



Sun GlassFish Enterprise Server v3 Release Notes



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Sun GlassFish Enterprise Server v3 Release Notes

The Sun GlassFish™ Enterprise Server product is a Java™ Platform, Enterprise Edition (Java EE) 6 platform-compatible server for the development and deployment of Java EE applications and Java Web Services. Production use of this server is free of charge. Sun GlassFish Enterprise Server is free for development, deployment, and redistribution. If you are a customer who is interested in redistribution, contact [Sun OEM \(http://www.sun.com/software/products/appsrvr/appsrvr_oem.xml\)](http://www.sun.com/software/products/appsrvr/appsrvr_oem.xml) sales for a redistribution license.

The *Sun GlassFish Enterprise Server v3 Release Notes* contain important information about the Enterprise Server v3 release, including information about new features, hardware and software requirements, and known issues with workarounds, if available.

Check this document prior to installing and setting up your software, and read this document before you begin using Sun GlassFish Enterprise Server v3. Consult this document periodically to view the most up-to-date documentation.

- “Revision History” on page 7
- “What’s New in the Sun GlassFish Enterprise Server v3 Release?” on page 8
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- “Accessibility Features” on page 45

Revision History

This section provides a record of changes in *Sun GlassFish Enterprise Server v3 Release Notes*.

TABLE 1-1 Revision History

Date	Description of Changes
December 2009	Initial release.
January 2010	Added information about redistribution. Added issue 11427 to Known Issues. Added issue 11428 to Known Issues. Added issue 11439 to Known Issues. Added issue 6852796 to Known Issues.

What's New in the Sun GlassFish Enterprise Server v3 Release?

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

The following new features of Enterprise Server are described here:

- “Support for Java EE Profiles” on page 8
- “Modular Design” on page 9
- “Support for Extending Enterprise Server” on page 9
- “Update Tool Integration” on page 10
- “Support for Scripting Languages” on page 10
- “Web Services Interoperability Technologies (WSIT) Support” on page 11
- “Enhancements to the `appclient` Utility” on page 11
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- “Move of HTTP Service Settings to Network Service” on page 12
- “Changes Related to Administrator Authentication” on page 12
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Support for Java EE Profiles

Java EE 6 introduces the concept of profiles. A *profile* is a collection of Java EE technologies and APIs that address specific developer communities and application types.

The following profiles are implemented through the distributions of Sun GlassFish Enterprise Server v3:

- **Full Platform Profile.** This profile is designed for developers who require the full set of Java EE APIs for enterprise application development. The Full Platform Profile is installed when you install Sun GlassFish Enterprise Server v3. This profile is also installed as part of the Java EE 6 SDK installation.
- **Web Profile.** This profile contains web technologies that are part of the full platform and is designed for developers who do not require the full set of Java EE APIs. The Web Profile is installed when you install Sun GlassFish Enterprise Server v3 Web Profile. This profile is also installed with Java EE 6 Web Profile SDK.

Java EE 6 SDK distributions are available from the [Java EE 6 SDK downloads page](http://java.sun.com/javaee/downloads/index.jsp) (<http://java.sun.com/javaee/downloads/index.jsp>).

For the list of APIs in each profile, see “Java EE 6 Standards” on page 40.

Modular Design

In Sun GlassFish Enterprise Server v3, the GlassFish code was split into modules to provide flexibility and improved runtime performance. The modular architecture is implemented on top of OSGi Alliance standards and enables reusability of Enterprise Server v3 modules as well as other modules.

This design change allows use of only those modules that you require for the applications deployed. Runtime is used only for applications that use it, and upgrades can be implemented without a complete system reinstallation. This change minimizes startup times, memory consumption, and disk space requirements.

The modular design provides the ability to do the following:

- Deploy OSGi bundles
- Deploy library Java archive (JAR) files
- Replace existing functionality with another implementation

Support for Extending Enterprise Server

A new Sun GlassFish Enterprise Server v3 container system provider interface (SPI) defines interfaces that the container developer must implement so that Enterprise Server can call into it at appropriate times. This change enables Enterprise Server users to create custom application servers by adding administrative commands and graphical add-on components.

Enterprise Server also provides streamlined support of new module types, such as Ruby on Rails.

Update Tool Integration

Update Tool is now embedded in the Sun GlassFish Enterprise Server v3 Administration Console. This tool facilitates managing add-on components and related applications that are available for extending Enterprise Server v3 functions.

The Administration Console provides access to the Update Tool page through the navigation tree. The Update Tool page provides tabs to display the following:

- Components that are installed
- Updates that are available for installed components
- Add-on components that are available and can be installed

Integration of Update Tool in the Administration Console enables administrators to easily extend Enterprise Server and view available updates. A standalone version of Update Tool is also available using the `update tool` command. For more information about Update Tool, see “Update Tool” in *Sun GlassFish Enterprise Server v3 Administration Guide*.

Note – You cannot update existing components using the Update Tool interface in the Administration Console. To update or remove installed components, you must use the standalone command-line version or the `pkg` command.

Update Tool is developed through the [Update Center \(http://wiki.updatecenter.java.net/\)](http://wiki.updatecenter.java.net/) project. The Administration Console uses the Update Center 2.3 API to display a list of available components, versions, and dates. For information about Update Center 2.3, see the [Release Notes for Update Center 2.3 \(http://wiki.updatecenter.java.net/wiki.jsp?page=UC2Documentation.ReleaseNotes.2.3\)](http://wiki.updatecenter.java.net/wiki.jsp?page=UC2Documentation.ReleaseNotes.2.3).

Note – Update Tool differs from Upgrade Tool, which is used to migrate the configuration and deployed applications from an earlier version of Enterprise Server to the current version. For more information about Upgrade Tool, see the *Sun GlassFish Enterprise Server v3 Upgrade Guide*.

Support for Scripting Languages

To facilitate rapid application development and deployment, Sun GlassFish Enterprise Server v3 supports a variety of scripting languages. The use of scripting languages enables Enterprise Server to be applied beyond developments that are centered on Java technology. Supported scripting languages include the following:

- JRuby and Rails: A scripting language and a framework for developing web applications
- Grails: A web application framework that leverages the Groovy programming language and complements Java web development

- Jython and Django: A Java implementation of the Python language and a web framework for Python and implementations of Python (such as Jython)
- jMaki: A framework for creating Ajax web applications

Support for these scripting languages is provided by components that are available through Update Tool.

Web Services Interoperability Technologies (WSIT) Support

Sun is working closely with Microsoft to ensure interoperability of Web services enterprise technologies such as message optimization, reliable messaging, and security. WSIT is a product of this joint effort. WSIT is part of Metro 2.0, a high-performance, extensible web service stack that offers interoperability with Microsoft .NET 3.5. Metro 2.0 is included in the full distribution of Enterprise Server v3.

WSIT is an implementation of a number of open web services specifications to support enterprise features. In addition to message optimization, reliable messaging, and security, WSIT includes a bootstrapping and configuration technology. Starting with the core XML support currently built into the Java platform, WSIT uses or extends existing features and adds new support for interoperable web services, including:

- Bootstrapping and Configuration
- Message Optimization Technology
- Reliable Messaging Technology
- Security Technology

Enhancements to the `appClient` Utility

In this release, the `appClient` utility is enhanced as follows:

- The `appClient` utility accepts an alternate command-line syntax that is similar to the syntax of the Java application launcher (`java`).
- The `-targetserver` option is added to enable the server and port number of the target to be specified.
- Splash screens in application clients are supported.

