Sun™ ONE Application Server 7 Release Notes

These release notes contain important information available at the time of the Version 7 release of the Sun™ Open Network Environment (ONE) Application Server, Standard Edition product. New features and enhancements, installation notes, known problems, and other late-breaking issues are addressed here. Read this document and associated documents before you begin using Sun ONE Application Server 7, Standard Edition product.

This document contains the following sections:

- What's New in the Sun ONE Application Server 7 Product

- Platform Summary

- Documentation

- Software and Hardware Requirements

- Known Problems and Limitations

- How to Report Problems

- For More Information

- Revision History

What's New in the Sun ONE Application Server 7 Product

Information on what's new in the Sun ONE Application Server 7, Standard Edition product can be found in the *Sun ONE Application Server What's New* document (PN 816-7141-10) at this location:

```
http://docs.sun.com/db?p=prod/s1appsrv
```

Platform Summary

Information on the supported platform for the Sun ONE Application Server 7, Standard Edition product can be found in the *Sun ONE Application Server Platform Summary* document (PN 816-7142-10) at the following location:

```
http://docs.sun.com/db?p=prod/s1appsrv
```

Documentation

All Sun Microsystems product documentation can be found at this location:

```
http://docs.sun.com/
```

This section contains the following sections:

* *Sun ONE Application Server 7 Documentation*

* *Referenced Documentation*

Sun ONE Application Server 7 Documentation

In addition to these release notes, the Sun ONE Application Server 7, Standard Edition product includes an entire set of documentation. This section contains a brief synopsis of each document.

NOTE	Some documents may be posted after initial Sun ONE Application Server 7, Standard Edition release. If a document listed here is not available on the Sun documentation site, check back in December 2002.
	For significant issues, a document may be revised. In this case, the revised version will be posted to this site. The date last updated is displayed in the top right corner of the contents page for the HTML version of the document.

The Sun ONE Application Server 7 documents can be found at this location:

```
http://docs.sun.com/db/coll/s1_asse_en
```

- *Product Overview*—(PN 816-7140-10) Addresses people getting first exposure to Sun ONE Application Server product as well as user who are already familiar with older versions of the application server.

- *Architecture Overview*—(PN 816-7143-10) Presents physical diagrams and descriptions of server architecture; discusses benefits of the Sun ONE Application Server architectural approach.

- *What's New*—(PN 816-7141-10) Conveys high-level feature differences between iPlanet Application Server/iPlanet Web Server 6.x and the Sun ONE Application Server 7 product.

- *Platform Summary*—(PN 816-7142-10) Provides a comprehensive, table-based summary of supported hardware, operating system, JDK and JDBC/RDBMS.

- *Getting Started Guide*—(PN 816-7146-10) Describes how to get started with the Sun ONE Application Server 7 product. Focuses on initial developer exposure; is also suited for users evaluating the product.

- *Installation Guide*—(PN 816-7145-10) Provides instructions for installing the Sun ONE Application Server software and its components, such as sample applications, the Administration interface, and the Sun ONE Message Queue.

- *Migrating and Redeploying Server Applications*—(PN 816-7148-10) Provides instructions for migrating your applications to the new Sun ONE Application Server 7 programming model, specifically from iPlanet Application Server 6.x and from Netscape Application Server 4.0. Includes a sample migration.

- *Developer's Guide*—(PN 816-7149-10) The centerpiece of the developer's collection, this document provides general information about how to create J2EE applications intended to run on the Sun ONE Application Server that follow the open Java standards model for servlets, Enterprise JavaBeans™ (EJBs™), JavaServer Pages (JSPs), and other J2EE components. Topics include: J2EE application design, security, deployment, debugging, and creating lifecycle modules. A comprehensive Sun ONE Application Server glossary is included.

- *Developer's Guide to Web Applications*—(PN 816-7150-10) Describes how to use servlets and JavaServer Pages (JSPs) within J2EE applications, and how to use HSTML and CGI. Topics include results caching, JSP precompilation, session management, security, and deployment.

- *Developer's Guide to Enterprise Java Beans Technology*—(PN 816-7151-10) Describes how to develop and deploy various types of enterprise beans in the Sun ONE Application Server environment. Topics include container-managed persistence, read-only beans, and the XML and DTD files associated with enterprise beans.

- *Developer's Guide to NSAPI*—(PN 816-7154-10) Describes how to create NSAPI plugins.

- *Developer's Guide to Web Services*—(PN 816-7152-10) Describes how to develop and deploy web services in the Sun ONE Application Server environment.

- *Developer's Guide to Clients*—(PN 817-0462-10) Describes how to develop and deploy various types of clients that are supported by the Sun ONE Application Server product. Topics include JMS Clients, CORBA Clients, the Application Client Container (ACC), and the client XML and DTD.

- *Administrator's Guide*—(PN 816-7156-10) The centerpiece of the administrator's collection, this document provides information and instructions on the configuration, management, and deployment of the Sun ONE Application Server subsystems and components, from both the Administration interface and the command-line interface. A comprehensive Sun ONE Application Server glossary is included.

- *Administrator's Configuration File Reference*—(PN 816-7155-10) Describes the contents of the Sun ONE Application Server configuration files, such as the `server.xml` file.

- *Administrator's Guide to Security*—(PN 816-7158-10) Describes how to configure and administer security for the Sun ONE Application Server operational environment. Includes information on general security, certificates, and SSL/TLS encryption. HTTP server-based security is also addressed.

- *J2EE CA SPI Administrator's Guide*—(PN 816-7157-10) Describes how to configure and administer JCA SPI Implementation features for the Sun ONE Application Server environment. Topics include the Administration Tool, Pooling Monitor, deploying a JCA connector, and sample connectors and sample applications.

- *Performance Tuning Guide*—(PN 816-7159-10) Describes how and why to tune your Sun ONE Application Server to improve performance.

- *Error Log Reference*—(PN 816-7986-10) Describes all Sun ONE Application Server error messages.

- Manpages for Command-line Interface—Provides XML pages written in manpage style for all command-line interface commands.

- Manpages for Utilities—Provides XML pages written in manpage style for all Sun ONE Application Server utility commands.

- Admin GUI Online Help—Provides content-specific online help for the Sun ONE Application Server graphical Administration interface.

- Sun ONE Studio 4, Enterprise Edition for Java with Application Server 7 Tutorial—Provides an introduction to using Sun ONE Studio 4 with the Sun ONE Application Server.

- Sun ONE Application Server Studio Online Help—Provides content-specific online help for the Sun ONE Application Server modules that integrate with the Sun ONE Studio 4 product.

Referenced Documentation

The Sun ONE Message Queue (also known as iPlanet Message Queue) subsystem integrated with the Sun ONE Application Server has its own set of documentation that can be found at the following location:

```
http://docs.sun.com/db?p=prod/s1.s1msgqu
```

Software and Hardware Requirements

Information on the platform requirements for the Sun ONE Application Server 7, Standard Edition product can be found in the *Sun ONE Application Server Platform Summary* document (PN 816-7142-10) at this location:

```
http://docs.sun.com/db/coll/s1_asse_en
```

The following table summarizes the Sun ONE Application Server requirements.

Operating System	Architecture	Minimum Memory	Recommended Memory	Minimum Disk Space	Recommended Disk Space
UNIX					
• Sun Solaris 8 or 9 for SPARC • Sun Solaris X86	32 and 64 bit	256 MB without Sun ONE Studio 512 MB with Sun ONE Studio	512 MB	250 MB free	500 MB free
Microsoft Windows					

Operating System	Architecture	Minimum Memory	Recommended Memory	Minimum Disk Space	Recommended Disk Space
• 2000 Advanced Server, SP2 • 2000 Server, SP2 • 2000 Professional, SP2 • Windows XP Professional	Intel 32 bit	256 MB without Sun ONE Studio 256 MB with Sun ONE Studio	256 MB without Sun ONE Studio 512 MB with Sun ONE Studio	250 MB free	500 MB free

Patches

Solaris 8 users must have the Sun recommended patch cluster installed, available under "Recommended and Security Patches" at this location:

```
http://sunsolve.sun.com/
```

Patches that are absolutely required for Solaris 8 are 109326-06 or higher, 108827-26 or higher and 110934 (any revision, for package based installation only). Without these patches, which the installer checks for, you won't be able to install or run the Sun ONE Application Server software. These patches are already contained in the latest recommended patch cluster.

Microsoft Windows

Your Microsoft Windows system must meet the following requirements before you can install the Sun ONE Application Server 7, Standard Edition product.

Operating Systems

The following Microsoft Windows operating systems will work with the Sun ONE Application Server 7 product:

- Windows 2000 Server, SP2+

- Windows 2000 Advanced Server, SP2+

- Windows 2000 Professional, Service Pack (SP)2+

- Windows XP Professional, SP2+

System Requirements

- Memory: 256 MB minimum

- Disk Space: 500 MB

Known Problems and Limitations

This section describes known problems and associated workarounds for the Sun ONE Application Server 7 product. This information is organized into the following sections:

- Installation/Uninstallation

- Server Startup/Shutdown

- Database Driver

- Web Container

- EJB Container

- Container-Managed Persistence

- JMS and Message-Driven Beans

- Java Transaction Service (JTS)

- Application Deployment

- Verifier

- Configuration

- Deployment Descriptors

- Monitoring

- Server Administration

- Sun ONE Studio 4 Plugin

- Sample Applications

- ORB/IIOP Listener

- Localization

- Documentation

Installation/Uninstallation

This section describes known Sun ONE Application Server 7 installation and uninstallation issues and the associated solutions.

ID	Summary
4687768	**Setup-SDK/JDK: An error occurs when installing in command-line mode on a machine without Xwindows.**

It is not possible to run the Sun ONE Application Server installer, even in command-line mode, on a hardened Solaris system which does not contain X Windows libraries. The installer will throw `java.lang.UnsatisfiedLinkError` while instantiating AWT objects used by SetupSDK/Webstart Wizard's installer framework.

Solution

1. Install X Windows support packages temporarily, removing them after installing the Sun ONE Application Server product.

2. Install the Sun ONE Application Server packages using the `pkgadd` command and create the initial domain using `asadmin` commands.

| **4719600** | **Warning messages occur during installation.** |

During installation, some invalid error messages may occur. For example:

```
WARNING: Couldn't flush system prefs:
java.util.prefs.BackingStoreException: Couldn't get file lock.
WARNING: Could not lock System prefs.Unix error code -223460600.
```

Solution

Ignore these warnings or, alternatively, you can create a system preferences directory (typically `/etc/.java/.systemPrefs`). This is normally done by the JDK install script.

ID	Summary
4737663	**If you install both the package-based install and regular install, there is conflict.**

If you install both the package-based install (Solaris 9 bundled) and the mainstream installer version of the product, there are potential conflicts. The Sun ONE Message Queue broker for both of these installations will be shared, so if you don't uniquely name the domains and instances, you may see the following message when starting the second instance with the same domain/instance name:

```
SEVERE: JMS5024: JMS service startup failed.
SEVERE: CORE5071: An error occured during initialization
```

In particular, the default domain and instance names are the same for both of these installations.

Solution

Follow the instructions in the "JMS Administration" chapter of the *Sun ONE Application Server Administrator's Guide*.

| **4742038** | **Sun ONE Application Server does not start if the install directory contains non alpha-numeric characters.** |

Sun ONE Application Server startup fails if the install directory contains characters such as #, spaces, or any other non alpha-numeric characters. In this case, the server log files are not created. The Sun ONE Application Server install directory can contain only the following characters: alphanumerics, - (dash) or _ (underscore). This also applies to entering existing Java 2 SDK directory during installation.

