# Sun Java™ System Application Server Enterprise Edition Release Notes for HP-UX

## Version 8.1 2005Q2

Part Number 819-4249-10

The Sun Java System Application Server Enterprise Edition 8.1 2005Q2 simplifies the task of creating and administering web services applications. It provides superior performance, clustering, and high availability features for scalable services that continue to operate despite software and hardware faults. The Application Server provides a development path for web services that simplifies the development process while providing uniquely flexible growth opportunities.

These release notes contain important information available at the time of the Sun Java System Application Server 8.1 2005Q2 release for HP-UX. Product requirements, platform summary, known problems, and other late-breaking issues are addressed here. Read this document before you begin using the Application Server product.

The most up-to-date version of these release notes can be found at the Sun Java System documentation web site: http://docs.sun.com/app/docs/prod/entsys.05q4. Check the web site prior to installing and setting up your software and then periodically thereafter to view the most up-to-date release notes and product documentation.

This document contains the following sections:

- Release Notes Revision History
- About Application Server 8.1 2005Q2
- Bugs Fixed in This Release
- Important Information
- Known Issues and Limitations
- Redistributable Files
- How to Report Problems and Provide Feedback
- Additional Sun Resources

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

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# Release Notes Revision History

This section lists the changes that have been made in these release notes after the initial release of the Application Server 2005Q2 product:

**Table  1**   Revision History

| Date | Description of Changes |
|---|---|
| February 2006 | Revenue release. |
| November 2005 | Beta release. |

# About Application Server 8.1 2005Q2

The Sun Java System Application Server Enterprise Edition 8.1 2005Q4 is a J2EE 1.4 platform compatible server for the development and deployment of J2EE applications and Java Web Services in large-scale production environments.

This section includes:

- What's New in This Release
- Hardware and Software Requirements

## What's New in This Release

The Application Server includes the following enhancements:

- **Improved Administration Features:** The Application Server supports the remote secure management of complex multi-machine enterprise deployments using either a browser based console or a scriptable command line interface. It also provides a rich JMX based API allowing remote, secure, programatic access to administrative and monitoring functions.

- **Message Broker:** The Application server is bundled with an integrated enterprise class message broker that features providing highly available, reliable, high performance, and scalable messaging.

- **Expanded Platform Support:** Additional operating systems, databases, locales, and hardware are supported.

- **Sun Java Enterprise System:** As a key component of the Sun Java Enterprise System, the Application Server is tightly integrated with portal and network identity services.

- **Java 2 Standard Edition 5.0 Support:** The Application Server supports the Java 2 Standard Edition 5.0 (Tiger), which includes enhanced management and monitoring features and many performance and scalability improvements.

- **JDBC Drivers:** The Application Server is bundled with DataDirect JDBC drivers.

- **Web Services Security:** These container message security mechanisms implement message-level authentication (for example, XML digital signature and encryption) of SOAP web services invocations using the X509 and username/password profiles of the OASIS WS-Security standard.

- **WS-I Profile 1.1:** As mandated by the J2EE 1.4 specification, this release implements Web Services Interoperability (WS-I) Basic Profile 1.1 to enable interoperability for web services applications.

- **Latest HADB Management System** – The UNIX® platforms contain the new high availability database (HADB) management system (HADB version 4.4.2-7). This eliminates the dependency on SSH/RSH, but requires that the network be configured for UDP multicast. See the *Sun Java System Application Server Enterprise Edition 8.1 Installation Guide* for the details on HADB requirements and limitations.

- The existing management command `hadbm listpackages` has been modified.Previously, the command took no operands, and listed all packages in the relevant management domain. The modifications introduces an optional package name operand, and lists only packages with that name. If the operand is not provided, all packages are listed. For more information, see the hadbm `listpackages` manpage.

- The existing management command `hadbm createdomain` has been modified.The `hostlist` operand is extended to also specify the port number of the management agent. In this way, the domain is completely specified using only the `hostlist` operand. The old behavior is still supported for backward compatibility. For more information, see the hadbm `createdomain` manpage.

- Some of the error messages from the management system have been modified. The modifications are intended to improve understandability, consistency and accuracy of the error messages. The actual modifications are not listed in these release notes.

- The installation and uninstallation behavior has been slightly changed. Installing or uninstalling the HADB should always preserve the softlink /opt/SUNWhadb/4, but this has not always been the case:

These two problems have now been fixed.

- For hadbm commands, it has previously been possible to enter a password as:

  ○ A password file

  ○ A command line option

  ○ An interactive input

- Using the command line option method is considered unsafe, and is therefore deprecated. A warning message is issued if a password is entered in this way. Instead, use a password file, or interactive output. Using a password at the command line will become obsolete in the next release. Note this applies to all hadbm commands taking a command line password option.