For more information, see the [appClient\(1M\)](#) man page.

EclipseLink Integration

Sun GlassFish Enterprise Server v3 uses EclipseLink as its Java Persistence API (JPA) 2.0 provider. EclipseLink is also the Reference Implementation for [JSR 317](#) (<http://jcp.org/en/jsr/detail?id=317>). For the most recent information regarding EclipseLink functionality, see the [EclipseLink 2.0 Release Notes](#) (<http://wiki.eclipse.org/EclipseLink/Release/2.0.0>).

Move of HTTP Service Settings to Network Service

In Sun GlassFish Enterprise Server v3, most HTTP Service settings have been moved into the new Network Service configuration. For more information, see the [Sun GlassFish Enterprise Server v3 Upgrade Guide](#).

Changes Related to Administrator Authentication

In Sun GlassFish Enterprise Server v3, you are not prompted for administration credentials by default. This is a change from previous releases.

If you install Enterprise Server using the ZIP file, you will not be prompted for administration credentials when you launch the Administration Console or use the `asadmin` utility and remote subcommands to perform administrative tasks.

If you install Enterprise Server v3 using the self-extracting file and graphical installer, you will not be prompted for administration credentials unless you specified a user name and password on the Administration Settings page during installation. If you accepted the defaults on that page, the default administrative user is `admin` and the password field is left empty.

If there is only one admin user with no password, unauthenticated logins are permitted. For more information about administrator authentication, see “[To Log In to a Domain](#)” in [Sun GlassFish Enterprise Server v3 Administration Guide](#).

Administrator authentication requirements can be changed after Enterprise Server has been installed. For information about using the Administration Console to perform this and related tasks, see the Administration Console online help. For information about using the command-line interface, see “[Administering Passwords](#)” in [Sun GlassFish Enterprise Server v3 Administration Guide](#).

Changes Related to the `asadmin` Utility

The behavior of the `asadmin` utility has been modified to emphasize the distinction between options for the `asadmin` utility itself and options for its subcommands. Options for the `asadmin` utility itself are now allowed before the subcommand. However, for compatibility with other releases, options for the `asadmin` utility itself are still allowed after the subcommand, but such syntax is deprecated.

For more information, see “[Using the asadmin Utility](#)” in [Sun GlassFish Enterprise Server v3 Administration Guide](#).

Changes Related to File Layout

Sun GlassFish Enterprise Server v3 includes the following file layout changes from previous releases:

- The default installation directory is as follows:
Solaris, Linux, and Mac OS X systems: `user's-home-directory/glassfishv3`

Windows systems: `SystemDrive:\glassfishv3`

- A `glassfish` subdirectory has been added, with other subdirectories underneath.
- Product libraries have moved from `glassfish/lib` to `glassfish/modules`.
- An `osgi` directory has been added.
- A designated directory for legal files has been added. License and copyright files are now in `glassfish/legal`.
- Sun GlassFish Message Queue is installed in a top-level directory instead of a subdirectory.
- Java DB is installed in a top-level directory instead of a subdirectory.

Changes Related to Ant Tasks and the `asant` Utility

Sun GlassFish Enterprise Server v3 provides server-specific Ant tasks, for which Ant must be installed. The `asant` utility is not included in the release.

Enterprise Server is compatible with Apache Ant versions 1.6.5 or greater. If Ant is not installed, you can install it using Update Tool.

For more information about Update Tool, see “Update Tool” in *Sun GlassFish Enterprise Server v3 Administration Guide*. For more information about Ant tasks, see Chapter 3, “Using Ant with Enterprise Server,” in *Sun GlassFish Enterprise Server v3 Application Development Guide*.

Changes Related to `domain.xml` Validation

Because Sun GlassFish Enterprise Server v3 is modular and extensible, the `domain.xml` file cannot be validated against a static DTD file. Instead, the `domain.xml` file is validated against `@Configured` annotations in the source code. For more information about the structure of the `domain.xml` file, see the *Sun GlassFish Enterprise Server v3 Domain File Format Reference*.

Changes Related to Applications

Application-related differences exist between Enterprise Server v3 and Enterprise Server v2. This section describes some of those differences.

`force` Option

The default value of the `force` option for deployment is `false` in Enterprise Server v3. This default value was `true` in Enterprise Server v2. In Enterprise Server v3 you must explicitly set the option to `true` for redeployment. This option is not automatically set during the upgrade process. The purpose of this change is to avoid accidentally overwriting the contents of an existing application. This applies to both the Administration Console and command-line utility.

The `asadmin redeploy` command is also new in Enterprise Server v3 and offers an equivalent to `--force=true`. The `force` option is only applicable to the `deploy` command (command-line interface) and the `deploy` screen (console), not to the `redeploy` command and `redeploy` screen.

Applications and Generated Directory Layout

Enterprise Server v2 contained two subdirectories for the applications repository: `applications/j2ee-apps` and `applications/j2ee-modules`. Those subdirectories do not exist in Enterprise Server v3 (there is no `j2ee-apps` or `j2ee-modules` level). Deployment of a standalone module such as `foo.war`, which resided in `applications/j2ee-modules/foo` in Enterprise Server v2, now resides in `applications/foo` in Enterprise Server v3. Enterprise applications and standalone modules essentially share the same name space, so the intermediate directory layer was not necessary.

`domain.xml` application Element

Previous elements such as `web-module`, `ejb-module`, and so on are deprecated in Enterprise Server v3 and replaced with the new application element. For more information about the application element, see “application” in *Sun GlassFish Enterprise Server v3 Domain File Format Reference*.

During an upgrade, Enterprise Server v2 applications are redeployed at the new `applications/` location with the new application element in `domain.xml`. Any new applications deployed on Enterprise Server v3 will be deployed with the new directory structure and element.

Stricter JAR Visibility Rules

Java EE 6 imposes stricter JAR visibility rules than did Java EE 5. As a result, some older applications might fail.

The [Java EE 6 specification \(http://jcp.org/en/jsr/detail?id=316\)](http://jcp.org/en/jsr/detail?id=316) imposes strict rules about which JAR files are visible from an enterprise archive (EAR) file. See especially section EE.8.3.3. Specifically, application client modules should not have access to any EJB JAR file unless the application client JAR file's `manifest Class-Path` refers to the EJB JAR file(s) explicitly.

This is a change from Enterprise Server v2, in which application clients automatically had access to all EJB JAR files in the EAR file and all JAR files at the top level of the EAR file. To comply with the stricter specification language, Enterprise Server v3 cannot automatically provide application clients with access to these JAR files.

This new, stricter behavior imposed by Java EE 6 can be addressed as follows:

- If the application is deployed to an Enterprise Server v2 domain, Upgrade Tool will preserve the Enterprise Server v2 behavior for that application in that domain. For more information about upgrading, see *Sun GlassFish Enterprise Server v3 Upgrade Guide*.
- Change the `manifest Class-Path` of the client so it refers explicitly to the JAR files on which it depends. The `Class-Path` must not list JAR files in the EAR file's library directory. As required by the specification, all JAR files in that directory are available to all modules in the EAR file. This directory is `/lib` by default, or can be set to some other directory using `library-directory` in the `application.xml` descriptor.