Solution

During installation, specify a directory where names contain only alphanumeric, dash, or underscore characters.

| **4742828** | **Silent installer is not checking user permissions.** |

Although interactive installers (GUI or command-line) check for appropriate user permissions (admin user for Microsoft Windows platforms, and root user for Solaris package-based installation), this check is not done during silent installation. As a result, installation will fail later in the process because you will not have sufficient permissions to install packages (Solaris) or create services (Microsoft Windows).

Solution

Make sure that silent installation is being run as the appropriate user.

ID	Summary
4741190	**Installer accepts JDK_LOCATION value even if the location contains an earlier version (less than 1.2 on Solaris).**
	Sun ONE Application Server 7 requires a Java 2 SDK version greater than or equal to 1.4.0_02. However, on Solaris, if a user chooses to reuse an existing Java 2 SDK (less than version 1.2), the installer may not display a warning message. The installation might complete successfully, but the Sun ONE Application Server may not function properly. This is caused by having an existing JAVA_HOME in your environment.
	Solution
	Before starting the installation program, unset JAVA_HOME as follows:
	(On ksh): `unset JAVA_HOME` (On csh): `unsetenv JAVA_HOME`
4742171	**Installing a development and operations installation over an existing consistency installation in silent mode does not report an error.**
	Affects Microsoft Windows and Solaris development and operations installers running in silent mode. If user attempts to install over an existing consistency installation of Sun ONE Application Server 7 (in the same directory), silent installation does not report any errors and proceeds normally. Existing consistency installation files are preserved.
	Solution
	Uninstall existing consistency installations before installing a new development and operations installation in the same location.
4742552	**Selecting Application Server and Support for Sun ONE Studio 4, Enterprise Edition for Java components in the same installation session in command-line and silent mode does not work correctly.**
	Affects Microsoft Windows and Solaris development and operations installations. While running installation in command-line or silent mode, you can choose to install both Application Server and Support for Sun ONE Studio 4, Enterprise Edition for Java components during the same installation session (in GUI mode, these components are mutually exclusive). The installer does not process component dependency correctly and tries to install the Administration Client component instead of the selected Sun ONE Application Server component.
	Solution
	Simulating GUI mode, first install the Sun ONE Application Server component in command-line or silent mode, then run another installation and install the Support for Sun ONE Studio 4, Enterprise Edition for Java component.

ID	Summary
N/A	**If the Sun ONE Application Server installer upgrades an existing Sun ONE Message Queue 3.0 to 3.0.1, the resulting installation will be removed during Sun ONE Application Server uninstallation.**

Affects Solaris development and operations installer. If an installed Sun ONE Message Queue 3.0 is detected on the system, you are given the option of automatically upgrading this installation to version 3.0.1. If this option is chosen, the resulting Sun ONE Message Queue 3.0.1 installation will be uninstalled during Sun ONE Application Server uninstallation.

Solution

To preserve the Sun ONE Message Queue installation after the Sun ONE Application Server is uninstalled:

1. Exit the installer when offered the automatic upgrade choice,.

2. Upgrade Sun ONE Message Queue to version 3.0.1 according to Sun ONE Message Queue documentation,.

3. Run Sun ONE Application Server installation again.

4746410	**When installing the Sun ONE Application Server in non-default locations, the package-based installer on Solaris does not check disk space in the correct locations.**

When attempting to install the Sun ONE Application Server on Solaris (using the package-based installer) in non-default locations, the installation program does not check for disk space in the specified target directory. Instead, it checks for disk space only in the default location (`/opt`).

Solution

Before starting the installation, make sure that you have adequate disk space (85 MB) in `/opt` even if you do not plan to install in `/opt`. In addition, make sure you have adequate disk space (85 MB) in the target directory.

4748404	**On Windows XP, cannot incrementally install sample applications and PointBase 4.2 components.**

This issue affects the Windows XP platform. If you try to incrementally install Sample Applications and/or PointBase 4.2 components over an installed Sun ONE Application Server component, the installer does not correctly detect the existing Sun ONE Application Server installation and reports `Application Server Not Found`. Installation does not proceed.

Solution

Install sample applications and PointBase 4.2 components together with the Sun ONE Application Server component. If the Sun ONE Application Server is already installed on the system, uninstall it and run installation again, this time selecting all necessary components.

ID	Summary
4748455	**Directory error occurs during generic silent install.**
	This issue affects silent installation on all platforms. If the installer finds a problem with a given installation directory, the generic error message `Invalid Installation Directory` is reported.This error message covers the following situations:
	• Selected directory is not writable.
	• Selected directory string is empty or contains space characters.
	Solution
	Check the supplied installation directory value for both issues to determine the cause of error.
4749033	**On Windows XP, cannot uninstall standalone admin client installation using uninstaller.**
	This issue affects a standalone admin client installation on the Windows XP platform. If user tries to uninstall a standalone admin client through the provided uninstaller, uninstallation tries to uninstall an incorrect set of components and hang.
	Solution
	Uninstall a standalone admin client manually. Files located in the *install_dir* directory should be deleted. The related Program Group folder (Start->Programs->Sun Microsystems->Sun ONE Application Server) should also be removed. There are no related Microsoft Windows registry entries for a standalone admin client component; these steps will fully revert the system in the state before admin client installation.
4749666	**Samples documentation is not published to initial server instance if Sample Application component has been incrementally installed.**
	This issue affects the development and operations installer on all platforms. If sample applications are installed in a separate installation session over an installed Sun ONE Application Server, the sample documentation will not be published to the initial server instance and will not be accessible through the `http://<hostname>:<port>/samples` URL. However, documentation is installed on the file system and can be accessed locally at this location: `file:///<install_root>/samples/index.html`
	Solution
	Access samples documentation locally.

ID	Summary

4754256	**Sun ONE Message Queue configuration files are not preserved during Sun ONE Message Queue upgrade performed by the installer.**
	
	If an existing Sun ONE Message Queue 3.0 package has been detected on the system, the installer offers to upgrade this installation to version 3.0.1 which can be used by the Sun ONE Application Server. During this upgrade operation, the existing 3.0 Solaris packages is removed, resulting in the removal of the following configuration files:
	
	`/etc/imq/passwd`
	`/etc/imq/accesscontrol.properties`
	
	If these files have been modified, those modifications will be lost and the resulting Sun ONE Message Queue 3.0.1 installation will contain the default configuration values.
	
	Solution
	
	Create a backup copy of any user-modified files and restore the backup copies of the files after the upgrade has been completed. For more details, consult *Sun ONE Message Queue 3.0 Installation Guide.*

ID	Summary
4754824	**An installer error message occurs while running a Solaris installation from a CD.**

When a volume is inserted into the CD-ROM drive, Solaris volume management assigns it the next symbolic name. For example, if two CD-ROMs match the default regular expression, they are named cdrom0 and cdrom. Any that match the added regular expression would be named starting with cdrom2. This is documented on vold.conf man page. Every time you install the Sun ONE Application Server from the CD, the CD-ROM mount point appends a number after the label name. The first time the CD is mounted everything goes well. On subsequent mounts, the following error message occurs when the installer starts:

```
IOException:java.io.FileNotFoundException: /cdrom/appserver7 (No such
file or directory) while loading default flavormap.properties file
URL:file:/cdrom/appserver7#4/AppServer7/pkg/jre/lib/flavormap.propert
ies
```

Solution

Installer functionality is not affected in any way. However, the following workaround exists:

1. Become the superuser by entering the command su and the root password at the command prompt, or log in as root. The command prompt changes to the pound sign (#).

2. If the /cdrom directory does not already exist, enter the following command to create it:

   ```
   # mkdir /cdrom
   ```

3. Mount the CD-ROM drive.

NOTE: The vold process manages the CD-ROM device and performs the mounting. The CD-ROM might automatically mount onto the /cdrom/cdrom0 directory.

If you are running File Manager, a separate File Manager window displays the contents of the CD-ROM.

4. If the /cdrom/cdrom0 directory is empty because the CD-ROM was not mounted, or if File Manager did not open a window displaying the contents of the CD-ROM, verify that the vold daemon is running by entering:

   ```
   # ps -e | grep vold | grep -v grep
   ```

5. If vold is running, the system displays the process identification number of vold. If the system does not display anything, kill the daemon by typing the following:

   ```
   # ps -ef | grep vold | grep -v grep
   ```

6. Stop the vold process by entering:

   ```
   # kill -15 process_ID_number
   ```

7. Mount the CDROM manually:

   ```
   # mount -F hsfs -r ro /dev/dsk/cxtyd0sz /cdrom/cdrom0
   ```

where x is the CD-ROM drive controller number, y is the CD-ROM drive SCSI ID number, and z is the slice of the partition on which the CD-ROM is located.

You have now mounted the CD-ROM drive. Refer to Installing and Setting Up CD One on Solaris for procedures on installation.

ID	Summary
4755165	**On Microsoft Windows, Installer functionality is affected if administrator user credentials are supplied only when running setup.exe.**
	This issue affects all installations on Microsoft Windows platforms. If a user is logged in without administrator privileges, he/she will be prompted to enter administrator user credentials while attempting to run setup.exe. If the correct credentials are entered, the installer checks for user privileges will be satisfied and installation will proceed. However, some installer functionality will be affected:
	• The installer will hang if the Browse button is selected on the installation directory selection screen.
	• Program Group entries for the Sun ONE Application Server items may not be created.
	Solution
	Log in as user with administrator privileges when performing installation.
4757687	**Incremental installation of the Sun ONE Application Server component on the system with previously installed Administration Client component may result in an unusable installation.**
	This issue affects Solaris package-based installation on a Solaris platform. If user tries to install the Sun ONE Application Server component on the system where a standalone Administration Client component has already been installed, and selects a different installation directory from the one originally used for Administration Client installation, the resulting Sun ONE Application Server installation will be unusable even though the installation outcome is reported as successful. This is because the Administration Client Solaris packages will be detected as already installed on the system, and they will not be installed as the part of the Sun ONE Application Server installation. As a result, files critical for product functionality will be missing.
	Solution
	Uninstall the standalone Administration Client before attempting to install the Sun ONE Application Server on the same Solaris system.
	Alternatively, an incremental installation can be attempted, but the same installation directory that has been used for the Administration Client installation should be used for the subsequent Sun ONE Application Server installation.

ID	Summary
4762118	**Solaris installation fails if a selected custom configuration directory is a subdirectory of the selected installation directory and is called 'etc'.**
	This issue affects Solaris package-based installation on a Solaris platform. If the following combination of custom directory locations has been selected, installation fail due to inconsistent group ownership information for the same directory:
	• Installation directory: *install_dir*
	• Configuration directory: *install_dir*/etc
	The pkgadd log file in the /var/sadm/install/logs directory will contain following error message:
	``` pkgadd: ERROR: duplicate pathname </install_dir/etc> pkgadd: ERROR: unable to process pkgmap ```
	Solution
	Select a custom configuration directory other than *install_dir*/etc.
4724612	**PointBase shell scripts fail if run by someone other than the installing user.**
	This issue affects only the evaluation Solaris installer. All PointBase shell scripts are set to execute permission only for the installing user.
	Solution
	If users other than the person who installed the product need to execute these scripts, change the permissions to 0755.
4762694	**Sun ONE Message Queue Solaris package SUNWiqsup is not removed during Message Queue upgrade process.**
	This is only an issue on Solaris. The Sun ONE Application Server 7 installation process involves installing Sun ONE Message Queue version 3.0.1. On Solaris, if Sun ONE Message Queue version 3.0 is detected, it is first uninstalled (after user confirmation) and the 3.0.1 version is installed.
	There is a minor cleanup issue where the Solaris installer does not remove one of the Solaris packages (SUNWiqsup) for Sun ONE Message Queue 3.0 as part of this upgrade process. The presence of this package is harmless and does not affect Sun ONE Message Queue or Sun ONE Application Server 7.
	Solution
	Manually remove the SUNWiqsup package using the following command (as root):
	``` # pkgrm SUNWiqsup ```

Server Startup/Shutdown

This section describes known Sun ONE Application Server 7 startup/shutdown issues and the associated solutions.