- HADB has been upgraded to use JGroups Version 2.2, and its source code is distributed along with the HADB. To support online upgrade from a previous HADB version, both JGroups 2.1 and 2.2 are delivered with HADB. For JGroups 2.1, byte code is delivered only.

# Compatibility Issues

In the next major release of the Sun Java System Application Server Enterprise Edition the following incompatibilities will be introduced:

- While the HTTP Service will continue using a DNS cache for better performance, monitoring of the DNS cache will not be available.

- The support for HTTP file caching will be revamped, resulting in changes to configuration and monitoring.

- The format for the access log rotation suffix will be changed to the format supported by date and time objects as specified in http://java.sun.com/j2se/1.5.0/docs/api/java/text/SimpleDateFormat.html. The default value in this release, "%YYYY;%MM;%DD;-%hh;h%mm;m%ss;s," will continue to be supported but no other variations will be supported.

- Any domain.xml elements, attributes and properties no longer supported will be flagged as warnings in the server log and in the upgrade log file as having been deprecated.

- The `server.http-service.dns` node will no longer be available in the monitoring view.

- Some of the attributes from the `server.http-service.file-cache` node may be removed. Consequently, any asadmin monitoring command trying to access removed attributes from these nodes will fail.

## Deploytool

Deploytool will no longer be available. The equivalent functionality is available in the NetBeans IDE. For more information and to plan a migration, please see J2EE 1.4 tutorial for NetBeans 4.1 at http://www.netbeans.org/kb/41/j2ee-tut/index.html.

## Verifier

- Verifier GUI mode (invoked by `verifier -u`) will no longer be available. The equivalent functionality will be available in the NetBeans IDE.

- The default mode for application verification when using verifier tool will change from "Verify J2EE rules" to "Verify J2EE rules and Sun Application Server Configuration Rules." In other words, by default verifier will test whether an application meets J2EE rules and is configured to run on Sun Application Server. The verifier command will have a command-line switch to test an application for J2EE rules only.

## Classloader Changes

In the current release, the JAR and directory entries added to `classpath-prefix`, `server-classpath`, and `classpath-suffix` attributes of `domain.xml` (application server configuration file) are available in the JVM system classpath. An application depending on this behavior might be using the following methods from the `class java.lang.ClassLoader` to access classes or other resources from JVM system classpath:

- `getSystemClassLoader()`

- `getSystemResource()`

- `getSystemResourceAsStream()`

- `getSystemResources`

In the next major release, the JAR and directory entries added to `classpath-prefix`, `server-classpath`, and `classpath-suffix` will no longer be available in the JVM system classpath. If an application uses one of the methods mentioned above, Sun strongly recommends using an equivalent method that does not assume that the resources are available in the system classpath. The equivalent methods that do not rely on the JVM system classpath are available in `java.lang.ClassLoader` and should be used when possible; for example:

**Code Example  1**    Old Code

```
java.net.URL url = ClassLoader.getSystemResource

("com/acme/tools/tools.properties");
```

**Code Example 2**    Suggested Change
```
java.net.URL url = this.getClass().getClassLoader().getResource

("com/acme/tools/tools.properties");
```

If it is not possible to change the code, then you may choose to use a new configuration option that will be added in the next release to set JVM system classpath.

## Web Service Security Configuration

Security for Web services can be configured using the files `wss-client-config.xml` and `wss-server-config.xml`. Please note that the content and names of these configuration files are unstable and likely to change. The equivalent functionality will continue to be available.

# J2EE Support

The Sun Java System Application Server 8.1 2005Q2 supports the J2EE 1.4 platform. The following table describes the enhanced APIs available on the J2EE 1.4 platform.

**Table 2**    Major API changes on the J2EE 1.4 Platform

| API | Description |
| --- | --- |
| **Components** | |
| Application and Application Client | Implementation of standard deployment descriptors by means of XML schemas |
| Enterprise JavaBeans (EJB) 2.1 | Timer service and EJB Web-service endpoint |
| Java Servlet 2.4 | Web-service endpoint filter |
| JavaServer Pages (JSP) 2.0 architecture | Expression language and tag library |
| J2EE Connector Architecture 1.5 | Inbound resource adaptor and Java Message Service (JMS) pluggability |
| **Web Services** | |
| Java Web Services Developer Pack 1.5 | Integrated toolkit for building, testing and deploying XML applications, Web services, and Web applications |
| Java API for XML-based Remote Procedure Calls (JAX-RPC) 1.1 | Mapping for WSDL and Java technology and support for development of Web-service clients and endpoints |
| WS-I Basic Profile 1.0 | The enabling element for interoperability using WSDL and SOAP |
| SOAP with attachment API for Java (SAAJ) 1.2 | An API for SOAP-based messaging; fosters the creation of SOAP messages with attachments |