- Deploy the EAR file using the optional `--property compatibility=v2` setting. This preserves the Enterprise Server v2 behavior for that application when it is deployed to Enterprise Server v3.

This change in behavior is also discussed in [Chapter 1, “Application Server Compatibility Issues,”](#) in *Sun GlassFish Enterprise Server v3 Upgrade Guide*.

Application Client `deploy --retrieve` and `get-client-stubs` Commands

In Sun GlassFish Enterprise Server v3, running the `deploy --retrieve` and `get-client-stubs` commands no longer downloads just one JAR file to your local directory as in Enterprise Server v2. While `localdir/myAppClient.jar` is still created in Enterprise Server v3 and can be used as a target in the `appclient` command, another directory is also created, `localdir/myAppClient`, which in turn might contain other files.

If you typically copy the single Enterprise Server v2 downloaded JAR file as a way to move the application client components from one place to another, that will not work in Enterprise Server v3. The supported method is to use the `asadmin get-client-stubs` command for that purpose. For more information about the command, see [get-client-stubs\(1\)](#).

If you still choose to copy, however, you must copy not only the `localdir/myAppClient.jar` file (as in Enterprise Server v2), but also all of the contents of the `localdir/myAppClient` directory.

Hardware and Software Requirements

This section lists the requirements that must be met before installing the Sun GlassFish Enterprise Server v3 product.

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- “System Virtualization Support” on page 17
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Supported Platforms

Sun GlassFish Enterprise Server v3 requires a minimum of 200 Mbytes of free disk space to install, and 100 Mbytes of free memory to run.

The following table lists supported operating systems and provides minimum memory, recommended memory, minimum disk space, recommended disk space, and Java virtual machine for each.

As listed below, Enterprise Server requires JDK™ [release 6](#). The minimum (and certified) version of the JDK 6 software that is required depends on the operating system. For platform-specific requirements, see [“Required JDK Version”](#) on page 18.

TABLE 1-2 Supported Operating Systems

Operating System	Minimum Memory	Recommended Memory	Minimum Disk Space	Recommended Disk Space	Java Virtual Machine
Solaris™ Operating System					
Solaris 10 (SPARC™ platform)	1 GB	2 GB	250 MB free	500 MB free	JDK 6 32- and 64-bit
Solaris 10 (x86 platform)	1 GB	2 GB	250 MB free	500 MB free	JDK 6 32- and 64-bit
OpenSolaris™ 2009.06	1 GB	2 GB	250 MB free	500 MB free	JDK 6
Linux					
Red Hat Enterprise Linux 5.0	1 GB	2 GB	250 MB free	500 MB free	JDK 6 32- and 64-bit
Red Hat Enterprise Linux 4.0	1 GB	2 GB	250 MB free	500 MB free	JDK 6 32-bit
SUSE Linux Enterprise Server 10	1 GB	2 GB	250 MB free	500 MB free	JDK 6 32-bit
Ubuntu Linux 8.04	1 GB	2 GB	250 MB free	500 MB free	JDK 6 32-bit
Windows					
Windows 7 Professional	1 GB	2 GB	250 MB free	500 MB free	JDK 6 32- and 64-bit
Windows XP Professional SP3	1 GB	2 GB	250 MB free	500 MB free	JDK 6 32-bit
Windows 2008	1 GB	2 GB	250 MB free	500 MB free	JDK 6 32-bit

TABLE 1-2 Supported Operating Systems (Continued)

Operating System	Minimum Memory	Recommended Memory	Minimum Disk Space	Recommended Disk Space	Java Virtual Machine
Windows Vista Business	1 GB	2 GB	250 MB free	500 MB	JDK 6 32-bit
Mac OS					
Mac OS X 10.5 and 10.6	1 GB	2 GB	250 MB free	500 MB free	JDK 6 32-bit

On UNIX® platforms, you can check your operating system version by using the `uname` command. Disk space can be checked by using the `df` command.

Note – Use the NTFS file system rather than FAT or FAT32 when running Enterprise Server on any Microsoft Windows platform.

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. Sun performs testing of its Sun Java System products on select system virtualization and OS combinations to help validate that the Sun Java System products continue to function on properly sized and configured virtualized environments as they do on non-virtualized systems. For information about Sun support for Sun Java System products in virtualized environments, see [System Virtualization Support in Sun Java System Products](#).

Required Disk Space

Your temporary directory must have enough free space for the installation of the following software:

- **Sun GlassFish Enterprise Server:** 35 MB minimum
- **SDK:** 250 MB minimum

Required Free Ports

You must have seven unused ports available.

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 Enterprise Server v3

Port Number	Usage
4848	Administration Console
8080	HTTP
8081	HTTPS
8686	Pure JMX clients
3700	IIOP
3820	IIOP/SSL
3920	IIOP/SSL with mutual authentication

Important Patch Information

Solaris Patch Requirements

If you are using the Solaris 10 operating system, you must apply the appropriate patch for your platform as listed in the following table.

Platform	Patch Number
SPARC platform	119963-08
x86 platform	119964-08

You must also ensure that the Sun recommended patch cluster is applied.

These patches and the patch cluster are available from the SunSolveSM program [web site](http://sunsolve.sun.com/pub-cgi/show.pl?target=patchpage) (<http://sunsolve.sun.com/pub-cgi/show.pl?target=patchpage>).

- To obtain a patch, click the PatchFinder link and then use the Patch ID field to find the patch.
- To obtain a patch cluster, click the Patch Cluster and Patch Bundle Downloads link in the Downloads section, and then the link for recommended patch clusters.

Required JDK Version

Installation of Sun GlassFish Enterprise Server v3 requires JDK [release 6](#).

The minimum (and certified) version of the JDK software that is required for Enterprise Server depends on the operating system:

- For supported operating systems *except* Mac OS X, the minimum required version is 1.6.0_17.

- For the Mac OS X operating system, the minimum required version is 1.6.0_15.

Path Settings for the JDK Software

The following binary files that are used with Enterprise 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 of the JDK software precedes the bin directory of the JRE software in your path.

Supported JDBC Drivers and Databases

The following table lists the databases and drivers that are supported in this release. All supported configurations of the Sun GlassFish Enterprise Server v3 must contain at least one combination of database and driver from this table, such as the Java DB and driver. In addition, Enterprise Server is designed to support connectivity through Java DataBase Connectivity (JDBC™) technology to any additional database management system (DBMS) with a corresponding driver that supports the JDBC API (JDBC driver).

TABLE 1-4 Supported JDBC Drivers and Databases

JDBC Driver Vendor	JDBC Driver Type	Supported Database Server
MySQL Connector/J Driver 5.1	Type 4	MySQL 5.1
Java DB 10.5.3.0	Type 4	Java DB 10.5.3.0
Oracle 11	Type 2 and Type 4	Oracle 11
PostgreSQL 8.4	Type 4	PostgreSQL 8.4
DB2 9.7	Type 2	DB2 9.7
Sun, DataDirect 4.0	Type 4	Sybase ASE 15
Sun, DataDirect 4.0	Type 4	DB2 9.7
Sun, DataDirect 4.0	Type 4	Microsoft SQL Server 2008
Sun, DataDirect 4.0	Type 4	MySQL 5.1

Supported Browsers

The following table lists supported browsers and versions.