Behavior of Log Service create-console Attribute

On Microsoft Windows, when the `create-console` attribute of the `log-service` element in `server.xml` is set to true (the default setting), a window displaying the content of the server event log is displayed on the desktop. By design, closing this window does not result in a persistent termination of the App Server instance process. Closing the console window terminates the `appservd.exe` process, but the watchdog process (`appservd-wdog.exe`) immediately restarts the server instance process.

For developers, closing the event log window of an instance can be used as a means of quickly restarting the App Server instance.

However, to stop the App Server instance completely (along with the companion watchdog process), use one of the following methods:

- Administration interface—Start->Programs->Sun ONE Application Server 7->Stop Application Server

- Command-line interface—`asadmin stop-instance --local=true` *instance name*

  This is the local form of the `stop-instance` command. You can also use the remote form. See the `asadmin stop-instance` help for more information.

- Admin Console—Select server instance, and slick Stop.

Using the Admin Console, you can enable/disable the console event log window by modifying the Create Console setting under the Logging tab of the App Server instance.

ID	Summary
4725893	**License expiration information is not shown.**
	On Solaris evaluation licenses, warning information relating to imminent expiration of license (within 14 days or less of expiration) would not be reported through the command-line interface and browser-based interfaces. The warnings would, however, appear in the server log files.
	Solution
	Check the server log files.

ID	Summary
4738648	**JMS service/Sun ONE Application Server startup fails.**

If the JMS provider (Sun ONE Message Queue broker) has a large number of undelivered persistent messages, a Sun ONE Application Server initialization failure may occur due to following problems:

1. As it tries to load all the pending messages, the MQ broker may run out of memory and abort.

Solution

Use more Java heap space for the MQ broker process. To do this, set the `Start Arguments` attribute of the JMS service to `-vmargs -Xmx256m.`

The procedure for setting this attribute is described in the "Using the JMS Service" chapter of the *Sun ONE Application Server Administrator's Guide.*

2. If the MQ broker cannot complete its initialization sequence within a certain period of time, the Sun ONE Application Server times out and aborts.

Solution

Increase the value of the JMS service Start Timeout attribute. The procedure for setting this attribute is described in the "Using the JMS Service" chapter of the *Sun ONE Application Server Administrator's Guide.*

ID	Summary
4762420	**Firewall rules may cause Sun ONE Application Server startup failures.**

If you have a personal firewall installed, you may experience this problem. The presence of strict firewall rules on the same machine as a Sun ONE Application Server installation may cause startup failures of the Admin Server and App Server instances. Specifically, the Admin Server and App Server instances attempt to establish local connections within the Sun ONE Application Server environment. Since these connection attempts access ports using the host name of the system rather than localhost, local firewall rules may block such attempts.

The local firewall may also inadvertently generate alerts saying that either the "Portal of Doom Trojan" attack (for example, TCP connection attempts on port 3700) or similar attacks have occurred when, in fact, such access attempts have been made by the Sun ONE Application Server and are in no way a security threat to your machine. Under some conditions, the port number which the Sun ONE Application Server uses for various local communications may overlap with port numbers used in known popular attacks. Some symptoms of this problem:

- An attempt to start the Sun ONE Application Server using the Microsoft Windows program group item "Start Application Server" fails with this message:

```
Could not start the instance: domain1:admin-server
server failed to start: abnormal subprocess termination
...
```

- The administrative and server instance log files contain connection exceptions followed by this message: CORE3186: Failed to set configuration

Solution

Modify the firewall policy to allow the Sun ONE Application Server to make connection attempts to ports on the local system.

To avoid inaccurate alerts concerning possible attacks, either modify the relevant rules or change the conflicting port number(s) used by the Sun ONE Application Server.

To determine the port numbers used by the Admin Server and App Server instances, see the server.xml file in the following location of your Sun ONE Application Server installation:

```
<domain_config_dir>/domain1/admin-server/config/server.xml
<domain_config_dir>/domain1/server1/config/server.xml
```

where <domain_config_dir> is the location of your initial server configuration. For example:

Microsoft Windows: <install_dir>/domains/...
Solaris 9 and above integrated install: /var/appserver/domains/...
Solaris 8, 9 and above unbundled install: /var/opt/SUNWappserver7/domains/...

Look for the port settings in the <iiop-listener> and <jms-service> elements. You can either change these port numbers to other unused port numbers, or you can modify your firewall policy to allow connection attempts from clients on the local machine to these port numbers on the same machine.

ID	Summary
4780076	**The Sun ONE Application Server starts all instances as root thereby allowing non-root users root access.**

There are several issues associated with application server startup when the Sun ONE Application Server is installed as part of a Solaris installation (bundled):

- All application server and administrative server instances are started automatically during Solaris system startup. In many environments, not all the instances are expected to be started automatically during Solaris system startup. Starting every defined instance can adversely impact the memory available on a system.

- When application server instances and administrative server instances are started automatically, the startup script for each instance is executed as root. Execution of non-root owned instance startup scripts can enable non-root users access to the root user through modification of the instance-level startup scripts.

Background

During installation of the Sun ONE Application Server as part of a Solaris installation, the `/etc/init.d/appserv` script and symbolic links to the S84appserv and K05appserv scripts in the `/etc/rc*.d/` directories are installed. These scripts cause all the application server and administrative server instances defined as part of the application server installation to be started and stopped automatically during Solaris system startup and shutdown.

The `/etc/init.d/appserv` script contains the following section of code:

```
...
case "$1" in
'start')
    /usr/sbin/asadmin start-appserv
    ;;
'stop')
    /usr/sbin/asadmin stop-appserv
    ;;
...
```

Execution of the `asadmin start-appserv` command causes the administration server instance and all application server instances defined in all administrative domains to be started during Solaris system startup. Since the system startup and shutdown scripts are executed as root, the startup script for each application server and administrative server instance is also executed as root. The instance-level startup script is named `startserv` and is located at *instance-dir*/bin/startserv. Since instances may be owned by users other than root, the `startserv` scripts could be modified by the non-root user to execute commands as the root user.

In cases where an instance is using a privileged network port, the instance's `startserv` script must be executed as root. However, in these cases, "run as user" is typically set in the instance's configuration to force the instance to run as the specified user after the instance has been initially started by the root user.

ID	Summary

(cont.)	**Solution**
	
	Perform one of the following workarounds depending on your environment:
	
	• If your environment does not require all application server and administrative server instances to be started as root, then you should comment out execution of the `asadmin start-appserv` and `asadmin stop-appserv` commands in the `etc/init.d/appserv` script.
	
	• If your environment requires starting either specific administrative domains (including the administrative server instance and all application server instances of each domain) or specific instances within one or more administrative domains, then you should either modify the `/etc/init.d/appserv` script to start the domains and/or instances of interest or define new `/etc/rc*.d/` scripts that suit the needs of your environment.
	
	• Starting a specific domain. If you require to start either an administrative domain or specific instances as non-root users, then you should ensure that the `su` command with the `-c` option is used to start the domains and/or instances of interest.
	
	Examples
	
	Starting a specific administrative domain—If you want to start the administrative server instance and all application server instances of a specific administrative domain as the root user, you can modify the `/etc/rc*.d/` scripts as follows:
	
	<pre>...
	case "$1" in
	'start')
	   /usr/sbin/asadmin start-domain --domain production-domain
	   ;;
	
	'stop')
	   /usr/sbin/asadmin stop-domain --domain production-domain
	   ;;
	...</pre>

ID	Summary
(cont.)	• If you want to start specific application server instances as a non-root user, modify the /etc/rc*.d/ scripts to use the su command with the -c option:

```
...
case "$1" in
'start')
   su - usera -c "/usr/sbin/asadmin start-instance --domain
test-domain instance-a"
   su - userb -c "/usr/sbin/asadmin start-instance --domain
test-domain instance-b"
   ;;

'stop')
   su - usera -c "/usr/sbin/asadmin stop-instance --domain
test-domain instance-a"
   su - userb -c "/usr/sbin/asadmin stop-instance --domain
test-domain instance-b"
   ;;
...
```

See the*Sun ONE Application Server Administrator's Guide* for more information on the startup and shutdown commands available through the asadmin command line interface.

Database Driver

This section describes known database driver issues and the associated solutions.

ID	Summary
4700531	**ORACLE: JDBC driver error occurs.**
	This new Java Database Connectivity (JDBC) driver is for Oracle (R) working with JDK1.4. The problem is caused by a combination of the Oracle 9.1 database and ojdbc14.jar. Applying the patch will fix the problem on Solaris 32-bit machine, running an Oracle 9.0.1.3 database.
	Solution
	Obtain and apply the patch to your server from the Oracle Web site for Bug 2199718. Perform the following steps:
	1. Go to the Oracle Web site.
	2. Click the 'patches' button.
	3. Type 2199718 in the patch number field.
	4. Click the 32-bit Solaris OS patch.Go to `Metalink.oracle.com`.
	5. Click patches.
	6. Under patch number, enter 2199718.
	7. Click the 32 bit Solaris OS patch.
4707531	**Accessing an Oracle 9.1 database with an Oracle 9.2 Client may cause data corruption.**
	If you use an Oracle (R) 9.2 client to access an Oracle 9.1 database, data corruption might occur when a number column follows a timestamp column.
	The problem might be caused by using the `ojdbc14.jar` file with an Oracle 9.1 database. Applying the patch might assist in addressing the situation on Solaris 32-bit machines, running an Oracle 9.1 database. This JDBC™ driver is for Oracle working with JDK1.4.
	Solution
	Obtain the patch that Oracle might make available from the Oracle web site for Bug 2199718 and apply it to your server.

Web Container

This section describes the known Sun ONE Application Server 7 web container issues, and the associated solutions.

ID	Summary
4740477	**The web cache example in sun-web-app_2_3-0.dtd file provides incorrect syntax for the timeout element.**

The `timeout` element is specified to use in XML cache object as:
```
<timeout> 60 </timeout>
```

Because the name parameter is a required field, it should be written as:
```
<timeout name="foo">60</timeout>
```

Solution

Do not use with verifier.

EJB Container

This section describes the known Sun ONE Application Server 7 EJB container issues, and the associated solutions.

ID	Summary
4735835	**Cannot properly handle null PKs returned from ejbFind methods.**

The following container-managed persistence (CMP) examples might return one or more nulls from an `ejbFind` (assumed called from `EmployeeEJB` bean, as they must return the same instance type as the bean):

1. `find insurance.employee where insurance.id == 10`

This returns null if such insurance does not have an employee associated with it.

2. `find all insurance.employee where insurance.id > 10`

This returns a collection that might contain nulls for those insurances that do not have an employee.

For the first occurrence of a null PC in the result set, the CMP client will get `JDOFatalInternalException` "param0 cannot be null".

The BMP client will get `EJBException` "Null primary key returned from ejbFind method" for a single object finder, and (possibly) a `NullPointerException` for a multi object finder.

Solution

None.

