Sun Java System Web Server 7.0 Release Notes

Contents

Sun Java System Web Server Release Notes

These release notes contain important information about the Sun Java™ System Web Server 7.0 (Web Server 7.0) for the stand-alone as well as Java Enterprise System (Java ES) 5 releases. These notes address new features and enhancements, installation notes, known problems, and other late-breaking issues. Read this document before you begin using Web Server 7.0.

These release notes contain the following sections:

- What's New in This Release
- Supported Platforms
- Required Patches
- Supported Browsers
- Installation and Migration Notes
- Product Documentation
- Known Issues
- How to Report Problems and Provide Feedback
- Additional Sun Resources
- Searching Sun Product Documentation

What's New in This Release

Web Server 7.0 is a major new release with significant enhancements in the Administration Infrastructure. In addition, Web Server can now be configured to run as a 64–bit application on the Solaris™, SPARC® and AMD64 platforms.

Web Server 7.0 provides comprehensive command-line interface support, consolidated configuration, enhanced security with elliptic curve cryptography support, and clustering support. It also comes with a robust built-in migration tool that helps migrate applications and configurations from Web Server 6.0 and Web Server 6.1 to Sun Java System Web Server 7.0.

Sun Java System Web Server 7.0 includes the following new features:

- JMX Based Management Infrastructure
- Redesigned Administration Server Interface
- Command-Line Interface Support
- Sun N1 Service Provisioning System Support
- Consolidated Configuration Files
- Java Servlet 2.4 and Java Server Pages (JSP) 2.0 Support
- JavaServer Pages Standard Tag Library 1.1 and Java Server Faces 1.1 Support
- JNDI Support
- Java Database Connectivity and Connection Pooling Support
- Java SE 5.0 and 6.0 Support
- Integrated Java Web Services Developer Pack 2.0 Technologies
- Lightweight Session Replication Support
- URL Redirection and Rewriting with Regular Expressions
- Extensive Real-Time Monitoring Support
- Integrated Reverse Proxy
- FastCGI Plug-in
- Enhanced Security
- Elliptic Curve Cryptography Support
- NetBeans 5.0 and 5.5 Support
- Sun Java Studio Enterprise Support
- Localization Support

JMX Based Management Infrastructure

Web Server 7.0 management infrastructure is based on the modern distributed Java Management Extensions (JMX™) technology. JMX technology provides tools for building distributed, web-based, modular and dynamic solutions for managing and monitoring devices, applications, and service-driven networks. JMX helps to manage and monitor instances, configurations, and web applications across clustered Web Server deployments.

Redesigned Administration Server Interface

The Administration Server is a specially configured Web Server instance on which the administration applications are deployed. An administration instance runs on each node in the server farm. Of these nodes, one node is configured to be the Administration Server and the rest are configured to be Administration Nodes.

The web-based Administration Server is redesigned to make common tasks easier to access and complex tasks easier to accomplish.

The Administration Server includes the following new features:

- Web-based wizards for performing most common tasks
- Comprehensive command-line interface (CLI) support for server configuration and server administration tasks
- Centralized configuration store
- Support for deploying Web Server configuration information on multiple machines. This feature extends to support Web Server in a server farms and clusters.
- Built-in management and monitoring of server clusters

For more information on using the administration interface to perform administrative tasks, see the *Sun Java System Web Server 7.0 Administrator's Guide*.

Command-Line Interface Support

The command-line interface enables you to easily configure and administer the server.

The administration CLI has the following key features:

- Embedded Java Command Language (`jacl`) shell for scripting
- Extensible CLI, which enables you to add more commands by using the third-party plug-ins
- Support for local and remote administration, configuration, and management of one or more server instances
- Automatically completes commands when you type one or more characters and then press a tab key
- Easy-to-use CLI-based operational modes including single mode, shell mode, and file mode

For more information on the commands, see the *Sun Java System Web Server 7.0 CLI Reference Manual*.