TABLE 1-5 Supported Web Browsers

Browser	Version
Firefox	2.0, 3.0
Internet Explorer	7.0, 8.0
Safari	3.2, 4.0

mod_jk Support

Sun GlassFish Enterprise Server v3 supports mod_jk 1.2.x, with a minimum of 1.2.26.

Known Issues

This section describes known issues in Sun GlassFish Enterprise Server v3 and workarounds if available.

- “[JDK_Issue] Performance degradation caused by invoking `setSoLinger` or `setReuseAddress` (Issue 7109)” on page 21
- “[JDK_Issue] Null pointer exception on server restart (Issue 8299)” on page 22
- “[JDK_Issue] IO exception: invalid argument during longevity test (Issue 7529)” on page 22
- “[JDK_Issue] EPoll null pointer exception at startup (Issue 9472)” on page 23
- “[JDK_ISSUE] Richaccess: `java.io.IOException: Invalid argument from doSelect` (Issue 8573)” on page 23
- “File permissions on domain `/applications` directory can cause `NullPointerException` (Issue 6545)” on page 23
- “Windows installation log file is not readable (Issue 4881)” on page 24
- “Access to statistics for new virtual servers requires server restart (Issues 6238 and 6422)” on page 24
- “[Open Installer] Option `-l` to relocate log files ignored on Windows (Issue 10693)” on page 24
- “Issues occur with ZIP distribution if UAC enabled on Windows Vista (Issue 10755)” on page 25
- “Null pointer exception thrown from `com.sun.xml.wss.NoncexManager.getInstance` (Issue 11138)” on page 25
- “[Open Installer] Start menus not displayed and then empty on Windows Vista and Windows 2008 (Issue 5087)” on page 25
- “When `specj` application is deployed, `asadmin get --monitor=true "server.*"` results in I/O error (Issue 11163)” on page 26
- “Standalone Update Tool fails with segmentation fault on Solaris (Issue 11222)” on page 27
- “Ruby applications deployed on context root don't work with Admin Console (Issue 10854)” on page 27
- “Java EE 6 Managed Bean support not available in app clients launched using Java Web Start (Issue 11257)” on page 27
- “Warning messages when invoking `appclient` script on Mac OS X with Apple Java implementation (Issue 8644)” on page 28

- “Launching an app client can give ClassNotFoundException error for the client's main class (Issue 11181)” on page 28
- “Change to log file location requires server restart to take effect (Issue 11142)” on page 29
- “Unable to open installation log files using links on the Summary screen on Linux and Mac OS (Issue 6621)” on page 29
- “update tool command does not work if you reinstall into the same install directory on Windows (Issue 8233)” on page 30
- “[Update Center] Non-user directory access fails (Update Center Issue 1583)” on page 30
- “Inline help and CLI man page list incorrect servlet version 2.4 in X-Powered-By (Issue 11011)” on page 30
- “[Embedded] Deployment of application containing activation-1.1.jar fails when using uber-jar (Issue 11149)” on page 31
- “create-service fails to create service without AS_ADMIN_USER in passwordfile on Solaris (Issue 11119)” on page 31
- “[Monitoring] Extra monitoring view for connector-connection-pools not available (Issue 11256)” on page 31
- “[EclipseLink] Issues with ElementCollections of embeddables (EclipseLink Issue 296606)” on page 32
- “Virtual server started twice (Issue 11195)” on page 32
- “Problems debugging JPA (Issue 11274)” on page 33
- “EJB interop for remote EJBs broken when target EJB is on the same host (Issue 11152)” on page 33
- “Installer hangs at 41% intermittently on Windows Vista and Windows 7 (Issue 11185)” on page 33
- “Cannot send JMS messages between systems (Issue 11254)” on page 34
- “Windows system menu is empty (Issue 11239)” on page 34
- “mysql not listed in list of supported databases in --dbvendorname in deploy command man page (Issue 11328)” on page 34
- “Embedded ACC overly strict on current thread context class loader (Issue 11427)” on page 35
- “EJB Timer Service config issue for MySQL (Issue 11428)” on page 35
- “deploy subcommand fails against secure server (Issue 11439)” on page 36
- “Expired certificate in Enterprise Server truststore (Issue 6852796)” on page 36

[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.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=7109\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=7109).

Workaround

None.

[JDK_Issue] Null pointer exception on server restart (Issue 8299)

Description

Restarting Enterprise Server sometimes causes a null pointer exception to be thrown.

```
SEVERE: doSelect exception  
java.lang.NullPointerException
```

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

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=8299\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=8299).

Workaround

None.

[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.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=7529\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=7529).

Workaround

None.

[JDK_Issue] EPoll null pointer exception at startup (Issue 9472)**Description**

At startup, Enterprise Server throws a null pointer exception:

```
java.lang.NullPointerException
    at sun.nio.ch.Util.atBugLevel(Util.java:326)
    at sun.nio.ch.SelectorImpl.<init>(SelectorImpl.java:40)
    at sun.nio.ch.EPollSelectorImpl.<init>(EPollSelectorImpl.java:47)
```

This relates to Grizzly and is a JDK 6 issue. This issue is resolved in JDK 7.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=9472\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=9472).

Workaround

None. Grizzly tries to work around this issue but still may fail.

[JDK_ISSUE] Richaccess: java.io.IOException: Invalid argument from doSelect (Issue 8573)**Description**

The following exception is seen:

```
[#|2009-06-20T06:05:57.942-0700|SEVERE|glassfish|
com.sun.grizzly.config.GrizzlyServiceListener|
_ThreadID=21;_ThreadName=Thread-2;|doSelect
IOException
java.io.IOException: Invalid argument
```

This is a JDK issue, scheduled to be fixed in JDK 1.6.0_18.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=8573\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=8573).

Workaround

Increase the maximum number of file descriptors to 10000 or greater (the default on Solaris is 64000). Once JDK 1.6.0_18 becomes available, install it.

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.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=6545\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=6545).

Workaround

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

Windows installation log file is not readable (Issue 4881)

Description

The *time-stamp*-install.log file cannot be read, because all lines written to the file are concatenated into a single long string.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=4881\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=4881).

Workaround

Use a different editor, and manually open the installation log file created under the %TEMP% directory.

Access to statistics for new virtual servers requires server restart (Issues 6238 and 6422)

Description

Monitoring statistics about newly added virtual servers are available only after the server is restarted.

For more information, see the reports for [Issue 6238 \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=6238\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=6238) and [Issue 6422 \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=6422\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=6422).

Workaround

After adding a virtual server, restart the server to view monitoring data for the virtual server.

[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.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=10693\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=10693).

Workaround

None.

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.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=10755\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=10755).

Workaround

Disable UAC and reboot.

Null pointer exception thrown from `com.sun.xml.wss.Noncemanager.getInstance` (Issue 11138)

Description

Testing a JAX-RPC web service, with GlassFish message security provider enabled, throws the following exception in the server logs:

```
[#|2009-11-23T11:16:58.375+0005|SEVERE|glassfishv3.0|  
javax.enterprise.resource.webservices.rpc.server.http|_ThreadID=25;_  
ThreadName=http-thread-pool-8080-(2);|caught  
throwable  
java.lang.RuntimeException: com.sun.enterprise.security.jauth.AuthException
```

The default value of the nonce property does not work.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=11138\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=11138).