ID	Summary
4744434	**The Sun ONE Application Server occasionally throws Null Pointer Exception when using stateful session beans.**
	The EJB container in the Sun ONE Application Server caches stateful session beans to improve performance. When the cache overflows (that is, the number of beans in the cache exceeds `max-cache-size`) the container passivates beans to the disk. Occasionally the server throws `NullPointerException`. The problem occurs when the difference between `max-cache-size` and `cache-resize-quantity` is less than 8.
	Solution
	Ensure that the difference between `max-cache-size` and `cache-resize-quantity` is greater than eight, or use an unbounded cache by setting `max-cache-size` to zero.

Container-Managed Persistence

This section describes the known container-managed persistence (CMP) issues and the associated solutions.

ID	Summary
4723378	**Exception occurs when IMAGE datatype is used in the WHERE clause of EJBQL.**
	There is a limitation in the Sybase database structure where a column of data with IMAGE as the datatype cannot exist anywhere within the WHERE clause. Thus, for EJBQL SELECT DISTINCT OBJECT(t) FROM TestBean t WHERE t.product IS NOT NULL, if t.product is mapped to the IMAGE datatype, the following exception occurs from Sybase: `com.sybase.jdbc2.jdbc.SybSQLException: TEXT and IMAGE datatypes may not be used in a WHERE clause, except with the LIKE expression.`
	Solution
	None.
4732684	**Oracle JDBC driver optimizations are not being initiated.**
	To take advantage of Oracle (R) database optimizations with container-managed persistence (CMP) beans, the `classes12.zip` file must be specified in the `classpath-suffix` attribute of the `server.xml` file rather than placed in the instance's `/lib` directory which is the default for third-party libraries.
	Solution
	Add the `classes12.zip` file to the `classpath-suffix` attribute of the `server.xml` file.

ID	Summary
4734963	**Self-referencing CMRs cause problem during deployment.**
	The parser of the EJB deployment descriptor, `ejb-jar.xml`, does not correctly handle self-referencing container-managed relationships (CMRs), that is, `ejb-relationship-role`. The One side field is skipped.
	Solution
	Switch the `ejb-relationship-role` sections so that the One side (with `<multiplicity>` Many) is the first in `ejb-relation`.
4742757	**Cascade-delete does not work for CMRs with overlapping PK/FKs.**
	Related elements of a container-managed relationship (CMR) field cannot be deleted with the `cascade-delete` functionality if such CMR field is mapped to a database schema with overlapping primary key/foreign key constraints.
	An example of such schema is an Order-LineItem relationship. If an application with such a schema tries to delete an Order bean, and the corresponding relationship is marked for `cascade-delete`, the caller gets the following error message about not allowing update of a primary key:
	``` java.rmi.RemoteException: Exception thrown from bean; nested exception is: javax.ejb.EJBException: nested exception is: com.sun.jdo.api.persistence.support.JDOUserException: Incorrect attempt to remove an instance from a managed relationship. ```
	The relationship is defined by a primary key column on the other side. A remove operation on a collection requires updating the column on the other side, and primary key update is not allowed. Therefore, removal of an instance from a managed relationship collection defined by a primary key can only be done by deleting the instance, either explicitly or by `cascade-delete`.
	``` NestedException: com.sun.jdo.api.persistence.support.JDOUnsupportedOptionException: Update of a primary key field is not allowed. ```
	Solution
	Either of these solutions can be used as a work around:
	1. Do not use `cascade-delete` for relationships mapped to a table with overlapping PK/FKs. Iterate over-related beans, and call remove on each of them separately before removing the owning bean.
	2. Change the table definition not to have overlapping PK/FKs.

ID	Summary
4745637	**Overloading of finder and selector methods causes parameter error.**

A bean cannot have overloaded finder or select methods, meaning finder or select methods having the same name, but different parameters. Suppose an employee bean has two finder methods selecting employee beans by their name. The first finder method returns employees having a last name specified as a parameter:

```
public Collection findByName(String name)
EJBQL: SELECT OBJECT(e) FROM Employee e WHERE lastname = ?1
```

The second finder method is also called findByName, but it takes first name and last name:

```
public Collection findByName(String firstname, String lastname)
EJBQL: SELECT OBJECT(e) FROM Employee

    WHERE firstname = ?1 AND lastname = ?1
```

Because the runtime internally mixes the definitions of the two finders, this error might occur:
JDOQueryException: Unbound query parameter

Solution

Always use unique names for finder and selector methods. In the above example, this could be findByLastname and findByFirstnameAndLastname.

ID	Summary
4747222	**On Oracle, the capture-schema utility does not work if -schemaname is not specified.**

The `capture-schema` utility has the following problems if the `-schemaname` option is not specified when capturing database schema information from the Oracle (R) database:

1. If you attempt to capture all tables (that is, no tables are explicitly chosen):

```
bin/capture-schema -dburl jdbc:oracle:thin:@oraserver:1521:ora
-username scott -password tiger -driver
oracle.jdbc.driver.OracleDriver -out test.dbschema
```

You will receive:
```
java.sql.SQLExceptions
ORA-00942: table or view does not exist.
```

The resulting output file is broken.

2. If one or more tables are specified with the `-table` option:

```
bin/capture-schema -dburl jdbc:oracle:thin:@oraserver:1521:ora
-username scott -password tiger -driver
oracle.jdbc.driver.OracleDriver -table DEPT -out test.dbschema
```

The resulting file has the specified tables, but no column information, which means the file can't be used for CMP mapping.

Solution

When capturing a schema from the Oracle database, always use the `-schemaname` option with the user name in uppercase letters as the value:

```
bin/capture-schema -dburl jdbc:oracle:thin:@oraserver:1521:ora
-username scott -password tiger -driver
oracle.jdbc.driver.OracleDriver -schemaname SCOTT -out test.dbschema)
```

4751235	**For capture-schema utility: If values for the -table option are not specified in uppercase on Oracle and/or PointBase, the resulting file is broken.**

Oracle (R) and PointBase internally translate case-insensitive identifiers into uppercase letters, unless the identifier are enclosed in " "). The `capture-schema` utility does not correctly handle table names in lowercase or mixed-case letters as arguments to the `-table` option when capturing a database schema from Oracle or PointBase (such as `-table student` or `-table Student`). The generated database schema file will not contain any columns information for the corresponding table.

Solution

Use uppercase letters to specify table names (such as `-table STUDENT`).

JMS and Message-Driven Beans

This section describes the known Java Message Service (JMS) and message-driven beans issues, and the associated solutions.

ID	Summary
4683029	**The -javahome flag in all MQ Solaris/Microsoft Windows scripts does not work if the value has a space.**
	The command-line utilities in Sun ONE Message Queue have a -javahome option that allows you to specify an alternate Java runtime. Using this option exposes a limitation where the path of the specified alternate Java runtime must not contain spaces. Examples of paths that have spaces are:
	• Microsoft Windows: C:\jdk 1.4
	• Solaris: /work/java 1.4
	This problem occurs at Sun ONE Application Server instance startup. When a Sun ONE Application Server instance is started, by default its corresponding Sun ONE Message Queue broker instance is also started. The broker always starts using the -javahome command-line option to ensure that it uses the same Java runtime used by the Sun ONE Application Server. If the Java runtime that is configured for use by the Sun ONE Application Server (and therefore passed on for use by the broker) is located at a path that contains spaces, broker startup fails, which also causes the Sun ONE Application Server instance startup to fail.
	Solution
	Make sure that the Java runtime used by the Sun ONE Application Server is located at a path that does not contain spaces.

Java Transaction Service (JTS)

This section describes the known Java Transaction Service (JTS) issues and the associated solutions.

Recovery

There are some known problems with the recovery implementations of some of the JDBC drivers. For these known problems, Sun One Application Server provided some workarounds. By default, these workarounds will not be used unless you explicitly indicate that these workarounds are to be used.

- Issue with the Oracle (R) JDBC driver—Oracle XA Resource implementation's recover method repeatedly returns the same set of in-doubt Xids regardless of the input flag. According to the XA specs, the Transaction Manager should initially call `XAResource.recover` with TMSTARTSCAN and then call `XAResource.recover` with TMNOFLAGS repeatedly until no Xids are returned.

  Oracle XA Resource's commit method also has some problems, which are addressed in a workaround provided by the Sun ONE Application Server. To enable this workaround, the following property should be added to the `transaction-service` subelement in the `server.xml` file:

  `oracle-xa-recovery-workaround`

  This property value should be set to true.

- Issue with Sybase JConnect 5.2—There are some known problems with JConnect 5.2 driver which are resolved in JConnect 5.5. If the JConnect 5.2 driver is used, to make recovery to work, the following property should be added to the `transaction-service` subelement in the `server.xml` file:

  `sybase-xa-recovery-workaround`

  This property value should be sent to true.

Transactions

In the `server.xml` file, `res-type` is used to demarcate the connection as non-XA or XA. This demarcation is used to identify the configuration of the data source to drive data. For example, in the Datadirect driver, the same data source can be used as either XA or non-XA.

The default behavior of the data source is non-XA. To make the data source behave as XA with the `connpool` element for transactions, `res-type` is needed. For the `connpool` element to work and participate in transactions, add the following for the attributes `res-type` in the `server.xml` file:

`res-type="javax.sql.XADataSource"`

ID	Summary
4689337	**The connection from XADatasource in non-txn context cannot be used.**

This is a known database driver issue. When there is a connection in a non-txn context, with XADataSource the `Autocommit` is set to false by default.

Solution

Use the non-XA datasource class to call the commit/rollback programs explicitly rather than through transactions.

ID	Summary
4700241	**Non-zero transaction timeout setting causes slow local transactions.**

Currently, the Local Transaction Manager does not support transactions with definite timeouts. If you set the `timeout-in-seconds` attribute in `transaction-service` element to a value greater than 0, all local transactions will be processed as a global transactions, and will take longer to complete. A local transaction may also fail, if the data source driver does not support global transactions. A timeout value of 0 means that the transaction manager will wait indefinitely if it does not hear back from a participating data source.

Solution

Reset the `timeout-in-seconds` value to its default value of 0.

Application Deployment

This section describes the known Sun ONE Application Server 7 deployment issues and the associated solutions.

ID	Summary
4703680	**Redeploying an EJB module (with MDB) throws a resource conflict exception.**

This occurs on Windows 2000 using Sun ONE Studio 4 when using message-driven beans (MDBs). If an EJB module contains an MDB that utilizes a specific queue, then re-deploying the same EJB module with the same MDB (utilizing the same Queue) causes a resource conflict. This makes (modified) module un-usable.

Solution

None.

ID	Summary
4725147	**Cannot choose a particular virtual server for deployment.** In this case, two virtual servers are configured with exactly the same host and listener. If an application is deployed only for second virtual server, it cannot be reached because combination host:port leads to the first virtual server. **Solution** The virtual server hostname should not be the same as the original hostname, especially when the same HTTP listener is used.
4734969	**Can't deploy application with user's Query class in the bean package.** Container-managed persistence (CMP) code-gen does not use the fully qualified name for the JDO Query variable in `concreteImpl`. If you have a Query class in the same package as the abstract bean, a compilation error occurs. **Solution** Move the Query class into another or separate package.
4750461	**SPARC: The Sun ONE Application Server might crash during dynamic reloading.** For a large application (with many enterprise beans), a crash may occur during dynamic reloading of the application. The dynamic reloading feature is used, in the development environment, to quickly test minor changes to an application. The crash is caused by attempting to use more file descriptors than are available. **Solution** 1. Increase the file descriptors limit by adding lines, in this format, to the `/etc/system` file. Depending on the size of the application, the values can be set higher or lower. ```\nset rlim_fd_max=8192\nset rlim_fd_cur=2048\n``` 2. Reboot the system.

