 [-I|--interactive[=<interactive(default:true)>]]
 [-?|--help[=<help(default:false)>]]
 create-jvm-options [command-specific options]
Command create-jvm-options failed.
```

The usage message appears to be in the style of a v2 usage message. In GlassFish Server 3.1, `asadmin` utility options are not provided in the usage message.

### Workaround

To workaround this problem, run the `create-jvm-options` subcommand in single mode specifying at least one `asadmin` utility option. For example:

```
dashost$ asadmin --host dashost create-jvm-options -Xrs
Created 1 option(s)
Command create-jvm-options executed successfully.
```

For the complete report about this issue, see [GLASSFISH-16037](#).

## appliance in cygwin passing extra empty string (16044)

### Description

Using Cygwin on Windows, the app client container (ACC) passes an extra empty-string argument to the client's main method. This might result in the app client throwing an `index-out-of-range` exception if the client does not guard itself against empty argument values.

### Workaround

1. If your client works with a variable number of arguments make sure that it protects itself against empty argument values.
2. Avoid using Cygwin on Windows for clients that cannot be made to guard against an empty argument value.

For the complete report about this issue, see [GLASSFISH-16044](#).

### 3.1 GlassFish installer takes longer to bootstrap Update Center than in 3.0.1 (16067)

#### Description

The GlassFish Server 3.1 Update Center may take significantly longer to load the first time it is launched than it did in GlassFish Server 3.0.1. This is caused by a performance regression in Update Center, not in GlassFish Server itself. This performance regression is documented in JIRA issue [UPDATECENTER2-2175](#).

#### Workaround

None, although download and program loading times can be improved by bypassing any proxy servers.

You can verify that the Update Center package download process is proceeding by watching the file count in the `glassfish3/.org.opensolaris/pkg/download/number` directory.

For the complete report about this issue, see [GLASSFISH-16067](#).

### On Windows the first time pkg.bat or updatetool.bat is run they may echo garbage (16094)

#### Description

On Windows, if you do not install Update Center as part of the GlassFish Server product installation, the first time you run `pkg.bat` (or `updatetool.bat`) the scripts echo a large amount of garbage output before prompting you to continue with the Update Center installation. The Update Center installation works, but the large amount of initial garbage output may be confusing.

#### Workaround

No workaround is necessary. The garbage output is harmless and can be safely ignored.

For the complete report about this issue, see [GLASSFISH-16094](#).

### Admin GUI hangs on first access after installation on some Solaris Server Hardware. (16153)

#### Description

After installing GlassFish Server 3.1 and starting the DAS for the first time on some Solaris Server hardware, the GlassFish Server Administration Console starts to load, but then the browser screen goes blank and the browser hangs indefinitely. The only way to continue is to kill the hung `prtf ru` process.

The problem is that during the generation of the GlassFish Server registration page, if the `SolarisSystemEnvironment.getSNViaPrtfruX()` method is called, and the output from the `prtf ru -x` command is significant (for example, a large server could output over 3000 lines/150Kbytes) then the page generation will hang.

For the complete report about this issue, see KM article [1299968.1](#) on the [My Oracle Support](#) site.

### Workaround

There are three possible workarounds for this problem:

- Kill the `prtfru` process.

For example:

```
ptree cat as-install-parent/glassfish/domains/domain-dir/config/pid'
20365 /usr/jdk/jdk1.6.0_23/bin/java -cp as-install-parent/glassfish/modules/glass
 20385 /usr/sbin/prtfru
kill -9 20385
```

- Prior to logging in to the DAS for the first time, make the `as-install-parent/glassfish/lib/registration` directory read-only. For example:

```
chmod -w as-install-parent/glassfish/lib/registration/
```

Note that this will result in the registration file not being generated, and the registration option will not be displayed.

- Prior to logging in to the DAS for the first time, enter the following command:

```
touch as-install-parent/glassfish/lib/registration/registration.html
```

As with the second workaround, above, this will disable the registration option.

For the complete report about this issue, see [GLASSFISH-16153](#).

### asupgrade Fails Without Internet Connection (16159)

#### Description

Upgrade Tool fails when trying to parse the product version in the source `domain.xml` file when an Internet connection is not available. This problem only occurs when using Upgrade Tool to perform a side-by-side upgrade on *2.x* domain without an Internet connection.

#### Workaround

The workaround for this issue is as follows:

1. Copy the older source domain to be upgraded to the new target `as-install/domains` directory.

Rename the target `domain1` directory, if one exists, before proceeding.

2. Re-run the upgrade.

