

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

Version 8.1 2005Q1

Part Number 819-1561-10

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The Sun Java™ System Application Server Enterprise Edition 8.1 2005Q1 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 2005Q1 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>. 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 2005Q1](#)
- [Bugs Fixed in This Release](#)
- [Important Information](#)
- [Known Issues and Limitations](#)
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- [How to Report Problems and Provide Feedback](#)
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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 2005Q1 product:

**Table 1** Revision History

Date	Description of Changes
February, 2005	Initial release of Sun Java System Application Server 8.1 2005Q1Release Notes for HP-UX.
July, 2005	Release of RR version of Sun Java System Application Server 8.1 2005Q1Notes for HP-UX.

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## About Application Server 8.1 2005Q1

The Sun Java System Application Server Enterprise Edition 8.1is 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:

- **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 4.4.1-7). 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.

## J2EE Support

The Sun Java System Application Server 8.1 2005Q1 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
<b>Components</b>	
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
<b>Web Services</b>	
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
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)
<b>Other</b>	
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 2005Q1.

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

Component	Platform Requirement
Supported Platform	HP-UX PA-RISC 2

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

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

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## Bugs Fixed in This Release

The table below describes the bugs fixed in Application Server 8.1 2005Q1:

**Table 4** FixedBugs in Application Server 8.1 2005Q1

Bug Number	Description
<b>6233605</b>	Start up problem in Application Server.
<b>6256580</b>	Web Server start fails due to permission error in lbplugin.
<b>6256583</b>	HADB server installation on Solaris.

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## 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](#)

- [Documentation Notes](#)

## System Requirements

### Platform Requirements

The following table lists the operating systems that are supported for Sun Java System Application Server Enterprise Edition 8.1 2005Q1 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 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 patch 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

**Table 6** J2EE Compatible JDBC Drivers

JDBC Vendor	JDBC Driver Type	Supported Database Server
IBM	Type 2	IBM DB2 8.1 Service Pack 3+
PointBase	Type 4	PointBase Network Server 4.8

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
<b>Supported</b>	
J2SE 1.4	J2SE 1.4
J2SE 5.0	J2SE 1.4
<b>Unsupported</b>	
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 8.12005Q1.

**Table 9** Supported Web Servers

Web Server	Version	Operating System
Sun Java System Web Server	6.1 Service Pack 4	HP-UX 11.11i

## Browsers

This section lists the browsers that are supported with the Sun Java System Application Server Enterprise Edition 8.12005Q1.

**Table 10** Supported Browsers

Browser	Version
Mozilla	1.4
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, but HADB client is supported.

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

- HADB requires 512 MB minimum memory and 1GB 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.

## Switching to J2SE 1.4.2

Sun Java System Application Server 8.1 2005Q1 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.
  - The installation program automatically detects ports in use and suggests currently unused ports for the default settings. By default, the initial default ports are 8080 for the HTTP server, and 4849 for the Admin Server.
  - The installation program will detect used ports and assign two others for you: Sun Java™ System Message Queue (by default, 7676), and IIOP (by default, 3700 for IIOP and 1060 and 1061 for IIOP/SSL). 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/819-0222>

## 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/db/prod/slappsrv#hic>

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

**Table 11** Books in This Documentation Set

Book Title	Description
<i>Release Notes</i>	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.
<i>Quick Start Guide</i>	How to get started with the Sun Java System Application Server product.
<i>Installation Guide</i>	Installing the Sun Java System Application Server software and its components.
<i>Deployment Planning Guide</i>	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.
<i>Developer's Guide</i>	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.
<i>J2EE 1.4 Tutorial</i>	Using J2EE 1.4 platform technologies and APIs to develop J2EE applications and deploying the applications on the Sun Java System Application Server.

**Table 11** Books in This Documentation Set (*Continued*)

<b>Book Title</b>	<b>Description</b>
<i>Administration Guide</i>	Configuring, managing, and deploying the Sun Java System Application Server subsystems and components from the Administration Console.
<i>High Availability Administration Guide</i>	Post-installation configuration and administration instructions for the high-availability database.
<i>Administration Reference</i>	Editing the Sun Java System Application Server configuration file, domain.xml.
<i>Upgrade and Migration Guide</i>	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.
<i>Performance Tuning Guide</i>	Tuning the Sun Java System Application Server to improve performance.
<i>Troubleshooting Guide</i>	Solving Sun Java System Application Server problems.
<i>Error Message Reference</i>	Solving Sun Java System Application Server error messages.
<i>Reference Manual</i>	Utility commands available with the Sun Java System Application Server; written in manpage style. Includes the asadmin command line interface.

## Known Issues and Limitations

This section describes the known issues and limitations of Sun Java System Application Server Enterprise Edition 8.1 2005Q1 for HP-UX. For a list of the known issues and limitations in this component, refer to the following Release Notes:

<http://docs.sun.com/app/docs/doc/819-0214>

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.

## 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.

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## 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

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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.



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# 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](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/slappsrv#hic/>
- Sun Microsystems product documentation:  
<http://docs.sun.com/>

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