ID	Summary
4744128	**The EJB compiler fails to generate valid JAVA code for inner classes.**

The EJB compiler fails to generate valid JAVA code for the implementation of the enterprise bean that uses inner classes as the return type.

```
public interface IStateServer {
    ....
    public StateProperties getProperties(String objectID, String
variantName, IToken securityToken) throws RemoteException;

    public class StateProperties implements Serializable {
        public StateProperties() {
        }
        public String description = "";
        public String owner = "";
        public Date modifyTime = new Date();
        public String accessPermissions = "";
    }
}
public interface IStateServerEJB extends EJBObject, IStateServer {
    ....
}
```

```
Note method getProperties returns an inner class.
```

Example of the error:

```
D:\AppServer7a\appserv\domains\domain1\server1\generated\ejb\j2ee-app
s\smugglercom\spss\ssp\state\ejb\StateServerEJB_EJBObjectImpl.java:13
3:
```

Direct use of synthetic inner class names is not allowed:
`com.spss.ssp.state.IStateServer$StateProperties`

The generated code should be
`com.spss.ssp.state.IstateServer.StateProperties`

instead of
`com.spss.ssp.state.IstateServer$StateProperties`

Solution

Move `StateProperties` to a separate (standalone not inner) class.

ID	Summary
4756093	**Redeployment of a deployed application fails after Sun ONE Application Server restart.**
	If an application is redeployed while the Sun ONE Application Server instance is running, the application may fail.
	Solution
	Stop the App Server instance, redeploy the application, then restart the App Server instance. The application can be redeployed as many times as necessary if the App Server instance is not running.
4756981	**Permission problem occurs during dynamic reloading and invocation of applications.**
	When the Admin Server is owned by root and the App Server instance is owned by a non-root user, there may be permission problems during dynamic reloading and invocation of applications.
	Solution
	After deploying/redeploying the module or application (with or without precompile option), change the directory owner from root to the non-root user. The change-of-owner should to be applied recursively to each of the directories in the following list based on the application type.

```
<domain-root>/<server-instance>/applications/j2ee-apps/<application-n
ame>
<domain-root>/<server-instance>/applications/j2ee-modules/<module-nam
e>
<domain-root>/<server-instance>/generated/ejb/j2ee-apps/<application-
name>
<domain-root>/<server-instance>/generated/jsp/j2ee-apps/<application-
name>
<domain-root>/<server-instance>/generated/jsp/j2ee-modules/<module-na
me>
```

1. Become superuser.

2. Type the following command for each of the directories that apply to your situation:

```
# chown -R <non-root-instance-owner> <directory-name>
```

Verifier

This section describes the known verifier issues and the associated solutions.

ID	Summary
4742545	**Standalone verifier shows EJB Class Not Found errors.**

The verifier indicates some failed tests with the following test description message: `EJB Class Not Found`. The test failures occur when an EJB JAR file uses an enterprise bean with a reference to another enterprise bean that is packaged in a separate EJB JAR file within the same EAR application. The failure messages are also observed if you try to validate the connector (RAR) dependent EAR files. This is because the RAR bundle need not be packaged within the EAR file that houses the enterprise bean with dependency on the RAR bundled files. The failures (exception to this are the connector-related failures) are only observed with the standalone verifier. The verifier invoked through the deployment command or the Administration interface does not show the failures.

Solution

Make sure that the packaging of the application EAR is correct and if you are using any utility JAR file, it is packaged within the EAR file. To resolve the referencing errors, you can shift to the verifier invoked through the deployment backend using `asadmin` or the Administration interface. For the connector-related failures, place the JAR file containing the required classes into the class path for the verifier. You can open the *install_root*/bin/verifier[.bat] file and add a LOCAL_CLASSPATH variable to the end of the JVM_CLASSPATH variable. Locally add the classes to the LOCAL_CLASSPATH variable, then run the verifier.

ID	Summary
4743480	**Verifier cannot detect the methods declared in the super interface of the local home interface.**

The verifier performs tests on the local home interface to check the interface for conformance to the J2EE specification. Some of the tests for the `findByPrimaryKey` method fail if you have a derived local home interface and the required method is declared in the super interface of the home interface. The failed tests are those performed by the tests named `HomeInterfaceFindByPrimaryKeyArg`, `HomeInterfaceFindByPrimaryKeyName`, `HomeInterfaceFindByPrimaryKeyReturn`, and `PrimaryKeyClassOpt`. Deployment would also fail if you use the `-verify` option with the module or application.

Solution

The test results can be ignored if the function has been properly declared in the super interface for the local home interface. In this case, do not use the `-verify` option with the deployment command. The deployment will complete correctly. A workaround is to declare the same function again in the derived home interface to pass the verification tests.

Configuration

- The default value of the `env-classpath-ignored` attribute of the `java-config` element is true.

- Not Implemented for this release:
  - ❍ The `bytecode-preprocessors` attribute in `java-config` element in `server.xml` (It is likely that it will become available in a future performance patch.)
- Deprecated for this release:
  - ❍ `is-cache-overflow-allowed`
  - ❍ `max-wait-time-in-millis`
- Due to J2EE 1.4 architecture changes, some elements may not be supported in future releases, such as:
  - ❍ `cmt-max-runtime-exceptions` property of the `mdb-container` element

The following table describes the known Sun ONE Application Server 7 configuration issues and their solution.

ID	Summary
4742559	**If IPv6 is not used in your network, this problem does not apply to you.**
	NOTE: If IPv6 is not used in your network, this problem does not apply to you.
	By default, the Sun ONE Application Server uses IPv4. This is supported by all platforms on which the Sun ONE Application Server is available. In certain platforms, IPv6 is supported. In this case, Sun ONE Application Server configuration changes are required for conformance.
	NOTE: If these configuration changes are to be made, it is essential to be absolutely sure of IPv6 support on the platforms. Server instances may not start if the IPv6-related configuration is applied to a system that has only IPv4 support.
	Solution
	Perform the following configuration changes:
	1. Start the Admin Server.
	2. Start the Administration interface. (Connect to Admin Server http host/port in a browser).
	3. Select the App Server instance to configure for IPv6, such as server1.
	4. Expand the HTTP Listeners node in the tree view.
	5. Select the HTTP Listener to configure for IPv6, such as http-listener1.
	6. In the General section, change the value of the IP Address field to ANY.
	7. In the Advanced section, change the value of the Family field to INET6.
	Setting the Family field to INET6 does not disable IPv4 functionality unless an IPv6 address is selected for IP address. Selecting an IP address of ANY will match any IPv4 or IPv6 address.
	8. Click Save.
	9. In the left pane, select your server instance.
	10. Click Apply Changes.
	11. .Click Stop.
	12. Click Start. This restarts the server and implements your changes.

Deployment Descriptors

This section describes the known Sun ONE Application Server 7 deployment descriptor issues.

sun-cmp-mapping.xml Issues

- Not Implemented for this release:

  ❍ `check-modified-at-commit`

  ❍ `lock-when-modified`

sun-ejb-jar.xml Issues

- Deprecated for this release:

  ❍ `is-cache-overflow-allowed`

  ❍ `max-wait-time-in-millis`

Monitoring

This section describes the known Sun ONE Application Server 7 monitoring issues and the associated solutions.

ID	Summary
4734595	**Total-connections-failed-validation does not show values.**
	The issue is with the inherent double pooling problem in the reference implementation (RI).
	Solution
	None.
4737227	**FlagAsyncEnabled does not set to 1 in http-server.**
	This is a known the Sun ONE Web Server issue.
	Solution
	None.
4752199	**Monitoring bean method attribute values are not shown for getPrimaryKey(), getEJBMetaData(), getHomeHandle() methods.**
	The monitoring tool lists methods in an enterprise bean that can be monitored. For `getPrimaryKey()`, `getEJBMetaData()`, and `getHomeHandle()`, the method level monitoring attributes always show zero.
	Solution
	None

Server Administration

This section contains the following sections:

- Command Line Interface (CLI)

- Administration Infrastructure

- Administration Interface

Command Line Interface (CLI)

This section describes the known Sun ONE Application Server 7 command-line interface issues and the associated solutions.

ID	Summary
4676889	**CLI command overflows in single-mode if the command is more than 256 characters long.**
	On UNIX, when executing a CLI command in single-mode that contains more than 256 characters, the command fails with this error: `...Command Not Found...`
	This is a terminal restriction, not a CLI restriction.
	Example:
| | ```
create-jdbc-connection-pool --instance server4 --datasourceuser admin
--datasourcepassword adminadmin --datasourceclassname test
--datasourceurl test --minpoolsize=8 --maxpoolsize=32 --maxwait=60000
--poolresize=2 --idletimeout=300 --connectionvalidate=false
--validationmethod=auto-commit --failconnection=false --description
test sample_connectionpoolid)
``` |
	Solution
	1. For commands that require more than 256 characters, use CLI multi-mode.
	2. If you must use single-mode, run the command using OpenWin `cmdtool`.

ID	Summary
4680409	**After configuring an instance to use SSL, the administrator cannot access the Admin Server from either the CLI or browser clients.**

Solution

Import the Sun ONE Application Server certificate into each client that is to use SSL to access the Admin Server, and indicate that servers with such a certificate are to be trusted. How to do this on a browser is browser-specific; consult your browser's online help to see how to import a certificate to be trusted.

For the CLI, if the server's certificate is in some `servercert.cer` file, and the installation directory is `/INSTALL`, the command is:

```
keytool -import -file servercert.cer -alias server -keystore
/INSTALL/jdk/jre/lib/security/cacerts
```

NOTE: To avoid this problem in the future, ensure that the Admin Server certificate is installed in both the server *and* the client(s) before configuring the Admin Server to use SSL.

ID	Summary
4688386	**Using the asterisk (*) character in single-mode CLI command results in unexpected behavior and/or error messages.**

The asterisk character is being expanded by the underlying shell into a list of names, and it is this list of names that is being seen by the command-line interface (CLI) command. Putting quote marks around the asterisk prevents the shell from expanding the asterisk, and thus the CLI gets to see the asterisk itself.

Solution

Use quote characters (either single or double quotes) around the asterisk.

ID	Summary
4701361	**Repeated changes applied to any instance eventually results in an out of memory error.**

The Admin Server keeps a record of all changes performed to the system, which requires memory. This change record (but not the changes themselves) is discarded during a reconfiguration, thus releasing the memory for use.

Solution

Use the `asadmin` reconfig command periodically to discard old change records.

ID	Summary
4704328	**Cleanup does not happen when a call to create a duplicate domain fails.**

When a domain that already exists is created, an appropriate error message is generated. However, a directory specified by the `-path` option in the `create-domain` command is created if it did not exist earlier. This should be removed since the command failed.

Solution

Remove any additional empty directory specified that might be created after the `-path` option is used.

ID	Summary

4708813   **Cannot monitor the default (pointbase) connection-pool JDBC resources.**

The JDBC connection pools are created dynamically on demand, which means that a pool is created the first time it is used. If the pool has not been created (not used), monitoring is not possible.

Solution

Create the desired connection pool to allow monitoring.

4722007   **Monitoring: Execution times of less than 1 millisecond cannot be measured.**

When an entity bean method is monitored, the `execution-time-millis` attribute shows -1. For example, when running the command:

```
iasadmin>get -m
server1.application.usecase1app.ejb-module.UseCase1Ejb_jar.entity-bea
n.BeanOne.bean-method.method_create0.*
```

The following attributes are returned:

```
Attribute name = total-num-errors Value = 0
Attribute name = method-name Value = public abstract
com.iplanet.ias.perf.jts.UseCase1.ejb.BeanOneRemote
com.iplanet.ias.perf.jts.UseCase1.ejb.BeanOneHome.create() throws
javax.ejb.CreateException,java.rmi.RemoteException
Attribute name = total-num-calls Value = 0
Attribute name = total-num-success Value = 0
Attribute name = execution-time-millis Value = -1
```

Before monitoring is started, the default value for `execution-time-millis` is set to -1 to indicate that the value for that attribute is invalid at that moment. A default value of 0 would give a false impression that the execution time has been measured, and that it has turned out to be a very small value.

Solution

None.

ID	Summary
4724743	**The asadmin reconfig command flags are misleading.**

In general, the `asadmin` options are stated as having two states: true and false. If you specify an option as true, it is exactly the opposite of specifying false. In contrast, the `asadmin` `reconfig` command has three states to deal with: a) check for manual changes and throw exception; b) keep manual changes c) discard manual changes. The command has only two options: `--keepmanualchanges` and `--discardmanualchanges`. Therefore, you can specify different combinations of these two options in the command.

Not all combinations are documented. The actual valid combinations are:

1. `discardmanualchanges=true --keepmanualchanges=false`

   Meaning: will discard manual changes (and use admin changes)

2. `discardmanualchanges=false --keepmanualchanges=true`

   Meaning: will keep manual changes (and throw away admin changes

3. `discardmanualchanges=false --keepmanualchanges=false`

   Meaning: will throw exception if there is manual change

4. `discardmanualchanges`

   Meaning: same as 1.

5. `keepmanualchanges`

   Meaning: same as 2.

6. (no options)

   Meaning: same as 3.

Invalid combinations are (`asadmin` will tell you that the combination is bad):

`--discardmanualchanges --keepmanualchanges`

`--discardmanualchanges=true --keepmanualchanges=true`

NOTE: The `--discardmanualchanges=false` option is NOT equal to the `--keepmanualchanges=true` option. The `--discardmanualchanges=false` is actually the same as not specifying the option.

Solution

None.

ID	Summary
4733109	**Verifier error reported in Administration interface when viewing Persistence Manager Factory resource created from command-line interface.**
	When a Persistence Manager Factory resource is viewed in the Administration interface, the following error is reported for the resource when it is created from the command-line interface:
	`ArgChecker Failure: Validation failed for jndiName: object must be non-null`
	Solution
	None.
4742993	**The flexanlg command causes open failure when used on Sun ONE Application Server that is integrated into Solaris.**
	If you are running a version that is integrated into the Solaris operating environment, and you use the `flexanlg` command from `/usr/appserver/bin`, an open failure error is displayed.

	`ld.so.1: /usr/appserver/bin/flexanlg: fatal: libplc4.so: open failed:`
	`No such file or directory`
	`Killed`

	Solution
	Complete these steps.
	1. Add the following entry to LD_LIBRARY_PATH file:
	`usr/lib/mps`
	2. Then run the `flexanlg` command.
	`% /usr/appserver/bin/flexanlg`
4750518	**Some CLI commands do not work on the target Admin Server.**
	The `create`, `delete`, or `list` commands do not work in the CLI on the target Admin Server for creating/deleting/listing new elements (such as SSL, mime, profiler, resources, and so on) in the `server.xml` file of the Admin Server.
	Solution
	Use the Administration interface to create, delete, and list elements in the Admin Server.

Administration Infrastructure

This section describes the known Sun ONE Application Server 7 administration infrastructure issues, and the associated solutions.

ID	Summary
4676888	**On Windows 2000, cannot create JVM when JVM heap size is set to a large value.**

If you try to set a larger JVM heap size on Windows 2000, you may get the following error message:

```
Error occurred during initialization of VM,
Could not reserve enough space for object heap
Internal error: unable to create JVM
```

Solution

To configure the Sun ONE Application Server with a larger JAVA heap size on Windows 2000, it is necessary to rebase the Sun ONE Application Server DLLs.

The Rebase utility, which comes both with Microsoft Framework SDK and Microsoft Visual Studio, allows you to set optimal base addresses for a number of DLLs starting from some address and thereby increasing JVM heap availability. The SDK Help Rebase topic recommends using address 0x60000000. For more details on the rebase utility:

```
http://msdn.microsoft.com/library/default.asp?url=/library/en-us/tool
s/tools/performance_tools.asp
```

Requirements:

- Window 2000 system with 2-4 GB memory

- Visual Studio/Microsoft Framework SDK Rebase utility

To apply rebase to S1AS dynamic libraries do the following:

1. `cd` into *install_dir*\bin

2. rebase -b 0x6000000 *.dll

3. cd ..\lib

4. rebase -b 0x6600000 *.dll

| **4686003** | **HTTP Quality of Service limits are not enforced.** |

Quality of Service (QOS) includes a means of specifying the maximum number of HTTP connections and the bandwidth limit. When these attributes are exceeded, a 503 error should be returned to the client. However, after enabling QOS through the Administration interface, the server does not enforce the QOS limits.

Solution

To fully enable QOS features, you must manually add an AuthTrans fn=qos-handler line to the top of the default object in the `obj.conf` file of the virtual server. The qos-handler Server Application Function (SAF) and `obj.conf` configuration file are described in the *Developer's Guide to NSAPI*.

ID	Summary
4692673	**Restarting an instance in debug mode seems to fail if the instance is originally running in non-debug mode.**
	If an instance is started without checking/selecting the 'Start/Restart in debug mode' check box, subsequent settings of this check box do not work. In the Administration interface, the Debug Enabled check box appears unchecked, even though it has been checked. The `server.xml` file also shows `debug-enabled=false`.
	Solution
	None.
4699450	**On Windows 2000, deployment fails for EAR files if total length of the path to a generated file during deployment exceeds 260 characters.**
	On the Windows 2000 platform, the Java Virtual Machine (JVM) is limited to 260 characters for path names to generated files.This is a problem with Microsoft Windows support in the JVM, and is likely to be fixed in the J2SE 1.5 release.
	Solution
	When deploying an application, use a path and file name that are less than 260 characters combined.
4723776	**SPARC: Server fails to restart when converting to an SSL-enabled environment**
	If you attempt to restart the Sun ONE Application Server after installing a certificate and enabling security, the restart fails. A message is displayed indicating that the server failed to receive a password. A second click of the Start button starts the server. When SSL is not enabled, passwords are not cached which results in the failure of restart. The restart command does not support the transition from non-SSL to SSL enabled mode.
	NOTE: This problem only occurs the first time the server is restarted. Subsequent restarts work fine.
	Solution
	If you have encountered this problem:
	Click the Start button.
	To avoid this problem, perform the following steps instead of clicking the Restart button.
	Click the Stop button. Click the Start button.

ID	Summary
4724780	**Cannot start Admin Server if the domain is created in another system.**

- If the domain is created on a PCNFS mounted drive, the Admin Server and any instances within such domains cannot be started due to a known Microsoft issue involving PCNFS drives.

- If the domain is created in the same local drive as the product installation but in a different directory path, the instances and the Admin Server work as expected, and are fully operational.

Solution

None.

4734184	**On Windows 2000, the console is sometimes disabled.**

Sometimes (rarely) the Admin Server or App Server instance hangs during deployment or when commands are run. This can happen when some of the text from the console log is selected. If you deselect the text on the console log, the process continues.

Solution

Disable automatic creation of the console for server1 instance by setting `log-service create-console` attribute to false. Clicking the mouse or pressing Enter on the console log may also solve this problem.

4736554	**After a secure httplistener has been removed from a server, the administrator is still prompted for the (no longer needed) password.**

Solution

Remove the entire server and then add it again.

NOTE: To avoid the problem in the future—Before removing the httplistener, disable security using the following command:

```
/export2/build/bin/> asadmin set --user admin --password adminadmin
server1.http-listener.http-listener-1.securityEnabled=false
Attribute securityEnabled set to false.
/export2/build/bin/> asadmin delete-http-listener --user admin
--password adminadmin ls2
Deleted Http listener with id = ls2
```

4737756	**On Windows 2000, corrupt messages display on the console.**

On Windows 2000, for a non-English locale (such as Japanese) you may see corrupted messages displayed on the console.

Solution

Use the Admin interface to view the log messages.

ID	Summary
4739831	**A partially-deleted instance causes incorrect responses from some CLI commands.**

If a server instance is partially deleted, the following problems are known to occur with some CLI commands (solutions are provided with each problem description):

1. The `create-instance` command in local mode reports that the instance exists even if there are no sub-directories under the instance folder.

Solution

Manually remove the leftover instance directory, then run the `create-instance` command.

2. The `list-instances` command in local mode includes the partially-deleted instance name and status.

Solution

Manually remove the leftover instance directory, then run the `list-instances` command.

3. On Windows 2000, the `start-instance` command in remote mode displays a null string.

Solution

Manually remove the leftover instance directory, create a new instance, then run the `start-instance` command.

4. On Windows 2000, the `stop-instance` command in both local and remote modes reports incorrect exceptions. In local mode, the command displays an incorrect message stating that the instance is not running. In remote mode, the command displays a null string.

On Solaris, the `stop-instance` command in local mode incorrectly reports that the user does not have permission to access the instance's `config` directory although the `config` directory does not exist.

Solution

Manually remove the leftover instance directory.

4739891	**Deletion of a virtual server fails if the default web module referred to by the virtual server does not exist or has been undeployed.**

Solution

Set the Default Web Module field of the virtual server to None Selected, click OK to save the changes, then delete the virtual server.

ID	Summary
4740022	**SNMP: END OF MIB is returned when adding and starting a new instance server.**
	If you add and start a new instance without shutting down the instance server and subagent, an `END OF MIB` message is returned.
	Solution
	1. To view a new instance, make sure the subagent and all the instance server processes are shut down. Under each server ->Monitoring -> "Enable SNMP Statistics Collection: on", apply the change, then restart each instance server, and start only one subagent process again.
	2. If the subagent is already running, don't start any extra subagent processes in any instance. There can only be one master agent and one subagent for a Sun ONE Application Server installation (common for all domains/instances).
4737138	**License expired message does not appear at Windows Services or at the DOS prompt.**
	When starting servers from Windows Services or from the DOS prompt command (`startserv.bat`) after license expiration, appropriate license expiration messages are not shown
	Solution Start servers from CLI (asadmin) or from Sun program icon
4780488	**Existence of multiple obj.conf files causes confusion.**
	Upon creation of a new Sun ONE Application Server instance, the *instance-dir*/`config`/ directory will contain two `obj.conf` files, one named `obj.conf` and the other named v*irtual-server-name*-`obj.conf`, where *virtual-server-name* is the same value as the instance name for the virtual server that is created automatically during instance creation. The documentation refers to "modification of the `obj.conf` file" when it should refer to "modification of the `obj.conf` file associated with the virtual server of interest."
	When the Sun ONE Application Server is installed, the `obj.conf` and `server1-obj.conf` files exist under the /domains/domain1/server1/config/ directory. The content in the file named `obj.conf` is overridden by the content of the `server1-obj.conf` file specified at the virtual server level. In effect, the file named `obj.conf` is not used by the Sun ONE Application Server instance.
	For example, if you modified the file named `obj.conf` while configuring the Sun ONE Application Server passthrough plug-in, your passthrough settings will not take effect because the wrong `obj.conf` file has been modified.
	Solution
	If and when you need to modify the `obj.conf` file for an instance, modify the file prefixed with the virtual server name of interest.

Administration Interface

When using Administration interface, make sure that the browser is configured to check for newer versions of pages from the server, instead of picking these from cache. Generally, default browser settings would not cause problems.

- On Internet Explorer, make sure that Tools->Settings...->Check for newer versions of stored pages: is not set to 'Never'.

- On Netscape, make sure that Edit->Preferences...->Advanced->Cache->Compare the page in the cache to the page on the network: is not set to 'Never'.

This section describes the known Sun ONE Application Server 7 administration graphical user interface issues, and the associated solutions.

ID	Summary
4722607	**On Windows 2000, cannot edit or remove entries within a newly created mime file that omits the .types extension.**
	On Windows 2000, the MIME file must have the .types extension following the file name in order for modifications to entries in the file. For example, `mime2.types` and not `mime2`
	Solution
	Use the `.types` extension for any mime file name.

ID	Summary
4725473	**External certificate nickname doesn't display on the Administration interface Nickname list.**

When you install an external certificate through the Sun ONE Application Server Administration interface, a problem is encountered when you attempt to enable SSL for the http-listener by using the certificate that is installed on the external cryptographic module. Although the installation of the certificate is successful, the certificate nickname does not display in the Administration interface.

Solution

1. Log in to the system where the Sun ONE Application Server software is installed as an Administrative User.

2. Link the http-listener to the certificate installed on the external cryptographic module. Execute the asadmin command. For more information on the asadmin command, see the asadmin(1M) man page.