**Table 2**  Major API changes on the J2EE 1.4 Platform *(Continued)*

| API | Description |
| --- | --- |
| Java APIs for XML Registries (JAXR) 1.0 | A uniform and standard API for accessing XML registries, such as those for Universal Description Discovery and Integration (UDDI and ebXML) |
| **Other** | |
| J2EE Deployment 1.1 | Standard APIs that enable deployments of J2EE components and applications |
| J2EE Management 1.0 | Definitions for the information model for managing the J2EE platform |
| Java Management Extensions (JMX) 1.2 | Standard management API |
| Java Authorization Contract for Containers (JACC) 1.0 | Definitions of security contracts between a J2EE Application Server and the authorization policy provider |
| Java API for XML Processing (JAXP) 1.2 | An API with which applications can parse and transform XML documents; also adds support for processing of XML schemas |
| JMS 1.1 | A messaging standard that enables J2EE application components to create, send, receive, and read messages; also adds support for uniform APIs for queues and topics |
| JavaMail 1.3 | A set of abstract classes that model a mail system; also includes minor updates to the APIs |

## High Performance

The Application Server includes a high performance EJB container, Web container and services, and supports concurrent message delivery with the Sun Java System Message Queue software.

## Scalability

The Application Server supports horizontal scalability through clustering of server instances and request load balancing. It also achieves class leading vertical scalability supporting large multi-processor machines. The integrated message broker can be clustered for better scalability and availability. Client access from HTTP clients, RMI/IIOP based Rich Client Applications, Web Services Clients, and JRM Clients can be load balanced to Application Server clusters.

## High Availability

The Application Server includes load balancing for HTTP, IIOP, and JMS clients; HTTP session failover support; EJB clustering and failover support; highly available EJB timers; distributed transaction recovery; support for rolling application upgrades; and a high availability database for storing the transient state of J2EE applications.

Availability allows for failover protection of Application Server instances in a cluster. If one Application Server instance goes down, another Application Server instance takes over the sessions that were assigned to the unavailable server. Session information is stored in the HADB. HADB supports the persistence of HTTP sessions, Stateful Session Beans, and Single Sign On credentials.

### JavaServer Faces 1.1 Support

The Sun Java System Application Server Enterprise Edition 8.1 supports JavaServer Faces 1.1 technology. The JavaServer Faces technology consists of a set of server-side APIs that represent user-interface components that manage their state, event, handling, and input validation. The APIs also define page navigation and support internationalization and accessibility. You can add custom UI components with a JSP custom tag library.

While developing with JavaServer Faces technology, each member of a development team can focus on a single piece of the process. A simple programming model then links the pieces, resulting in a much more efficient and simpler development cycle.

# Hardware and Software Requirements

The following software is required for Application Server 8.1 2005Q2.

**Table 3**    HP-UX Hardware and Software Requirements

| Component | Platform Requirement |
|---|---|
| Supported Platform | HP-UX PA-RISC 2 |
| Operating System | HP-UX 11i v1 |
| RAM | 2 Gbytes |
| Disk Space | 750 Mbytes |

# Bugs Fixed in This Release

The table below describes the bugs fixed in Application Server 8.1 2005Q2:

**Table 4**    Fixed Bugs in Application Server 8.1 2005Q2

| Bug Number | Description |
|---|---|
| 6233605 | Start up problem in Application Server. |
| 6256580 | Web Server start fails due to permission error in lbplugin. |

**Table 4**    Fixed Bugs in Application Server 8.1 2005Q2

| Bug Number | Description |
| --- | --- |
| 6256583 | Server installation on Solaris. |

# Important Information

This section lists the requirements that must be met before installing the Sun Java System Application Server Enterprise Edition 8.1 product.

- System Requirements
  - ○ Platform Requirements
  - ○ JDBC Drivers and Databases
  - ○ Web Servers
  - ○ Browsers
  - ○ High Availability Requirements and Limitations
  - ○ Other Requirements
- Installation Notes
- Documentation Notes
- Accessibility Features for People With Disabilities

## System Requirements

### Platform Requirements

The following table lists the operating systems that are supported for Sun Java System Application Server Enterprise Edition 8.1 2005Q2 product for HP-UX. Additionally, the minimum and recommended memory requirements are identified for installing and running the Application Server.