Workaround

To use message security with JAX-RPC web services, disable the nonce property in the configuration. See the Issue report for the complete steps for the workaround.

[Open Installer] Start menus not displayed and then empty on Windows Vista and Windows 2008 (Issue 5087)

Description

The Start menu group for Enterprise 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.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=5087\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=5087).

Workaround

None.

When specj application is deployed, `asadmin get --monitor=true "server.*"` results in I/O error (Issue 11163)

Description

The command `asadmin get -m "server.*"` returns all monitoring data pertaining to that server. When many applications are deployed, the amount of data is quite large and could take a long time to return. The client might time out with the following client-side error:

```
./asadmin get --monitor=true "server.*"  
I/O Error: Read timed out  
Command get failed.
```

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=11163\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=11163).

Workaround

Minimize the amount of data that is returned to the client.

1. Run the `asadmin list -m "server.*"` command, which returns the top-level elements.
2. Select the top-level element for which details are needed, and use this as a filter. For example:

```
> ./asadmin list -m "server.*"  
...  
server.applications.SPECjAppServer.supplier\ .jar.POEnt.bean-cache  
server.applications.SPECjAppServer.supplier\ .jar.POEnt.bean-methods  
server.applications.SPECjAppServer.supplier\ .jar.POEnt.bean-methods.  
create-int-int-[Lorg\ .spec\ .jappserver\ .supplier\ .helper\ .ComponentOrder  
  
server.applications.SPECjAppServer.supplier\ .jar.POEnt.bean-methods.  
findByPrimaryKey- java\ .lang\ .Integer  
server.applications.SPECjAppServer.supplier\ .jar.POEnt.bean-methods.generateXml  
server.applications.SPECjAppServer.supplier\ .jar.POEnt.bean-methods.getEJBLocalHome  
...  
  
> ./asadmin get -m  
"server.applications.SPECjAppServer.supplier\ .jar.POEnt.bean-methods.*"  
...  
server.applications.SPECjAppServer.supplier\ .jar.POEnt.bean-methods.remove.  
methodstatistic-name  
= MethodStatistic  
server.applications.SPECjAppServer.supplier\ .jar.POEnt.bean-methods.remove.  
methodstatistic-starttime  
= 1259604209775  
...
```

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

Description

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

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=11222\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=11222).

Workaround

Ensure that your system conforms to the standalone Update Tool patch requirements as defined in the [Update Center Release Notes \(http://wiki.updatecenter.java.net/wiki.jsp?page=UC2Documentation.ReleaseNotes.2.3\)](http://wiki.updatecenter.java.net/wiki.jsp?page=UC2Documentation.ReleaseNotes.2.3).

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

Ruby applications deployed on context root don't work with Admin Console (Issue 10854)

Description

If a Ruby application is deployed at contextroot '/' and the Administration Console is then accessed, accessing the Ruby application produces a 404 error.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=10854\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=10854).

Workaround

None.

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.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=11257\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=11257).

Workaround

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

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)  
    ...
```

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=8644\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=8644).

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.

Launching an app client can give `ClassNotFoundException` error for the client's main class (Issue 11181)

Description

A problem occurs when all of the following are true:

- The application is an EAR that contains an app client.
- The EAR is directory deployed.
- The EAR contains an application client module `myAppClient.jar`, which, because this is a directory deployment, is pre-expanded into `myAppClient_jar`. (For the purposes of this example, `myApp` is the name of the EAR. This name can be anything.)

Attempts to launch the application client fail with the following error because one file generated on the server is placed in the wrong server directory and overwrites another generated file:

```
java.lang.ClassNotFoundException: (main-class-for-the-client)
```

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=11181\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=11181).

Workaround

Change the name of the application client so it is not `myAppClient.jar`. Specifically:

1. Edit `myApp/META-INF/application.xml` so that the declaration of the client is `<java>myClient.jar</java>`. Note that you can use any name other than `myAppClient.jar`.
2. Rename the directory `myApp/myAppClient_jar` to `myApp/myClient_jar`. Note that the client's subdirectory name must be the same as the application client URI in the `application.xml` file, with the `.jar` replaced with `_jar`.
3. Deploy the application:

```
asadmin deploy --retrieve localdir myApp
```
4. Run the application client:

```
appclient -client localdir/myAppClient.jar
```

Change to log file location requires server restart to take effect (Issue 11142)

Description

Changes to server log values on the General tab of the Logger Settings page in the Administration Console do not immediately take effect.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=11142\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=11142).

Workaround

Restart the server. All changes to the values on this page require a server restart to take effect.

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.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=6621\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=6621).

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.

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

Description

If you reinstall Enterprise 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.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=8233\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=8233).

Workaround

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

[Update Center] Non-user directory access fails (Update Center Issue 1583)

Description

This issue occurs intermittently on Windows and Mac OS systems. `pkg(5)` does not work on certain systems at certain times.

For more information, see [Update Center Issue report \(https://updatecenter2.dev.java.net/issues/show_bug.cgi?id=1583\)](https://updatecenter2.dev.java.net/issues/show_bug.cgi?id=1583).

Workaround.

None.

Inline help and CLI man page list incorrect servlet version 2.4 in X-Powered-By (Issue 11011)

Description

The inline help and CLI man page list servlet 2.4 in the X-Powered-By field. The correct version is servlet 3.0.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=11011\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=11011).

Workaround

None.

[Embedded] Deployment of application containing activation-1.1.jar fails when using uber-jar (Issue 11149)

Description

When using embedded with glassfish-embedded-all-3.0-b73.jar, deployment fails with the following error:

```
SEVERE: WEB9051: Error trying to scan the classes at
/private/var/folders/CV/CVhj8DvqEwGK5bdJKK9TaE  TI/-Tmp-
/gfembed6991712842235699248tmp/applications/xwiki-enterprise-web-2.0/
WEB-INF/lib/activation-1.1.jar for annotations in which a
ServletContainerInitializer has expressed interest
java.util.zip.ZipException: error in opening zip file
```

The issue occurs because embedded uses a folder with plus signs (+), and plus signs in a path are converted into space characters " " when the path is decoded.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=11149\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=11149).

Workaround

A system property has been added that enables you to place temporary directories. The property is `glassfish.embedded.tmpdir` and can be set so the temporary domain directory is not placed in the user directory.

create-service fails to create service without AS_ADMIN_USER in passwordfile on Solaris (Issue 11119)

Description

create-service fails to create service without AS_ADMIN_USER in passwordfile on Solaris.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=11119\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=11119).

Workaround

None.

[Monitoring] Extra monitoring view for connector-connection-pools not available (Issue 11256)

Description

Enterprise Server uses a tree structure to track monitorable objects. Within that tree, the following view is not available to obtain connection pool statistics:

```
server.connector-service.resource-adapter-name.connection-pool-name.* or
server.jms-service.connection-factories.connection-factory-name.* (for
jms-ra-related pools).
```

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=11256\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=11256).

Workaround

Use the `server.resources.*` view to obtain the statistics.

For more information about Monitoring, see [Chapter 8, “Administering the Monitoring Service,” in *Sun GlassFish Enterprise Server v3 Administration Guide*](#).

[EclipseLink] Issues with ElementCollections of embeddables (EclipseLink Issue 296606)

Description

With weaving enabled, updates on an element collection of embeddables can potentially throw a null pointer exception.

For more information, see [EclipseLink Issue report \(https://bugs.eclipse.org/bugs/show_bug.cgi?id=296606\)](https://bugs.eclipse.org/bugs/show_bug.cgi?id=296606).

Workaround

Two workarounds are available:

1. Add the annotation `@ChangeTracking(DEFERRED)` on the embeddable and set the property `eclipselink.weaving.internal` to `false`, or
2. Set the following properties to `false` in persistence XML:
`eclipselink.weaving.changetracking` and `eclipselink.weaving.internal`.

Virtual server started twice (Issue 11195)

Description

After starting the domain and accessing `localhost:4848`, the following messages are seen in the server log:

```
[#|2009-11-27T16:21:57.091+1100|INFO|glassfishv3.0|  
javax.enterprise.system.container.web.com.sun.enterprise.web|  
_ThreadID=20;_ThreadName=Thread-1;|Created  
virtual server server|#]
```

```
[#|2009-11-27T16:21:57.091+1100|INFO|glassfishv3.0|  
javax.enterprise.system.container.web.com.sun.enterprise.web|  
_ThreadID=20;_ThreadName=Thread-20;|Created  
virtual server server|#]
```

These messages give the impression that the virtual server, `server`, was started twice. This is not the case. Virtual servers are only started once, but messages are logged multiple times.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=11195\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=11195).

Workaround

None.

Problems debugging JPA (Issue 11274)**Description**

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

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=11274\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=11274).

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.

EJB interop for remote EJBs broken when target EJB is on the same host (Issue 11152)**Description**

EJB interoperability for remote EJBs is broken when the target EJB is on the same host (another Enterprise Server domain or another Enterprise Server v3 instance).

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=11152\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=11152).

Workaround

Set the following property in `jvm-options`:

```
-Dorg.glassfish.orb.iiop.orbserverid=:
```

Installer hangs at 41% intermittently on Windows Vista and Windows 7 (Issue 11185)**Description**

The Enterprise Server graphical installer hangs at 41% during installation on Windows Vista and Windows 7. This does not happen with every installation attempt.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=11185\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=11185).

Workaround

This issue is related to the auto-tuning feature in Windows Vista and Windows 7, which is enabled by default.

If you experience hangs when installing Enterprise Server initially, or when adding packages or applying updates, restrict or disable the auto-tuning feature.

Cannot send JMS messages between systems (Issue 11254)

Description

By default, the default host name for the JMS service on Enterprise Server is `localhost`. To access the JMS service from another system, however, you must change the host name. You can change it to either the actual host name or to `0.0.0.0`.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=11254\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=11254).

Workaround

To make the change, do one of the following:

1. Use the Administration Console: Expand the Configuration, Java Message Service, and JMS Hosts nodes, select `default_JMS_host`, and edit the Host field, or
2. Use an `asadmin` subcommand such as the following:

```
asadmin set
server-config.jms-service.jms-host.default_JMS_host.host="0.0.0.0", or
asadmin set
server-config.jms-service.jms-host.default_JMS_host.host="hostname"
```

Windows system menu is empty (Issue 11239)

Description

When Enterprise Server is installed using the graphical installer, the installation completes successfully but only the top-level GlassFish v3 entry is added in the Windows system menu, and it is empty. This issue occurs with both the localized and English installers.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=11239\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=11239).

Workaround

None.

mysql not listed in list of supported databases in --dbvendorname in deploy command man page (Issue 11328)

Description

`mysql` is not listed in the list of supported databases in `--dbvendorname` in the `deploy` command man page. This is incorrect. MySQL is a supported database and should be listed.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=11328\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=11328).

Workaround

None.

Embedded ACC overly strict on current thread context class loader (Issue 11427)

Description

The ACC expects the current thread's context class loader to be an `ACCClassLoader`. This is overly restrictive. Although this condition is met for `appclient` script and Java Web Start launches, it might not be met for the embedded case. Other functions inside the ACC require the class loader to be a `URLClassLoader` (or an instance of a subclass of `URLClassLoader`), but the loader does not need to be an `ACCClassLoader`.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=11427\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=11427).

Workaround

Two workarounds are available:

1. Set `-Djava.system.class.loader=org.glassfish.appclient.client.acc.ACCClassLoader`, or
2. In your Java program, instantiate an `ACCClassLoader` and set it to be the current thread's context class loader using `Thread.currentThread().setContextClassLoader` before using the embedded ACC classes and interfaces.

EJB Timer Service config issue for MySQL (Issue 11428)

Description

Able to create and store EJB timer in MySQL as user, but when trying to configure EJB Timer Service for MySQL, get the following exception (SQLException executing statement):

```
"CREATE TABLE EJB__TIMER__TBL (TIMERID
VARCHAR(255) NOT NULL, BLOB BLOB(64000), INITIALEXPIRATIONRAW BIGINT, SCHEDULE
VARCHAR(255), INTERVALDURATION BIGINT, OWNERID VARCHAR(255), STATE INTEGER,
LASTEXPIRATIONRAW BIGINT, PKHASHCODE INTEGER, CREATIONTIMERAW BIGINT,
CONTAINERID BIGINT, PRIMARY KEY (TIMERID))":
com.mysql.jdbc.exceptions.jdbc4.MySQLSyntaxErrorException: You have an error in
your SQL syntax; check the manual that corresponds to your MySQL server version
for the right syntax to use near 'BLOB BLOB(64000), INITIALEXPIRATIONRAW BIGINT,
SCHEDULE VARCHAR(255), INTERVALDU' at line 1|#]
```

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=11428\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=11428).

Workaround

Make sure that the `datasource-classname` specified for the timer pool represents an XA `DataSource`.

MySQL-specific steps:

1. Unpack
`glassfishv3/glassfish/lib/install/applications/ejb-timer-service-app.war`.
2. Add the following to `WEB-INF/classes/__ejb_timer_mappings.xml` after `<persistence-unit-metadata>`:

```
<persistence-unit-defaults>
<delimited-identifiers/>
</persistence-unit-defaults>
```
3. Repackage the `WEB-INF/classes/__ejb_timer_mappings.xml` file.
4. (This step required only if the current installation has already used the EJB Timer Service.)
Manually create the `EJB__TIMER__TBL` in the database using this create statement:

```
CREATE TABLE 'EJB__TIMER__TBL' ('TIMERID' VARCHAR(255) NOT NULL,
'BLOB' BLOB(64000), 'INITIALEXPIRATIONRAW' BIGINT, 'SCHEDULE' VARCHAR(255),
'INTERVALDURATION' BIGINT, 'OWNERID' VARCHAR(255), 'STATE' INTEGER,
'LASTEXPIRATIONRAW' BIGINT, 'PKHASHCODE' INTEGER, 'CREATIONTIMERAW' BIGINT,
'CONTAINERID' BIGINT, PRIMARY KEY ('TIMERID'))
```

deploy subcommand fails against secure server (Issue 11439)

Description

The `deploy` subcommand fails against a secure server unless the `--secure` option is used.

For more information, see [Issue report \(https://glassfish.dev.java.net/issues/show_bug.cgi?id=11439\)](https://glassfish.dev.java.net/issues/show_bug.cgi?id=11439).

Workaround

Use the `--secure` option when issuing the `deploy` subcommand against a secure server.

Expired certificate in Enterprise Server truststore (Issue 6852796)

Description

One of the authority certificates in the Enterprise Server truststore expired on January 7, 2010. The certificate is `cacerts.jks`. An error message is generated on startup indicating that the certificate has expired:

```

Version: V1
Subject: OU=Secure Server Certification Authority, O="RSA Data Security, Inc.", C=US
Signature Algorithm: MD2withRSA, OID = 1.2.840.113549.1.1.2

Key: SunPKCS11-Solaris RSA public key, 1000 bits (id 17891456, session object)
modulus:
public exponent:
Validity: [From: Tue Nov 08 19:00:00 GMT-05:00 1994,
           To: Thu Jan 07 18:59:59 GMT-05:00 2010]
Issuer: OU=Secure Server Certification Authority, O="RSA Data Security, Inc.", C=US
SerialNumber: [ 02ad667e 4e45fe5e 576f3c98 195eddc0]

```

For more information, see [Issue report \(http://bugs.sun.com/bugdatabase/view_bug.do?bug_id=6852796\)](http://bugs.sun.com/bugdatabase/view_bug.do?bug_id=6852796).

Workaround

The expired authority certificate was removed in update 18 of Java SE 6. It will also be removed from the Enterprise Server truststore in a future update.

You can ignore the error messages and use the update, or you can eliminate the error messages. To stop receiving the error messages, use `keytool` to remove the certificate from the Enterprise Server truststore:

```

=> cd domains/domainX/config
=> cp cacerts.jks cacerts.jks.save
=> keytool -delete -keystore cacerts.jks -alias verisignserverca
Enter keystore password:

```

To prevent the expired certificate from reappearing in subsequently created domains, the certificate should also be removed from the template truststore:

```

=> cd glassfish/lib/templates
=> cp cacerts.jks cacerts.jks.save
=> keytool -delete -keystore cacerts.jks -alias verisignserverca
Enter keystore password:

```

For more information about the keystore password, see the information about master passwords and keystores in [“Authentication” in Sun GlassFish Enterprise Server v3 Administration Guide](#).

Restrictions

This section describes the following Sun GlassFish Enterprise Server v3 restrictions:

- “Unsupported Options in `asadmin` Commands” on page 38
- “No Support for Client VM on Windows AMD64” on page 38

Unsupported Options in `asadmin` Commands

The help for `asadmin` commands describes some options that are not supported by Sun GlassFish Enterprise Server v3. For example:

- Options that relate to clusters and multiple server instances, for example, the `--target` option
- Options that relate to profiles, for example, the `--profile` option

If you specify an unsupported option, a syntax error does not occur. Instead, the command runs successfully, and the unsupported option is silently ignored.

No Support for Client VM on Windows AMD64

By default, Enterprise Server uses 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.

For more information about platform support, see *Ergonomics in the 5.0 Java Virtual Machine* (<http://java.sun.com/docs/hotspot/gc5.0/ergo5.html>).

Enterprise Server Documentation Set

The following table provides titles and short descriptions of books in the Enterprise Server documentation set.

TABLE 1–6 Books in the Enterprise Server Documentation Set

Book Title	Description
<i>Release Notes</i>	Provides late-breaking information about the software and the documentation. Includes a comprehensive, table-based summary of the supported hardware, operating system, Java Development Kit (JDK), and database drivers.
<i>Quick Start Guide</i>	Explains how to get started with the Enterprise 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 Enterprise Server. This guide also describes differences between adjacent product releases and configuration options that can result in incompatibility with the product specifications.
<i>Administration Guide</i>	Explains how to configure, monitor, and manage Enterprise 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.

TABLE 1–6 Books in the Enterprise Server Documentation Set (Continued)

Book Title	Description
<i>Application Deployment Guide</i>	Explains how to assemble and deploy applications to the Enterprise Server and provides information about deployment descriptors.
<i>Your First Cup: An Introduction to the Java EE Platform</i>	Provides a short tutorial for beginning Java EE programmers that explains the entire process for developing a simple enterprise application. The sample application is a web application that consists of a component that is based on the Enterprise JavaBeans™ specification, a JAX-RS web service, and a JavaServer™ Faces component for the web front end.
<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 Enterprise Server. These applications follow the open Java standards model for Java EE components and APIs. This guide provides information about developer tools, security, and debugging.
<i>Add-On Component Development Guide</i>	Explains how to use published interfaces of Enterprise Server to develop add-on components for Enterprise Server. This document explains how to perform <i>only</i> those tasks that ensure that the add-on component is suitable for Enterprise Server.
<i>Embedded Server Guide</i>	Explains how to run applications in embedded Enterprise Server and to develop applications in which Enterprise Server is embedded.
<i>Scripting Framework Guide</i>	Explains how to develop scripting applications in languages such as Ruby on Rails and Groovy on Grails for deployment to Enterprise Server.
<i>Troubleshooting Guide</i>	Describes common problems that you might encounter when using Enterprise Server and how to solve them.
<i>Error Message Reference</i>	Describes error messages that you might encounter when using Enterprise Server.
<i>Reference Manual</i>	Provides reference information in man page format for Enterprise Server administration commands, utility commands, and related concepts.
<i>Domain File Format Reference</i>	Describes the format of the Enterprise Server configuration file, <code>domain.xml</code> .
<i>Java EE 6 Tutorial, Volume I</i>	Explains how to use Java EE 6 platform technologies and APIs to develop Java EE applications.
<i>Message Queue Release Notes</i>	Describes new features, compatibility issues, and existing bugs for Sun GlassFish Message Queue.
<i>Message Queue Administration Guide</i>	Explains how to set up and manage a Sun GlassFish Message Queue messaging system.
<i>Message Queue Developer's Guide for JMX Clients</i>	Describes the application programming interface in Sun GlassFish Message Queue for programmatically configuring and monitoring Message Queue resources in conformance with the Java Management Extensions (JMX).

TABLE 1-6 Books in the Enterprise Server Documentation Set (Continued)

Book Title	Description
<i>System Virtualization Support in Sun Java System Products</i>	Summarizes Sun support for Sun Java System products when used in conjunction with system virtualization products and features.

Features Available Only in the Full Platform Profile

The following features of Sun GlassFish Enterprise Server v3 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

Sun GlassFish Enterprise Server v3 implements the Java EE standards listed in the following table. 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.

Java EE Standard	Java Specification Request (JSR)	Sun GlassFish Enterprise Server v3 Full Platform Profile	Sun GlassFish Enterprise Server v3 Web Profile
Java Platform, Enterprise Edition 6 (http://java.sun.com/javaee/6/docs/api/)	JSR 316 (http://jcp.org/aboutJava/communityprocess/pr/jsr316/)	X	X
Java Servlet Technology 3.0 (http://java.sun.com/products/servlet/)	JSR 315 (http://jcp.org/en/jsr/detail?id=315)	X	X
JavaServer Pages 2.2 (http://java.sun.com/products/jsp/)	JSR 245 (http://jcp.org/en/jsr/detail?id=245)	X	X
Expression Language 2.2	JSR 245 (http://jcp.org/en/jsr/detail?id=245)	X	X
Debugging Support for Other Languages 1.0	JSR 45 (http://jcp.org/en/jsr/detail?id=45)	X	X
Standard Tag Library for JavaServer Pages 1.2 (http://java.sun.com/products/jsp/jstl/)	JSR 52 (http://jcp.org/en/jsr/detail?id=52)	X	X
JavaServer Faces 2.0 (http://java.sun.com/javaee/javaserverfaces/)	JSR 314 (http://jcp.org/en/jsr/detail?id=314)	X	X
Common Annotations for the Java Platform 1.1	JSR 250 (http://jcp.org/en/jsr/detail?id=250)	X	X
Java Transaction API 1.1 (http://java.sun.com/javaee/technologies/jta/index.jsp)	JSR 907 (http://jcp.org/en/jsr/detail?id=907)	X	X
Java Persistence API 2.0 (http://java.sun.com/javaee/technologies/persistence.jsp)	JSR 317 (http://www.jcp.org/en/jsr/detail?id=317)	X	X
Enterprise JavaBeans 3.1 Lite (http://java.sun.com/products/ejb/)	JSR 318 (http://jcp.org/en/jsr/detail?id=318)	X	X

Java EE Standard	Java Specification Request (JSR)	Sun GlassFish Enterprise Server v3 Full Platform Profile	Sun GlassFish Enterprise Server v3 Web Profile
Managed Beans 1.0	JSR 316 (http://jcp.org/en/jsr/detail?id=316)	X	X
Interceptors 1.1	JSR 318 (http://jcp.org/en/jsr/detail?id=318)	X	X
Dependency Injection for Java 1.0	JSR 330 (http://jcp.org/en/jsr/detail?id=330)	X	X
Enterprise JavaBeans 3.1 Full API (http://java.sun.com/products/ejb/)	JSR 318 (http://jcp.org/en/jsr/detail?id=318)	X	X
Contexts and Dependency Injection for Java EE 1.0	JSR 299 (http://jcp.org/en/jsr/detail?id=299)	X	X
Java API for RESTful Web Service (JAX-RS) 1.1 (https://jsr311.dev.java.net/)	JSR 311 (http://jcp.org/en/jsr/detail?id=311)	X	X
Bean Validation 1.0	JSR 303 (http://jcp.org/en/jsr/detail?id=303)	X	-
Java EE Connector Architecture 1.6 (http://java.sun.com/j2ee/connector/)	JSR 322 (http://jcp.org/en/jsr/detail?id=322)	X	-
Java API for XML-Based Web Services (JAX-WS) 2.2 (https://jax-ws.dev.java.net/)	JSR 224 (http://jcp.org/en/jsr/detail?id=224)	X	-
Java Architecture for XML Binding (JAXB) 2.2 (https://jaxb.dev.java.net/)	JSR 222 (http://jcp.org/en/jsr/detail?id=222)	X	-

Java EE Standard	Java Specification Request (JSR)	Sun GlassFish Enterprise Server v3 Full Platform Profile	Sun GlassFish Enterprise Server v3 Web Profile
Implementing Enterprise Web Services 1.3	JSR 109 (http://jcp.org/en/jsr/detail?id=109)	X	-
Web Services Metadata for the Java Platform 2.1	JSR 181 (http://jcp.org/en/jsr/detail?id=181)	X	-
Java Message Service API 1.1 (http://java.sun.com/products/jms/)	JSR 914 (http://www.jcp.org/en/jsr/detail?id=914)	X	-
JavaMail 1.4 (http://java.sun.com/products/javamail/)	JSR 919 (http://jcp.org/en/jsr/detail?id=919)	X	-
Java Authorization Contract for Containers 1.4 (http://java.sun.com/j2ee/javaacc/)	JSR 115 (http://jcp.org/en/jsr/detail?id=115)	X	-
Java Authentication Service Provider Interface for Containers 1.1	JSR 196 (http://jcp.org/en/jsr/detail?id=196)	X	-
Java EE Application Deployment 1.2 (http://java.sun.com/j2ee/tools/deployment/)	JSR 88 (http://jcp.org/en/jsr/detail?id=88)	X	-
J2EE Management 1.1 (http://java.sun.com/j2ee/tools/management/)	JSR 77 (http://jcp.org/en/jsr/detail?id=77)	X	-
Java API for XML-Based Remote Procedure Calls (JAX-RPC) 1.1 (https://jax-rpc.dev.java.net/)	JSR 101 (http://jcp.org/en/jsr/detail?id=101)	X	-
Java API for XML-Based Registries (JAXR) 1.0	JSR 93 (http://jcp.org/en/jsr/detail?id=93)	X	-

Building on these standards, Enterprise Server v3 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

Enterprise Server v3 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 Sun GlassFish Enterprise Server v3. 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 Sun GlassFish Enterprise Server v3 Web Profile. This version contains web technologies that are part of the Full Platform Profile and is designed for developers who do not require the full set of Java EE APIs.

Java EE 6 SDK distributions are available from the [Java EE 6 SDK downloads page](http://java.sun.com/javaee/downloads/index.jsp) (<http://java.sun.com/javaee/downloads/index.jsp>).

How to Report Problems and Provide Feedback

If you have problems with Sun GlassFish Enterprise Server v3, provide feedback through one of the following mechanisms:

- [GlassFish mailing lists](https://glassfish.dev.java.net/servlets/ProjectMailingListList) (<https://glassfish.dev.java.net/servlets/ProjectMailingListList>) – A variety of GlassFish community mailing lists for various interests and feedback
- [GlassFish forum](http://forums.java.net/jive/forum.jspa?forumID=56) (<http://forums.java.net/jive/forum.jspa?forumID=56>) – A forum for discussing the GlassFish project

Additional Resources

Useful information can be found at the following locations:

- [GlassFish Community](https://glassfish.dev.java.net/) (<https://glassfish.dev.java.net/>)
- [Glassfish Wiki: GlassFish v3](http://wiki.glassfish.java.net/Wiki.jsp?page=PlanForGlassFishV3) (<http://wiki.glassfish.java.net/Wiki.jsp?page=PlanForGlassFishV3>)
- [Sun Developer Information](http://developers.sun.com) (<http://developers.sun.com>)

- Sun Developer Support Services (<http://www.sun.com/developers/support>)
- Sun Microsystems product documentation (<http://docs.sun.com/>)

Third-Party Web Site References

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

Note – Sun is not responsible for the availability of third-party Web sites mentioned in this document. Sun does not endorse and is not responsible or liable for any content, advertising, products, or other materials that are available on or through such sites or resources. Sun will not be responsible or liable for any actual or alleged damage or loss caused by or in connection with the use of or reliance on any such content, goods, or services that are available on or through such sites or resources.

Accessibility Features

To obtain accessibility features that have been released since the publication of these media, consult Section 508 product assessments available from Sun upon request to determine which versions are best suited for deploying accessible solutions. Updated versions of applications can be found at <http://sun.com/software/javaenterprisesystem/get.html>.

For information on Sun's commitment to accessibility, visit <http://sun.com/access>.