```
/sun/appserver7/bin/asadmin create-ssl
   --user admin --password <password>
   --host <host name>
   --port 8888
   --type http-listener
   --certname nobody@apprealm:Server-Cert
   --instance server1
   --ssl3enabled=true
   --ssl3tlsciphers +rsa_rc4_128_md5
   http-listener-1
```

This command establishes the link between the certificate and the server instance; it does not install the certificate (which was done using the Administration interface). Even though the certificate is linked with http-listener, the http-listener will be listening in non-SSL mode.

3. Enable the http-listener to listen in SSL mode by using the following CLI command.

```
/sun/appserver7/bin/asadmin  set
   --user admin
   --password <password>
   --host <host name>
   --port 8888
   server1.http-listener.http-listener-1.securityEnabled=true
```

This command switches the server instance listening state from non-SSL to SSL.

After completing the preceding steps, the certificate is displayed in the Administration interface.

4. You can now use the Administration interface to edit the http-listener as needed.

ID	Summary
4728718	**When creating a new virtual server and a value is given for the location of the log file, a File Not Found" error is reported.**
	In the Administration interface, the log file field cannot be used to add any values.
	Solution
	Delete the virtual server just created, create the needed file, then recreate the virtual server.
	NOTE: To avoid the problem in the future—Always create the log file first, before attempting to create the new virtual server.
4741123	**Solaris 9 update 2: Default browser is incompatible with Sun ONE Application Server 7.**
	When trying to use the Sun ONE Application Server Administration interface with the default browser, this error message is displayed:
	`Unsupported Browser: Netscape 4.78`
	It is recommended that you upgrade your browser to Netscape 4.79 or Netscape 6.2 (or later) to run the Sun ONE Application Server Administration interface. If you choose not to upgrade, you may notice degraded performance and/or unexpected behavior.
	Solution
	Use `/usr/dt/bin/netscape6` instead of `/usr/dt/bin/netscape`.
4750616	**Access Control List (ACL) editing is not supported on some versions of Netscape Navigator.**
	If you attempt to edit ACL entries while using either Netscape Navigator, versions 6.x or 7.x, you might encounter intermittent problems, such as the browser disappearing or the ACL edit screen never displays.
	Solution
	Choose one of the following workarounds.
	• Use the supported 4.79 version of Netscape Navigator.
	• Manually edit the ACL file. For details on ACL file formatting, see the *Sun ONE Application Server Administrator's Guide*.
4752055	**Netscape 4.8 produces warning message on Administration interface.**
	When using Netscape 4.8 to access the Administration interface, a warning appears indicating Netscape 4.8 is an unsupported browser. Although no issues have been identified when using Netscape 4.8 to run the Administration interface, more thorough testing needs to be completed on this version of the Netscape browser.
	Solution
	Select the Continue hyperlink from the warning message to continue using the Administration interface.
	Use Netscape 4.79, or upgrade to Netscape 6.2 or higher.

ID	Summary
4760714	**An invalid Help button appears in the Install Certificate screen.**
	In the Install Certificate screen, which displays all the certificate information entered, an invalid Help button is present in the Administration interface. If you click this button, an error message is displayed indicating the help page was not found. Context-sensitive help is only available by clicking the Help link on the top frame of any page.
	Solution
	Click the Help link in the top pane for context-sensitive help.
4760939	**SSL: A self-signed certificate generated by certutil is not displayed on the Certificate Nickname list.**
	A self-signed certificate is generated by the certutil and Certificate Nickname is not displayed on the Administration interface.
	Solution
	To use a self-signed certificate, you must manually edit the `server.xml` file.

Sun ONE Studio 4 Plugin

This section describes the known Sun ONE Studio 4, Enterprise Edition (formerly known as Forte for Java) issues and the associated solutions.

ID	Summary
4689097	**Error occurs when spaces are specified in directories to be used by Sun ONE Studio 4.**
	Sun ONE Studio 4 does not install correctly if a space is used in the directory structure. The installer checks for spaces in the install path, and, if found, displays an error dialog.
	Solution
	Do not use a space when specifying the install directory for the Sun ONE Studio 4 component of Sun ONE Application Server.
4720145	**ConnectionException was thrown while establishing a connection to the debugger.**
	Sun ONE Studio 4 prompts many times asking if you want to create a new debugging session and then throws the exception.
	Solution
	Restart the IDE.

ID	Summary
4727932	**Using MAD environment in FFJ causes side effects.**
	Intermittent side effects occur when using MAD configurations with Sun ONE Studio 4.
	Solution
	Don't use Sun ONE Studio 4 with MAD configurations.
4733794	**ejb-name changes applied at Application node are undeployable.**
	It is possible to change the `ejb-name` element of a bean, in the context of an application, using the dialog presented when you select the View EJB Names item of an application node's contextual menu (right-click menu). These changes are applied to the 'alt-dd' that is created as part of the packaging. The name change is *not* propagated to the Sun ONE Application Server `alt-dd`.
	Solution
	None.

ID	Summary
4745283	**If only Admin Client is installed, App Client cannot be run.**

If only Admin Client or Sun ONE Studio Plugin is installed, you cannot run an App Client application. App Client is a separate package from Admin Client.

Solution

Install the App Client package. It can be get either a full installation (`appclient` script is under `<SUNONE_INSTALL_ROOT>/bin`), or get the `appclient` package from a remote machine where the Sun ONE Application Server installed.

To get `appclient` package:

1. Run `<SUNONE_INSTALL_ROOT>/bin/package-appclient[.bat]`

This generates `appclient.jar` file in
`<SUNONE_INSTALL_ROOT>/lib/appclient/appclient.jar`

2. Distribute the appclient.jar to the remote machine that does not have the Sun ONE Application Server installed, then unjar `appclient.jar`. You should get an appclient directory containing all App Client libraries and JAR files.

3. Modify the `bin/appclient` script that is packed in the `appclient.jar` file before first use. The `%CONFIG_HOME%` string should be substituted by the real path to `asenv.conf` (or `asenv.bat` for Windows 2000.)

4. Configure `asenv.conf` (asenv.bat for Microsoft Windows) as follows:

```
%AS_INSTALL%=<APPCLIENT_INSTALLED_ROOT>
%AS_JAVA%=<Your Installed Java Home>
%AS_IMQ_LIB%=<APPCLIENT_INSTALLED_ROOT>/imq/lib
%AS_ACC_CONFIG%=<APPCLIENT_INSTALLED_ROOT>/config/sun-acc.xml
%AS_WEBSERVICES_LIB%=<APPCLIENT_INSTALLED_ROOT>/lib
```

NOTE: The `appclient.jar` file is only intended to be run from a remote machine that has the same operating system as the machine where it was created. For example, `appclient.jar` created on a Solaris platform will not function on Windows 2000.

For details, see the `package-appclient` manpage.

ID	Summary
4748351	**Key columns don't appear to be mapped to key fields.**

For an EJB Module that contains CMP beans, you may encounter an error message that says something like the following at deployment:

```
Map the following primary key columns to key fields:
TABLE_NAME.PRIMARY_KEY_COLUMN_NAME.  If you already have fields
mapped to these columns, verify that they are key fields.
```

This is due to a timing issue in the plugin.

Solution

Reset the bean's key class or key field as follows:

1. Select the node for the bean in the Internet Explorer window.

2. Edit the value of the Primary Key Class property.

    a. Select a different existing field in the property editor as the key field.

    b. Accept the change, by pressing Okay in the dialog box.

3. Reset the value of the Primary Key Class property.

    a. Select the original existing field in the property editor as the key field.

    b. Accept the change, by pressing Okay in the dialog box.

4. Select Save All from the file menu.

| **4725779** | **Pre-configured Sun ONE specific property values do not appear in the editor.** |

If you have a RAR file that has been configured for deployment to the Sun ONE Application Server, and try to look at the property values in the property sheet, you will see the default values, not the values specified in the `sun-ra.xml` file.

Solution

Extract the Sun-specific descriptor XML file from the RAR and put it in the same directory as the RAR.This allows you to edit the `s1as` descriptors.

NOTE: The original contents of the RAR file will not be changed as a result of user edits this way, but the RAR file sent to the server will have the updated XML file in it.

ID	Summary
4733794	**EJB name changes applied at Application node are undeployable.**
	It is possible to change the `ejb-name` element of a bean in the context of an application by using the dialog presented when the you select the View EJB Names item of an application node's contextual menu (right click menu). These changes are applied to the `alt-dd` that is created as part of the packaging. The name change is not propagated to the Sun ONE Application Server `alt-dd`.
	Solution
	None.

Sample Applications

- The sample applications source is set up with an ANT directory structure and applications are not Sun ONE Studio-oriented. For this reason, you do not see icons for EJB modules, and so on. Only source files can be seen if a sample's `src` folder is mounted.

- Although Sun ONE Studio is ANT enabled, it cannot deploy the sample applications using an ANT target. In other words, running the `ANT target = all` command does not produce the same result as running an `ant all` command from the shell.

- Existing ANT-styled applications can be successfully compiled using Sun ONE Studio (ANT through Sun ONE Studio).

This section describes known Sun ONE Application Server 7 sample application issues, and the associated solutions.

ID	Summary
4714439	**In PetStore, cannot add a user that already exists.**
	In the PetStore sample application, trying to add a user that already exists displays a stack trace on the screen.
	Solution
	None.

ID	Summary
4726161	**Modified samples are not updated until redeployment.**

If users attempt to deploy a sample more than once, after making small changes and repackaging the application, the following error message is displayed.

```
"Already Deployed"
```

This issue affects most of the samples since they use the Ant utility and the `common.xml` file, which have the "deploy" target, thus mixing deployment of applications with registration of resources.

Solution

Choose one of the following workarounds:

For the majority of the sample applications that use the Ant utility `build.xml` files, which include the `common.xml` file, type the following command.

```
% asant deploy_common
```

For all other sample applications, type the following commands.