**Table 5**    Supported Operating Systems

| Operating System | Minimum Memory | Recommended Memory | Minimum Disk Space | Recommended Disk Space | JVM |
|---|---|---|---|---|---|
| HP-UX 11i V1 (PA-RISC 2) | 700 Mbytes | 2 Gbytes | 500 Mbytes free | 700 Mbytes free | JDK 1.4.2_03 <br> J2SE 5.0 |

On HP-UX, you can check your operating system version using the `uname -a` command. Disk space can be checked using the `df` or `bdf` command.

## HP-UX Patch Requirements

Remove `krng11i` (random number generator from OS) patch from the HP-UX system for Application Server to function.

## JDBC Drivers and Databases

The Sun Java System Application Server is designed to support connectivity to any DBMS with a corresponding JDBC driver. For a list of components that Sun has tested and found to be acceptable for constructing J2EE compatible database configurations, please refer to the following table:

**Table 6**    J2EE Compatible JDBC Drivers

| JDBC Vendor | JDBC Driver Type | Supported Database Server |
|---|---|---|
| i-net Software | Type 4 | Oracle (R) 8.1.7, 9i, 9.2.0.3 |
| i-net Software | Type 2 | Oracle (R) 9i, |
| i-net Software | Type 4 | Sybase ASE 12.5.2 |
| i-net Software | Type 4 | MS SQL Server 2000 4.0 Service Pack 1 |
| IBM | Type 2 | IBM DB2 8.1 Service Pack 3+ |
| PointBase | Type 4 | PointBase Network Server 4.8 |
| Data Direct | Type 4 | Oracle (R) 8.1.7, 9i, 9.2.0.3 |
| Data Direct | Type 4 | Sybase ASE 12.5.2 |
| Data Direct | Type 4 | Microsoft SQL Server |
| Data Direct | Type 4 | iIBM DB2 8.1 Service Pack 3+ |
| Sun Java JDBC Driver for Oracle | Type 4 | Oracle (R) 9.2.0.3, 10G |
| Sun Java JDBC Driver for DB2 | Type 4 | Sybase ASE 12.5.2 |

**Table 6**    J2EE Compatible JDBC Drivers

| JDBC Vendor | JDBC Driver Type | Supported Database Server |
|---|---|---|
| Sun Java JDBC Driver for Sybase | Type 4 | MS SQL Server 2000 4.0 Service Pack 1 |
| Sun Java JDBC Driver for Microsoft SQL Server | Type 4 | MS SQL Server 2000 4.0 Service Pack 1 |
| Oracle | Type 4,Type 2 | Oracle (R) 9.2.0.3, 10G |

For more information about i-net Software, see:

http://www.inetsoftware.de/

The following table identifies additional supported JDBC drivers; however these drivers are not J2EE compatible.

**Table 7**    JDBC Drivers not J2EE compatible

| JDBC Vendor | JDBC Driver Type | Supported Database Server |
|---|---|---|
| Oracle | Type 4 | Oracle (R) 9.2.0.3, 10G |
| Sybase | jConnector | Sybase ASE 12.5.1 |

Additional drivers have been tested to meet the JDBC requirements of the J2EE 1.4 platform with the JDBC Driver Certification Program. These drivers can be used for JDBC connectivity with the Sun Java System Application Server. While Sun offers no product support for these drivers, we support the use of these drivers with the Sun Java System Application Server.

## Configuring Oracle

Oracle JDBC drivers must be configured properly to be compliant with J2EE 1.4. Use the following configuration for Type 2 and Type 4 drivers:

1. Use the JDBC driver from 9.2.0.3 or later.

2. The Oracle database needs to have compatible=9.0.0.0.0 or higher in its parameter (init.ora) file.

3. Use the ojdbc14.jar file.

4. Configure the Application Server to define the following JVM property:

```
-Doracle.jdbc.J2EE13Compliant=true
```

In addition, for `Type-2` drivers, both the `ORACLE_HOME` and `SH_LIB_PATH` variables (which must include `$ORACLE_HOME/lib`) need to be defined in the environment in which the Application Server is started. For example, add them to the `asenv.conf` file and ensure they are exported.

## Configuring PointBase

Many sample applications use the PointBase database server included with the Application Server. When using Application Server Enterprise Edition, you must configure the PointBase database server before using it. Before using PointBase with the Application Server, however, note the supported configuration combination.