```
asadmin> start-domain --upgrade domain-name
```

For the complete report about this issue, see [GLASSFISH-16159](#).

## Application info page: status not shown correctly and virtual servers changes not saved (16048)

### Description

The information page for a deployed application may display incorrect information in a DAS only configuration. Specifically:

- The Enabled status checkbox is always unchecked regardless of whether the application is enabled or disabled.
- Modifications to the list of virtual servers is not persisted in other Administration Console pages.

This issue only occurs on the DAS when no clusters or standalone instances have been configured.

### Workaround

The issue has been fixed and will be available in future product releases. In the meantime, the following workarounds are available:

- To display the status for an application, look at the Applications table on the top-level Applications page rather than the Edit Application page for the individual application. The status is correctly displayed on the top-level Applications page, and the application status can also be modified from there.
- To view or change the virtual server for a deployed application, use the `asadmin get` and `set` subcommands.

- To view the status of an application, use the `get` subcommand.

```
asadmin> get server.application-ref.application-name
```

For example, to view the status of an application named `hello`:

```
asadmin> get server.application-ref.hello
```

- To change the list of virtual servers for an application, use the `set` subcommand.

```
asadmin set server.application-ref.application-name.virtual-servers=virtual-server[,virtual-server,...]
```

For example, to specify a virtual server named `myVS` for an application named `hello`:

```
asadmin> set server.application-ref.hello.virtual-servers=myVS
```

Separate multiple *virtual-server* names with commas. For example:

```
asadmin> set server.application-ref.hello.virtual-servers=myVS,yourVS,herVS
```

For the complete report about this issue, see [GLASSFISH-16048](#).

## Log Viewer: details garbled after navigating to earlier records, exception in server . log (16029)

### Description

When viewing server log records, switching views between the DAS and another server instance may cause the view to become blank or garbled. The issue is caused by a missing `logFile` parameter in the URL for the detailed log screen.

### Workaround

Specify the name of the log file manually in the URL for the detailed log screen. For example, an incorrect URL may read:

```
http://localhost:4848/common/logViewer/logEntryDetail.jsf?instanceName=server&logLevel=INFO&logFile=&recNumber=10
```

If the name of the log file is `server . log`, you would add this as the `logFile` parameter in the URL:

```
http://localhost:4848/common/logViewer/logEntryDetail.jsf?instanceName=server&logLevel=INFO&logFile=server . log&recNumber=10
```

For the complete report about this issue, see [GLASSFISH-16029](#).

## Cluster -> Resources tab: Should not include resources not included in the web distribution in the table dropdown (15925)

### Description

When using the GlassFish Server Web profile distribution, the Clusters→Resources tab in the Administration Console displays a drop-down list of resources that you can create, some of which are not available for that distribution. If you try to create one of these unsupported resources when using the Web profile, an HTTP Status 404 error message will be displayed. Note that the resources are correctly displayed in the node tree on the left side of the Administration Console.

### Workaround

The GlassFish Server 3.1 Web profile distribution does not contain any of the JMS or MQ components. The following resources are only available in the Full profile distribution:

- Destination Resources
- Connection Factory
- JavaMail
- Custom Resources
- External Resources

To work around this issue, refresh the exception screen by clicking the cluster node in the tree or by refreshing the browser.

## Firefox 4.0 does not work for the Admin Console Targeting dialogs (16385)

### Description

Firefox 4.0 does not work for the Administration Console Targeting dialogs. All other Web pages display correctly.

“Targeting dialogs” refer to those dialogs in which two adjacent columns of options are displayed, one for “Available Targets” and the other for “Selected Targets.” A user can select the desired options and move them from one column to other.

For example, such a dialog can be displayed by navigating to the Resources→JDBC→JDBC Resources→*resource-name*→Target page and then clicking Manage Targets. The resulting Manage Resource Targets page will not be displayed correctly in Firefox 4.0. Specifically, the CSS page formatting is not rendered, leaving just plain text and no layout.

### Workaround

None. This is a rendering issue in Firefox 4.0. Other browsers and earlier versions of Firefox do not exhibit this behavior.

For the complete report about this issue, see [GLASSFISH-16385](#).

## @DataSourceDefinition in EJBs bundled in a .war is not available for JPA during prepare () phase (15865)

### Description

The following application configuration results in a `@DataSourceDefinition` not found error:

1. A `@DataSourceDefinition` annotation is defined in an EJB that is bundled in a WAR file.
2. A JPA Persistence Unit is also in the WAR file, and that JPA depends on the `@DataSourceDefinition` exported by the EJB.

In this configuration, the `@DataSourceDefinition` is not available during `prepare ()` phase during which the JPA creates its tables. The `@DataSourceDefinition` is available only after deployment.

### Workaround

A JPA can only perform lookups on Data Source Definitions (DSDs) for scoped applications (“java:app”). Because of this, the workaround for this issue is to define the `@DataSourceDefinition` in the `web.xml`, `application.xml`, or Servlet instead of defining it in the EJB.

For the complete report about this issue, see [GLASSFISH-15865](#).

## Restrictions and Deprecated Functionality

This section describes restrictions and deprecated functionality in Oracle GlassFish Server 3.1 and 3.1.1.

The following topics are addressed here:

- “Node Agent Support” on page 60
- “HADB and hadbm Command Support” on page 60
- “asadmin Subcommands” on page 60
- “Deprecated, Unsupported, and Obsolete Options” on page 61
- “Applications That Use Java DB” on page 62
- “No Support for Client VM on Windows AMD64” on page 62
- “Metro Reliable Messaging in InOrder Delivery Mode” on page 63
- “No Support for Kerberos on AIX” on page 63
- “Update Center Client Limitations on AIX Platform” on page 63
- “Persistence of EJB References in HTTP Sessions Not Supported for Coherence\*Web” on page 64

### Node Agent Support

GlassFish Server 3.1–3.1.1 does not support node agents. When updating from installations of earlier product versions in which node agents were configured, the cluster definitions will be migrated, but the clustered instances themselves must be manually recreated. See “[Upgrading Clusters and Node Agent Configurations](#)” in *Oracle GlassFish Server 3.1 Upgrade Guide* for more information.

### HADB and hadbm Command Support

GlassFish Server 3.1–3.1.1 does not support HADB or the hadbm management command.

Instead of HADB, GlassFish Server 3.1–3.1.1 supports high availability clustering by means of in-memory session state replication and Active Cache for GlassFish. See [Chapter 1, “High Availability in GlassFish Server,”](#) in *Oracle GlassFish Server 3.1–3.1.1 High Availability Administration Guide* for more information.