```
% asant undeploy
% asant deploy
```

4733412	**Sample application converter has redundant JAR file in web module.**

The converter application has a redundant stateless-converter EJB JAR file under the `WEB-INF/lib` directory. The EAR file is located under the sample application directory. From the bundled Solaris build, it is here:

```
/usr/appserver/samples/ejb/stateless/converter/stateless-converter.ea
r
```

Extract this file and go to the `WEB-INF/lib` directory of the web module named stateless-converter and you will see the file. This redundant JAR file applies to all the web modules which call the EJB module. The root cause of the problem is the `common.xml` file used to build the application.

Solution

None. Doesn't affect functionality when running sample application.

ID	Summary
4739854	**Instructions needed for deploying resources using asadmin.**
	In the documentation for some samples, your are instructed to deploy the application using the `asadmin` command, but no explanation is provided on how to create the needed resources.
	Solution
	You can deploy the application/resource by using the `asadmin` command and can get more information by referring to the sample's `build.xml` file. More information can also be found in the printout from running `asant deploy`.
	For JDBC/BLOB example, the following steps create the resources using `asadmin` (assuming the hostname is `jackiel2` and the username/password/port for the Admin Server is admin/adminadmin/4848):
	`asadmin create-jdbc-connection-pool --port 4848 --host jackiel2` `--password adminadmin --user admin jdbc-simple-pool`
	`--datasourceclassname com.pointbase.jdbc.jdbcDataSource --instance` `server1`
	`asadmin set --port 4848 --host jackiel2 --password adminadmin --user` `admin`
	`server1.jdbc-connection-pool.jdbc-simple-pool.property.DatabaseName=j` `dbc:pointbase:server://localhost/sun-appserv-samples`
4747534	**The lifecycle-multithreaded sample application asks for the admin user password 8 times.**
	While deploying the sample application `lifecycle-multithreaded.jar` file using the `asant deploy` command, you are prompted to enter the admin user password eight times.
	Solution
	None.

ID	Summary
4748535	**Miscellaneous sample file issues.**

1. Logging sample generates multiple log files, for the fourth logging option.

2. Logging sample has a redundant `log.properties` file.

3. Instructions for the security grant in sample documentation are not fully correct.

Solution

1. Close the handler before removing it. See `initLog()` method in `GreeterServlet.java`.

```
private void initLog(String log_type) {
   //Remove all handlers
   Handler[] h = logger.getHandlers();
   for (int i = 0; i < h.length; i++) {
      h[i].close(); //must do this
      logger.removeHandler(h[i]);
   }
   ...
}
```

Also, open file handler with an append option. See `addHandler()` in `GreeterServlet.java`. Write:

```
Handler fh = new FileHandler(log_file, true);
```

instead of

```
Handler fh = new FileHandler(log_file);
```

2. Edit the `build.xml` file as follows:

```
< <fileset dir="${src.docroot}" excludes="cvs,annontation"/>
```

```
> <fileset dir="${src.docroot}"
excludes="cvs,annontation,log.properties"/>
```

3. In "Running the Sample Application" section, remove `domains/domain1/` from instructions to adding security grant entries to the `server.policy` file.

ID	Summary
4752731	**PointBase 4.3 replaced with PointBase 4.4.**

When downloading and installing PointBase with the samples,
(`http://<hostname:port>/samples/docs/pointbase.html`) the instructions refer to
PointBase 4.3. However, PointBase 4.3 as been replaced by PointBase 4.4.

Solution

In the "Update Samples Ant Files" section, use the `pbtools44.jar` and `pbclient44.jar`
files instead of the `pbtools43.jar` and `pbclient43.jar` files.

In the "Starting PointBase" section, for PointBase downloaded and installed separately on
UNIX platforms, use *pointbase_install_dir*`/tools/server/start_server` to start
PointBase.

ORB/IIOP Listener

This section describes known Sun ONE Application Server 7 ORB/IIOP-Listener
issues and the associated solutions.

ID	Summary
4743366	**The address attribute in the iiop-listener element in the server.xml file does not support ANY.**

In the default configuration, the Sun ONE Application Server is configured with the address
value of "0.0.0.0" in the `iiop-listener` element. This default configuration does not listen
on IPv6 interfaces. It only listens on all IPv4 interfaces on a system. The value of ANY in the
address element of the iiop-listener, that would allow the server to listen on all interfaces (IPv4
or IPv6) on a system, is not supported.

The ANY value in the address attribute of the iiop-listener element in the `server.xml` file
allows for listening on all interfaces available on a system. This support includes both the IPv4
and IPv6 interfaces.

Solution

For both IPv4 and IPv6 interfaces, use "::" in the address value of the `iiop-listener`
element. This solution is only applicable to Solaris 8.0 and above.

ID	Summary
4743419	**RMI-IIOP clients will not work for IPv6 addresses where DNS address lookups fail for the IPv6 address.**
	If a DNS lookup for an IPv6 address fails, clients of Remote Method Invocation-Internet Inter-ORB Protocol (RMI-IIOP) will not work for IPv6 addresses.
	Solution
	Domain Name Service (DNS) should be set up at the deployment site in order to look up an IPv6 address.

Localization

This section describes known Sun ONE Application Server 7 localization issues and the associated solutions.

ID	Summary
4757859	**Console 0utput is corrupted if the system's default encoding is not UTF-8.**
	If the system's default encoding is not UTF-8, the Sun ONE Application Server's output might cause multi-byte characters to display incorrectly.
	Solution
	Open the server.log file in your browser.
4763655	**The value in the "Only show entries with" field in the View Event log becomes corrupted when the application or system is not using UTF-8 encoding**
	If the user enters multi-byte characters in the "Only show entries with" field and searches the event log, the value in the "Only show entries with" field becomes corrupted when the search result is displayed. The problem is caused by the conversion of the message format from UTF-16 to UTF-8.
	Solution
	None.

Documentation

This section describes the known Sun ONE Application Server 7 documentation issues and the associated solutions.

In the "Developing Lifecycle Listeners" chapter of the Sun ONE Application Server *Developer's Guide*, the following line is incorrect:

If a lifecycle module needs to look up beans, it can do so in the READY_EVENT.

Instead, it should say:

If a lifecycle module needs to look up resources, it can do so in the READY_EVENT.

ID	Summary
4735625	**Online help doesn't explain clearly how to use GUI for Profiler page.**
	Profiler page ->JVM Settings->Profiler needs more extensive help text. Online help should explain that the Add/Save buttons do the same action here; the Delete button deletes only the JVM Options, not the Profiler.
	Solution
	None.
4740476	**Online help doesn't explain Verifier and Precompile JSPs.**
	Online help for Verifier and Precompile VSPs is missing from the Deploy Web Application page.
	Solution
	None.
4742620	**The documentation in the asadmin utility for the deploy command contains incorrect information**
	Solution
	The correct information is: the deployable file location should be an absolute path on the server machine when the `upload` option is set to false.

ID	Summary
4720171	**There is no documentation explaining the use of indexed deployment directories.**

The numbering scheme part of a deployed application's directory name has been implemented as an indexing mechanism to allow a developer to modify a JAR and/or class file associated with the deployed application. This is significant to the Microsoft Windows platform due to a sharing violation error that occurs during an attempt to overwrite a loaded file; Microsoft Windows places a file lock on the loaded file. The file is loaded into the server instance or the IDE during session startup. With the sharing violation error, two options are possible:

- Compile the updated class file (originally part of that JAR file) and place it first in the classpath in order to be loaded before the older classes, then allow for the Sun ONE Application Server to reload this application (as long as reload is active), OR

- Update the JAR file, create a new EAR file, and redeploy the application.

NOTE: Redeployment of the application on the Solaris platform is not necessary since there are no file locking constraints.

Solution

When making changes to an already deployed application on the Microsoft Windows platform for IDE setup, ANT file copy, or compile or other operations, note that a new directory will be created with an incremented index number as the workaround for the file locking constraint. For example: On the Solaris platform the J2EE application, helloworld, is deployed to the Sun ONE Application Server with the following directory structure:

```
appserv/domains/domain1/server1/applications/j2ee-apps/helloworld_1
```

A change is then to be made to a servlet that's part of this deployed application (for example, `HelloServlet.java`). The Sun ONE Studio IDE is started, the source file for this servlet is changed and compiled with the `javac` target set to the above directory. With the source compiled to the proper location, a reload file exists for this application, the reload flag in `server.xml` is set to true, and, with the server instance running, the changes take effect without having to reassemble the application and redeploy it.

For the Microsoft Windows platform, the JAR or class file cannot be altered and updated due to the file locking issue. Therefore, there are two methods of dealing with this issue on Microsoft Windows:

- Compile the changed source file and prepend the class file or JAR in the classpath in order to have the source changes picked up, OR

- Make the changes to the helloworld source, assemble it, and redeploy it without undeploying the previous deployment of helloworld.

The second option is the preferred method since this option results in the use of the incremented index number appended to the deployed application's directory name. Therefore, after a second deployment of helloworld, the directory structures would look like the following:

```
appserv/domains/domain1/server1/applications/j2ee-apps/helloworld_1
appserv/domains/domain1/server1/applications/j2ee-apps/helloworld_2
```
The second deployment of helloworld would be deployed under `helloworld_2`.

ID	Summary
4766638	**Scenarios for Sun ONE Studio 4 plugin installation are not included in documentation.**
	The Sun ONE Studio 4 plugin can be installed in the Studio user directory or the Studio installation directory. If the plugin is installed in the user directory, removing the user directory will uninstall the plugin module. To make a decision about where to install the Sun ONE Studio 4 plugin, the user needs to be aware of various Sun ONE Studio 4 plugin installation scenarios:
	Case 1:
	The Sun ONE Application Server installer installs the plugin in the Studio installation directory. Deleting the Studio user directory does not affect the plugin module.
	Case 2:
	User directs the Sun ONE Application Server installer to install the plugin in the Studio user directory. Deleting the Studio user directory removes the plugin module.
	Case 3:
	User installs the plugin using the Studio update center, which installs the plugin in the Studio user directory. Deleting the Studio user directory removes the plugin module.
	NOTE: The Sun ONE Application Server installer can be used only once to install the Sun ONE Studio 4 plugin, after which the option is disabled.

How to Report Problems

If you have problems with your system, contact customer support using one of the following mechanisms:

- The online support web site at:

  ```
  http://www.sun.com/supporttraining/
  ```

- The telephone dispatch number associated with your maintenance contract

Please have the following information available prior to contacting support. This helps to ensure that our support staff can best assist you in resolving problems:

- Description of the problem, including the situation where the problem occurs and its impact on your operation

- Machine type, operating system version, and product version, including any patches and other software that might be affecting the problem

- Detailed steps on the methods you have used to reproduce the problem

- Any error logs or core dumps

For More Information

Useful Sun ONE information can be found at the following Internet locations:

- Sun ONE products and services information

    `http://www.sun.com/service/sunps/sunone/index.html`

- Sun ONE developer information

    `http://developer.iplanet.com/`

- Sun ONE learning solutions

    `http://wwws.sun.com/software/training/`

- Sun ONE product data sheets

    `http://wwws.sun.com/software/`

- Sun Microsystems product documentation:

    `http://docs.sun.com/`

- Sun ONE Application Server product documentation:

    `http://docs.sun.com/db/coll/s1_asse_en`

Revision History

This section lists the changes that have been made in these release notes after the initial release of the Sun ONE Application Server 7, Standard Edition product.

Revision Date	Description of Change
October 2002	Initial release.
December 4, 2002	Added Server Startup/Shutdown bug 4780076. Added Database Driver bug 4707531. Added Admin Interface bug 4780488.
	Revised Server Administration bug 4722007: changed title and solution.
	Revised Sample Applications bug 4726161: changed description and solution.
January 6, 2003	Added Localization bugs 4757859 and 4763655.

Revision Date	Description of Change
January 28, 2003	Removed Microsoft Windows Patch Utility procedures; no longer valid.
	Added this revision history.