**Table 8**    Supported J2SE/PointBase Combinations

| Application Server | PointBase |
|---|---|
| **Supported** | |
| J2SE 5.0 | J2SE 1.4 |
| **Unsupported** | |
| J2SE 1.4 | J2SE 1.4 |
| J2SE 5.0 | J2SE 5.0 |

There are two ways to configure PointBase:

- Set the `JAVA_HOME` environment variable to the location of the J2SE. The PointBase implementation bundled with Application Server 8.1 is only supported with J2SE 1.4.2.

- Edit the Application Server's PointBase configuration file.

To use the first method:

1. Make sure you have the J2SE installed that you want to use.

   Download J2SE 1.4.2 if you do not already have it.

2. Using the command appropriate for your operating system and shell, set the `JAVA_HOME` environment variable to the directory in which J2SE is installed; for example:

   ```
   % setenv JAVA_HOME "/opt/java1.4"
   ```

To use the second method, the procedure depends on the operating system.

### *Solaris, Linux and HP Unix*

Edit the *install_dir*`/pointbase/tools/serveroption/pbenv.conf` configuration file, changing the line:

```
PB_JAVA=%%%PB_JAVA%%%
```

*to*

```
PB_JAVA=J2SE_location
```

where *J2SE_location* is the directory where the J2SE is installed. If you installed J2SE with Application Server, it is installed by default to *install_dir*/jdk. After making this change, you can start PointBase using the startserver script.

### Windows

Edit the *install_dir*\pointbase\tools\serveroption\pbenv.bat configuration file, changing the line:

```
set PB_JAVA=%%%PB_JAVA%%%
```

*to*

```
set PB_JAVA=J2SE_location
```

where *J2SE_location* is the directory in which the J2SE is installed. If you installed J2SE with Application Server, it is installed by default to *install_dir*\j2se1.4. After making this change, you can start PointBase by running startserver.bat.

## Web Servers

This section lists the web servers that are supported for the Sun Java System Application Server Enterprise Edition 8.12005Q2.

**Table 9**    Supported Web Servers

| Web Server | Version | Operating System |
|---|---|---|
| Sun Java System Web Server | 6.1 Service Pack 4 | HP-UX 11.11i v1 |
| Sun Java System Web Server | 6.1 Service Pack 4 | Solaris SPARC 8, 9, 10 |
| Sun Java System Web Server | 6.1 Service Pack 4 | Solaris x86, 9, 10 |
| Sun Java System Web Server | 6.1 Service Pack 4 | Windows 2003 Enterprise |
| Sun Java System Web Server | 6.1 Service Pack 5 | HP-UX 11.11i v1 |

## Browsers

This section lists the browsers that are supported with the Sun Java System Application Server Enterprise Edition 8.12005Q2.

**Table  10**  Supported Browsers

| Browser | Version |
| --- | --- |
| Mozilla | 1.4, 1.5, 1.6, 1.7.x |
| Netscape Navigator | 4.79, 6.2 |
| Internet Explorer | 5.5 Service Pack 2, 6.0 |

## High Availability Requirements and Limitations

Though HADB server is not supported on HP-UX 11.11i, HADB client is supported. HADB Server can be downloaded from the following location:

http://www.sun.com/download/sdl.jsp?2a1c7bbd=1.

The following high availability requirements must be met before configuring the Sun Java System Application Server High Availability component:

- HADB requires 1 GB minimum memory and more than 2 GB is the recommended memory to work properly with the Application Server.

- HADB supports IPv4 only.

- The network must be configured for UDP multicast.

- Do not use dynamic IP addresses (DHCP) for hosts used in `create domain`, `extend domain`, `hadbm create`, or `hadbm addnodes` commands.

## HADB File System Support

There are several important considerations if you want to configure HADB to use one of the following file systems:

- **ext2 and ext3** – HADB supports ext2 and ext3 file systems for Red Hat Application Server 3.0. For Red Hat Application Server 2.1, HADB supports only the ext2 file system.

- **Veritas** – When the Veritas File System is used on the Solaris platform, the message "`WRN: Direct disk I/O mapping failed`"is written to the history files. This message indicates that HADB cannot turn on direct I/O for the data and log devices. Direct I/O is a performance enhancement that reduces the CPU cost of writing disk pages. It also causes less overhead of administering dirty data pages in the operating system.

To use direct I/O with the Veritas File System, use one of the following:

○   Create the data and log devices on a file system that is mounted with the option mincache=direct. This option applies to all files created on the file system. See the mount_vxfs(1M) command for details.

○   Use the Veritas Quick I/O facility to perform raw I/O to file system files. See the *VERITAS File System 4.0 Administrator's Guide for Solaris* for details.

Note that these configurations have not been tested with Application Server 8.1.