### asadmin Subcommands

In GlassFish Server 3.1–3.1.1, 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 1–4](#) are deprecated or no longer supported, or are obsolete and are ignored.

**TABLE 1–4** Deprecated, Unsupported, and Obsolete Options for `asadmin` and Subcommands

Option	Affected Subcommands
--acceptlang	Unsupported for the <code>create-virtual-server</code> subcommand.
--acls	Unsupported for the <code>create-virtual-server</code> subcommand.
--adminpassword	Unsupported for all relevant subcommands. Use <code>--passwordfile</code> instead.
--autoapplyenabled	Obsolete for the <code>create-http-lb</code> subcommand.
--autohadb	Obsolete for the <code>create-cluster</code> subcommand.
--autohadboverride	Obsolete for the <code>start-cluster</code> subcommand and the <code>stop-cluster</code> subcommand
--blockingenabled	Unsupported for the <code>create-http-listener</code> subcommand.
--configfile	Unsupported for the <code>create-virtual-server</code> subcommand.
--defaultobj	Unsupported for the <code>create-virtual-server</code> subcommand.
--defaultvs	Deprecated for the <code>create-http-listener</code> subcommand. Use <code>--default-virtual-server</code> instead.
--description	Obsolete for the <code>restore-domain</code> subcommand.
--devicesize	Obsolete for the <code>create-cluster</code> subcommand.
--haadminpassword	Obsolete for the <code>create-cluster</code> subcommand.
--haadminpasswordfile	Obsolete for the <code>create-cluster</code> subcommand.
--haagentport	Obsolete for the <code>create-cluster</code> subcommand.
--haproperty	Obsolete for the <code>create-cluster</code> subcommand.
--hosts	Obsolete for the <code>create-cluster</code> subcommand.
--ignoreDescriptorItem	Replaced by the all lowercase option <code>--ignoredescriptoritem</code> in the <code>set-web-context-param</code> subcommand and the <code>set-web-env-entry</code> subcommand.
--mime	Unsupported for the <code>create-virtual-server</code> subcommand.
--password	Unsupported for all remote subcommands. Use <code>--passwordfile</code> instead.

**TABLE 1-4** Deprecated, Unsupported, and Obsolete Options for `asadmin` and Subcommands  
(Continued)

Option	Affected Subcommands
<code>--path</code>	Unsupported for the <code>create-domain</code> subcommand. Use <code>--domain-dir</code> instead.
<code>--portbase</code>	Obsolete <i>only</i> for the <code>create-cluster</code> subcommand. This option is still valid in other subcommands such as <code>create-domain</code> , <code>create-instance</code> , and <code>create-local-instance</code> .
<code>--resourcetype</code>	Unsupported for all relevant subcommands. Use <code>--restype</code> instead.
<code>--retrievefile</code>	Obsolete for the <code>export-http-lb-config</code> subcommand.
<code>--setenv</code>	Obsolete for the <code>start-instance</code> subcommand.
<code>--target</code>	<p>Obsolete <i>only</i> for the following subcommands:</p> <ul style="list-style-type: none"> <li>■ <code>create-connector-connection-pool</code></li> <li>■ <code>create-resource-adapter-config</code></li> <li>■ <code>delete-connector-connection-pool</code></li> <li>■ <code>delete-connector-security-map</code></li> <li>■ <code>delete-jdbc-connection-pool</code></li> <li>■ <code>delete-resource-ref</code></li> </ul> <p>Replaced by an operand in the <code>list-custom-resources</code> subcommand and the <code>list-jndi-entries</code> subcommand:</p>

### Applications That Use Java DB

The directory location of Java DB in GlassFish Server 3.1-3.1.1 has changed from its location in previous installations. Suppose that you have deployed applications that use Java DB databases in your previous server installation, and you upgrade your existing installation to GlassFish Server 3.1-3.1.1. If you run the `asadmin start-database` command and successfully start Java DB, 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 Java DB. For example:

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

2. After upgrade, start GlassFish Server 3.1-3.1.1.

### No Support for Client VM on Windows AMD64

By default, the GlassFish Server 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 5.0 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 GlassFish Server 3.1-3.1.1. The feature may work, but it has not been formally tested and is therefore not a supported feature.

### No Support for Kerberos on AIX

GlassFish Server 3.1.1 does not support Kerberos on the AIX platform.

For the complete report about this issue, see [GLASSFISH-16728](#).

### Update Center Client Limitations on AIX Platform

In Chapter 11, “Extending and Updating GlassFish Server,” in *Oracle GlassFish Server 3.1 Administration Guide*, the tools for updating software on a deployed server are listed as Update Tool, the `pkg` command, and the Administration Console. On AIX, only the `pkg` command is supported.

When you use the GlassFish Server installer in default mode on AIX, the Install Update Tool option is enabled, resulting in the following error:

```
Update Tool Bootstrap Not Configured
```

Use the following workaround:

1. Deselect the option to install Update Tool during installation.
2. Open the `as-install/.org.opensolaris/pkg/cfg_cache` file in a text editor.
3. Edit and save the file according to your edition of GlassFish Server:
  - For Oracle GlassFish Server, change this line in the file:
 

```
http://pkg.oracle.com/glassfish/v3/release//
```

 to this line:
 

```
http://pkg.oracle.com/glassfish/v3/release/
```
  - For GlassFish Server Open Source Edition, change this line in the file:
 

```
http://pkg.glassfish.org/v3/stable//
```

 to this line:
 

```
http://pkg.glassfish.org/v3/stable/
```
4. Run the `pkg` command from the `as-install/bin` directory to install the `pkg` client.

## Persistence of EJB References in HTTP Sessions Not Supported for Coherence\*Web

GlassFish Server and Coherence\*Web serialize EJB references differently. Therefore, GlassFish Server 3.1.1 does not support persistence of EJB references in HTTP sessions when Coherence\*Web is the persistence type.

## GlassFish Server Documentation Set

Listed below are the titles and short descriptions of the books in the GlassFish Server documentation set.

TABLE 1-5 Books in the GlassFish Server Documentation Set

Book Title	Description
<i>Release Notes</i>	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.
<i>Quick Start Guide</i>	Explains how to get started with the GlassFish Server product.
<i>Installation Guide</i>	Explains how to install the software and its components.
<i>Upgrade Guide</i>	Explains how to upgrade to the latest version of GlassFish Server. This guide also describes differences between adjacent product releases and configuration options that can result in incompatibility with the product specifications.
<i>Deployment Planning Guide</i>	Explains how to build a production deployment of GlassFish Server that meets the requirements of your system and enterprise.
<i>Administration Guide</i>	Explains how to configure, monitor, and manage GlassFish Server subsystems and components from the command line by using the <code>asadmin(1M)</code> utility. Instructions for performing these tasks from the Administration Console are provided in the Administration Console online help.
<i>Security Guide</i>	Provides instructions for configuring and administering GlassFish Server security.
<i>Application Deployment Guide</i>	Explains how to assemble and deploy applications to the GlassFish Server and provides information about deployment descriptors.
<i>Application Development Guide</i>	Explains how to create and implement Java Platform, Enterprise Edition (Java EE platform) applications that are intended to run on the GlassFish Server. These applications follow the open Java standards model for Java EE components and application programmer interfaces (APIs). This guide provides information about developer tools, security, and debugging.

TABLE 1-5 Books in the GlassFish Server Documentation Set (Continued)

Book Title	Description
<i>Add-On Component Development Guide</i>	Explains how to use published interfaces of GlassFish Server to develop add-on components for GlassFish Server. This document explains how to perform <i>only</i> those tasks that ensure that the add-on component is suitable for GlassFish Server.
<i>Embedded Server Guide</i>	Explains how to run applications in embedded GlassFish Server and to develop applications in which GlassFish Server is embedded.
<i>High Availability Administration Guide</i>	Explains how to configure GlassFish Server to provide higher availability and scalability through failover and load balancing.
<i>Performance Tuning Guide</i>	Explains how to optimize the performance of GlassFish Server.
<i>Troubleshooting Guide</i>	Describes common problems that you might encounter when using GlassFish Server and explains how to solve them.
<i>Error Message Reference</i>	Describes error messages that you might encounter when using GlassFish Server.
<i>Reference Manual</i>	Provides reference information in man page format for GlassFish Server administration commands, utility commands, and related concepts.
<i>Message Queue Release Notes</i>	Describes new features, compatibility issues, and existing bugs for GlassFish Server Message Queue.
<i>Message Queue Technical Overview</i>	Provides an introduction to the technology, concepts, architecture, capabilities, and features of the Message Queue messaging service.
<i>Message Queue Administration Guide</i>	Explains how to set up and manage a Message Queue messaging system.
<i>Message Queue Developer's Guide for JMX Clients</i>	Describes the application programming interface in Message Queue for programmatically configuring and monitoring Message Queue resources in conformance with the Java Management Extensions (JMX).