Refer to the *Sun Java System Application Server Enterprise Edition 8.1 Installation Guide* for detailed information about installing and configuring HADB with Application Server 8.1 software.

## Upgrading the High Availability Database

### *Pre-upgrade Tasks/Data Migration*

Users should keep the HADB history files, management agent configuration files, log files and repository, and all the data devices outside the installation path. If not, this should be done prior to the upgrade. To move the management repository and configuration files:

1.   Stop all the old management agents and keep the HADB nodes running.

2.   On each host, move the repository directory to the new location.

3.   On each host, copy the dbconfig directory to the new location.

4.   On each host, update the mgt.cfg file, and set the correct path for dbconfig and repository directory.

5.   Start the management agents using the updated mgt.cfg file.

### *Upgrade Procedure*

To upgrade from HADB version 4.4.x to version 4.4.2-7, apply the following steps:

1.   Perform the pre-upgrade tasks mentioned above as necessary.

2.   Install HADB version 4.4.2-7 on all HADB hosts (on another path than that of version 4.4.x, for instance on /opt/SUNWhadb/4.4.2-7).

3.   Install the HADB 4.4.2-7 version on the hadbm client hosts, if they are different than that of the HADB hosts.

4.   Stop all management agents running on all HADB hosts.

5.   Start the management agent processes using the HADB 4.4.2-7 software, with the old configuration files. In the remaining user the hadbm command found in the HADB 4.4.2-7 /bin directory.

6. Register the package in the management domain (default package name becomes V4.4, so another package name may be required to avoid conflicts with existing packages having the same name):

```
hadbm registerpackage --packagepath=/opt/SUNWhadb/4.4.2-7 V4.4.2-7
```

7. Run the hadbm `listpackages` command and check that the new package is registered in the domain.

8. Restart the database with the new hadbm version 4.4.2-7. If it is necessary to move the devices and history files, run online upgrade combined with setting new paths for devices and history files in one single operation:

```
hadbm set packagename=V4.4.2-7,devicepath=new_devpath,historypath=new_histpath
```

9. Check that the database status is "running" (using the hadbm status command) and that it functions normally, serving the client transactions).

10. If everything is working, the old installation can be removed later. Before unregistering the old package, remove all references to the old package from the ma repository. Otherwise, hadbm `unregisterpackage` will fail with "package in use." A dummy reconfiguration operation, for instance, hadbm set `connectiontrace`=*same as previous value* will remove all references to the old package. Now, unregister the old package:

```
hadbm unregisterpackage [--hosts=host-list] old pacakge name
```

11. Remove the old installation from the file system.

### *Testing the Upgrade*

On Solaris, to test that the upgrade was successful, check that the upgrade was performed properly:

1. Ensure that the running processes use the new binaries. Check the following in all HADB nodes:

```
new path/bin/ma -v new path/bin/hadbm -v
```

2. Check whether the database is running. The following command should show that all the HADB nodes are in a "running" state.

```
new path/bin/hadbm status -n
```

3. Ensure that the products using HADB have changed their pointers to point to the new HADB path.

4. The products using the HADB can run their upgrade tests to verify the HADB upgrade is also working.

   After an online upgrade, if the new version does not work properly, go back to using the previous HADB version. However, if there has been a change to the management agent repository, the HADB itself can be downgraded, but the new management agent must be kept running.

## Switching to J2SE 1.4.2

Sun Java System Application Server 8.1 2005Q2 supports J2SE 5.0 as the underlying JVM, however the bundled PointBase database does not. If you want to use PointBase with the Application Server, download J2SE 1.4.2 and use it instead of the bundled J2SE 5.0 JVM. To do this, perform the following steps:

1. Download the J2SE 1.4.2 SDK (not the JRE) from `http://www.hp.com/products1/unix/java` and install it on your system, if you have not already done so.

2. Completely stop the Application Server.

   You can use the following command line:

   *as-install*/bin/asadmin stop-domain

   or the Administration Console GUI:

   a. Click the "Application Server" node.

   b. Click "Stop Instance."

3. Edit the *install_dir*/config/asenv.conf file (asenv.bat on Windows), changing the value for AS_JAVA to point to the J2SE 1.4.2 home directory:

4. Edit the *as-install*/samples/common.properties file, changing the line beginning "com.sun.aas.javaRoot..." to reference the J2SE 1.4.2 home directory.

5. Restart the Application Server.

   *as-install*/bin/asadmin start-domain

## Other Requirements

The following additional requirements should be met before installing the Sun Java System Application Server software.

- **Free space:** your temporary directory must have a minimum of 700 Mbytes free for Sun Java System Application Server installation, and 250 Mbytes of free space for the SDK installation.

- **Using the uninstall program:** If you need to remove the application server from your system, it is important to use the uninstall program that is included with the software. If you attempt to use another method, problems will arise when you try to reinstall the same version, or when you install a new version.

- **Free ports:** You must have seven unused ports available.

  o The installation program automatically detects ports in use and suggests currently unused ports for the default settings. By default, the initial default ports are (if unused):

    ‣ HTTP Instance- 8,080.

    ‣ JMS- 7,676.

    ‣ IIOP- 3,700.

    ‣ HTTP_SSL-8,181.

    ‣ IIOP_SSL-3,820.

    ‣ IIOP_MUTUALAUTH-3,920.

    ‣ JMX_ADMIN-8,686.

    If these default port numbers are in use, the installation program will assign a random port number from the dynamic port range (note that this may not be the next available port number).

- **Starting previously-installed servers:** unless you are replacing the previously installed server, you should start it before you begin the Sun Java System Application Server 8.1 installation process. This allows the installation program to detect ports that are in use and avoid assigning them for other uses.

- **Shutting down firewall:** You must stop any firewall software before installing the Sun Java System Application Server software, because some of this software disables all ports by default. The installation program must be able to accurately determine which ports are available.

For further compatibility information, see the Upgrade and Migration Guide at:

> http://docs.sun.com/app/docs/doc/819-2559

# Installation Notes

For information about patch requirements and installation, see the following section:

## Patch Requirement Information

The following table gives the numbers and minimum versions for the alignment patches. All patches referred to in this section are the minimum version number required for upgrade. It is possible that a new version of the patch has been issued since this document was published. A newer version is indicated by a different version number at the end of the patch. For example: 123456-04 is a newer version of 123456-02 but they are the same patch ID. Refer to the README file for each patch listed for special instructions.

To access the patches, go to http://sunsolve.sun.com.

**Table 11** Application Server 8.1 2005Q2 Alignment Patches Required For HP-UX

| Patch Number | Patch Description |
| --- | --- |
| 121936-01 | HP-UX 11.11: Sun Java™ System Message Queue 3 2005Q4 (Localization Patch) |
| 121937-01 | HP-UX 11.11: Lockhart Localization Patch |
| 121514-01 | HP-UX 11.11: Sun Java™ System Application Server 8.1 2005Q2 |
| 121934-01 | HP-UX 11.11: Sun Java™ System Application Server 8.1 2005Q2 (Localization Patch) |

For detailed information about Upgrade procedure of the Application Server from JES3 to JES4 refer *Sun Java Enterprise System 2005Q4 Upgrade Guide for HP-UX* located at http://docs.sun.com/app/docs/doc/819-4460.

# Documentation Notes

In addition to these release notes, the Application Server product includes an entire set of documentation that can be found at this location:

> http://docs.sun.com/app/docs/coll/1310.1

The following table summarizes the books included in the Application Server core application documentation set.

**Table 12** Books in This Documentation Set

| Book Title | Description |
| --- | --- |
| *Release Notes* | Late-breaking information about the software and the documentation. Includes a comprehensive, table-based summary of the supported hardware, operating system, JDK, and JDBC/RDBMS. |

**Table 12** Books in This Documentation Set *(Continued)*

| Book Title | Description |
| --- | --- |
| *Quick Start Guide* | How to get started with the Sun Java System Application Server product. |
| *Installation Guide* | Installing the Sun Java System Application Server software and its components. |
| *Deployment Planning Guide* | Evaluating your system needs and enterprise to ensure that you deploy Sun Java System Application Server in a manner that best suits your site. General issues and concerns that you must be aware of when deploying an application server are also discussed. |
| *Developer's Guide* | Creating and implementing Java™ 2 Platform, Enterprise Edition (J2EE™ platform) applications intended to run on the Sun Java System Application Server that follow the open Java standards model for J2EE components and APIs. Includes general information about developer tools, security, assembly, deployment, debugging, and creating lifecycle modules. |
| *J2EE 1.4 Tutorial* | Using J2EE 1.4 platform technologies and APIs to develop J2EE applications and deploying the applications on the Sun Java System Application Server. |
| *Administration Guide* | Configuring, managing, and deploying the Sun Java System Application Server subsystems and components from the Administration Console. |
| *High Availability Administration Guide* | Post-installation configuration and administration instructions for the high-availability database. |
| *Administration Reference* | Editing the Sun Java System Application Server configuration file, domain.xml. |
| *Upgrade and Migration Guide* | Migrating your applications to the new Sun Java System Application Server programming model, specifically from Application Server 6.x and 7. This guide also describes differences between adjacent product releases and configuration options that can result in incompatibility with the product specifications. |
| *Performance Tuning Guide* | Tuning the Sun Java System Application Server to improve performance. |
| *Troubleshooting Guide* | Solving Sun Java System Application Server problems. |
| *Error Message Reference* | Solving Sun Java System Application Server error messages. |
| *Reference Manual* | Utility commands available with the Sun Java System Application Server; written in manpage style. Includes the asadmin command line interface. |