<i>Message Queue Developer's Guide for Java Clients</i>	Provides information about concepts and procedures for developing Java messaging applications (Java clients) that work with GlassFish Server.
<i>Message Queue Developer's Guide for C Clients</i>	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.

## Features Available Only in the Full Platform Profile

The following features of GlassFish Server 3.1-3.1.1 are available only in the Full Platform Profile:

- EJB features that make up the full EJB 3.1 API, such as remote EJB components, message-driven beans, web service EJB endpoints, and the EJB Timer Service

The EJB 3.1 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 Full Platform Profile.

## Java EE 6 Standards Support

Table 1–6 lists the Java EE 6 standards implemented in GlassFish Server 3.1-3.1.1. 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 1–6 Java EE 6 Standards Implementations in GlassFish Server 3.1-3.1.1

Java EE Standard	Java Specification Request (JSR)	GlassFish Server 3.1-3.1.1 Full Platform Profile	GlassFish Server 3.1-3.1.1 Web Profile
Java Platform, Enterprise Edition 6	JSR 316	X	X
Java Servlet Technology 3.0	JSR 315	X	X
JavaServer Pages 2.2	JSR 245	X	X
Expression Language 2.2	JSR 245	X	X
Debugging Support for Other Languages 1.0	JSR 45	X	X
Standard Tag Library for JavaServer Pages 1.2	JSR 52	X	X
JavaServer Faces 2.1	JSR 314	X	X
Common Annotations for the Java Platform 1.1	JSR 250	X	X
Java Transaction API 1.1	JSR 907	X	X

TABLE 1-6 Java EE 6 Standards Implementations in GlassFish Server 3.1-3.1.1 (Continued)

Java EE Standard	Java Specification Request (JSR)	GlassFish Server 3.1-3.1.1 Full Platform Profile	GlassFish Server 3.1-3.1.1 Web Profile
Java Persistence API 2.0	JSR 317	X	X
Enterprise JavaBeans 3.1 Lite	JSR 318	X	X
Managed Beans 1.0	JSR 316	X	X
Interceptors 1.1	JSR 318	X	X
Dependency Injection for Java 1.0	JSR 330	X	X
Enterprise JavaBeans 3.1 Full API	JSR 318	X	X
Contexts and Dependency Injection for Java EE 1.0	JSR 299	X	X
Java API for RESTful Web Service (JAX-RS) 1.1	JSR 311	X	X
Bean Validation 1.0	JSR 303	X	-
Java EE Connector Architecture 1.6	JSR 322	X	X*
Java API for XML-Based Web Services (JAX-WS) 2.2	JSR 224	X	-
Java Architecture for XML Binding (JAXB) 2.2	JSR 222	X	-
Implementing Enterprise Web Services 1.3	JSR 109	X	-
Web Services Metadata for the Java Platform 2.1	JSR 181	X	-
Java Message Service API 1.1	JSR 914	X	-
JavaMail 1.4	JSR 919	X	-
Java Authorization Contract for Containers 1.4	JSR 115	X	-
Java Authentication Service Provider Interface for Containers 1.1	JSR 196	X	-
Java EE Application Deployment 1.2	JSR 88	X	-
J2EE Management 1.1	JSR 77	X	-
Java API for XML-Based Remote Procedure Calls (JAX-RPC) 1.1	JSR 101	X	-

TABLE 1-6 Java EE 6 Standards Implementations in GlassFish Server 3.1-3.1.1 (Continued)

Java EE Standard	Java Specification Request (JSR)	GlassFish Server 3.1-3.1.1 Full Platform Profile	GlassFish Server 3.1-3.1.1 Web Profile
Java API for XML-Based Registries (JAXR) 1.0	<a href="#">JSR 93</a>	X	-

\* Standalone Connector 1.6 Container only.

Building on these standards, GlassFish Server 3.1-3.1.1 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 2.1 (JAX-WS 2.1).
- **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.

## Java EE 6 SDK

GlassFish Server 3.1-3.1.1 is available as part of the Java EE 6 SDK. The following versions of the Java EE 6 SDK are available:

- **Java EE 6 SDK:** This version includes GlassFish Server 3.1-3.1.1. This version is designed for developers who require the full set of Java EE APIs for enterprise application development.
- **Java EE 6 Web Profile SDK:** This version includes GlassFish Server 3.1-3.1.1 Web Profile. This version contains web technologies that are subset of the Full Platform Profile and is designed for developers who do not require the full set of Java EE APIs.

More information about the Java EE 6 SDK distributions are available at [Java EE Reference at a Glance](#). Java EE 6 SDK distributions are available from the [Java EE 6 SDK downloads page](#).

## How to Report Problems and Provide Feedback

If you have problems with GlassFish Server 3.1-3.1.1, provide feedback through one of the following mechanisms:

- [GlassFish Server mailing lists](#) – A variety of GlassFish Server community mailing lists for various interests and feedback
- [GlassFish Server forum](#) – A forum for discussing the GlassFish Server project
- [JIRA project tracking](#) – GlassFish Server project dashboards and issue tracking database

## Additional Resources

Useful information can be found at the following locations:

- [GlassFish Server Community](#)
- [GlassFish Server Wiki: GlassFish Server Open Source Edition 3.1](#)
- [Oracle Developer Information](#)
- [Oracle Developer Support Services](#)
- [Oracle product documentation](#)

## Third-Party Web Site References

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

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