# Accessibility Features for People With Disabilities

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

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

# Known Issues and Limitations

This section describes the known issues and limitations of Sun Java System Application Server Enterprise Edition 8.1 2005Q2 for HP-UX. This section covers the following topics:

- Start up
- Uninstallation

## Start up

**Sun ONE application server 8.1 supports only Sun ONE webserver load balancer (6257606)**

Application Server Load balancer does not support Apache webserver hence the user need to select `Sun ONE webserver` during Application Server configuration.

*Workaround*

None.

**Number format exception occurs while running Loadbalancer/Idempotent test (6299849)**

Install Sun Java System Appserver 8.1EE from Java Enterprise Systems 3 and setup SIFT cluster environment. Deploy `71/Apps/Loadbalancer/Infinite/infinite.war` and give `context root /infinite/infiniteLoopServlet?no-of-loops=20`. Now trying to access the webserver with its context root, like http://hostname.domainname:80/infinite/infiniteLoopServlet?no-of-loops=20 throws `NumberFormatException` while parsing the loop count.

*Workaround*

1. Deploy the `loadbalancer/idempotent` war file.

2. Make entry in `loadbalancer.xml` with context root

```
<web-module context-root="/infinite" enabled="true" disable-timeout-in-minutes="60"
error-url="">

<idempotent-url-pattern url-pattern="/SessionExample*" no-of-retries="-1"/>

</web-module>
```

3. Restart webserver

4. Access http://DAS-hostname.domainname:8080/infinite

5. Enter the value 20 and Submit.

6. Get the resultant value.

**Application Server conflict with KRNG11i patch for Random number generation (6319336)**

If system patch KRNG11i is installed on the machine then startup of domain fails.

```
swlist | grep KRNG11i
```

If you see in `/var/opt/sun/appserver/domain/domain1/logs/server.log` file you will see exception related to SecureRandom.setSeed Caused by: java.io.IOException: No such device (errno:19)

*Workaround*

Move the following files:

```
mv /dev/random    /dev/random.mv
```

```
mv /dev/urandom   /dev/urandom.mv
```

Then create domain and start it. It can be successfully executed.

# Uninstallation

**Uninstallation does not remove Application server folder during complete Java Enterprise Systems uninstall (6229908)**

Uninstallation does not remove Application server folder when uninstalling all components of Java Enterprise Systems 3.

*Workaround*

The user need to manually remove the `/opt/sun/appserver` directory after uninstallation, provided they don't have any node-agent or instance related data in this directory.

# Redistributable Files

Sun Java System Application Server Enterprise Edition 8.1 does not contain any files that can be redistributed.

# How to Report Problems and Provide Feedback

Use the following resources to handle problems you may encounter with the Application Server product:

- J2EE-INTEREST list: A mailing list for J2EE questions.

    http://archives.java.sun.com/archives/j2ee-interest.html

- Bug database on Java Developer Connection: To view bugs or to submit a bug, use the Java Developer Connection Bug Parade.

    http://developer.java.sun.com/servlet/SessionServlet?url=/developer/bugParade/index.jshtml

- Java Technology Forums: An interactive message board for sharing knowledge and questions about Java technologies and programming techniques. Use the J2EE SDK forum here for discussions related to the Sun Java System Application Server 8 Platform Edition product.

    http://forum.java.sun.com/

## Sun Welcomes Your Comments

Sun is interested in improving its documentation and welcomes your comments and suggestions.

To share your comments, go to http://docs.sun.com and click Send Comments. In the online form, provide the document title and part number. The part number is a seven-digit or nine-digit number that can be found on the title page of the guide or at the top of the document.

# Additional Sun Resources

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

- Application Server product information:

    http://www.sun.com/software/products/appsrvr_pe/index.xml

- Java developer resources:

    http://developer.java.sun.com/

- Java 2 Platform, Enterprise Edition (J2EE) site:

    http://java.sun.com/j2ee/

- Application Server product documentation:

    http://docs.sun.com/db/prod/s1appsrv#hic/

- Sun Microsystems product documentation:

    http://docs.sun.com/