Sun N1 Service Provisioning System Support

Web Server 7.0 is integrated with Sun N1™ Service Provisioning Server 5.2. Sun N1 Service Provisioning System is an application provisioning tool that eliminates the need for custom scripts. With the integration of Web Server with Sun N1 Service Provisioning System, as an administrator, you do not need to write custom scripts for installing multiple Web Servers in a datacenter environment or in a server farm.

Consolidated Configuration Files

Configuration files in Web Server 7.0 are rearranged and consolidated to simplify administration.

In the earlier versions of Web Server, the configuration files in `userdb` were shared by all instances, while the information contained in these files was often instance-specific. In Web Server 7.0, configuration files from the `userdb` directory are removed. Their functionality is incorporated into the `server.xml` file in the `config` directory. Configuration files from the `alias` and `httpacl` directories are moved into the `config` directory. These changes consolidate instance-specific configuration information within the instance-specific `config` directory.

For information about the configuration files, see the *Sun Java System Web Server 7.0 Administrator's Configuration File Reference*.

Java Servlet 2.4 and Java Server Pages (JSP) 2.0 Support

Web Server 7.0 includes a Java 2 Platform, Enterprise Edition (J2EE™) compliant implementation of the Java Servlet 2.4 and JavaServer Pages™ (JSP™) 2.0 technology specifications. Web Server 7.0 web container provides the flexibility and reliability needed to design and deploy web applications that comply with Java technology standards.

Servlets provide a component-based platform-independent method for building web-based applications, without the performance limitations of CGI programs. JSP technology is an extension of the servlet technology that supports authoring of HTML and XML pages with dynamic content.

For information about these technologies, see the following resource:

http://java.sun.com/j2ee/1.4/docs/tutorial/doc/index.html

JavaServer Pages Standard Tag Library 1.1 and Java Server Faces 1.1 Support

The JavaServer Pages Standard Tag Library 1.1 provides custom tags that encapsulate core functionality common to many Web applications. JavaServer Pages Standard Tag Library has support for common, structural tasks such as iteration and conditionals, tags for manipulating XML documents, internationalization tags, and SQL tags. It also provides a framework for integrating existing custom tags with JavaServer Pages Standard tag Library tags.

Web Server 7.0 supports JavaServer Faces™ technology. JavaServer Faces simplifies building user interfaces for JavaServer applications.

For information about these technologies, see the following resource:

http://java.sun.com/j2ee/1.4/docs/tutorial/doc/index.html

JNDI Support

The Java Naming and Directory Interface™ (J.N.D.I.) API provides seamless connectivity to heterogeneous enterprise naming and directory services.

Java Database Connectivity and Connection Pooling Support

Web Server provides out-of-the-box, seamless Java DataBase Connectivity (JDBC™), technology and supports a wide range of industry-standard and customized JDBC drivers.

Web Server 7.0 supports JDBC connection pooling, that is, a group of reusable connections for a particular database. Because creating each new connection is time consuming, the server maintains a pool of available connections to increase performance. When an application requests a connection, it obtains a connection from the pool. When an application closes a connection, the connection is returned to the pool.

For information on creating JDBC connection pools, see the *Sun Java System Web Server 7.0 Administrator's Guide*.

Java SE 5.0 and 6.0 Support

Web Server 7.0 supports the 32–bit version of the Java 2 Platform, Standard Edition (Java SE™) 5.0 and Java SE 6.0. For the 64-bit version of Web Server, the 64–bit version of Java Development Kit (JDK™) software support is available. The 64–bit version of Web Server is currently supported only on the Solaris Operating System.

Web Server 7.0 with the default installation option installs the co-packaged JDK version 1.5.0_09 software along with the Web Server. You can choose any other certified JDK version either during the installation or after the installation of Web Server.

To use the JDK version 1.6.0, download the software from the following location:

http://java.sun.com/javase/downloads/index.jsp

Web Server 7.0 is certified with the following JDK versions:

- Solaris (SPARC, x86 or AMD64), Linux, Windows: JDK 1.5.0_09 and 1.6.0
- HP-UX: JDK 1.5.0.03

Note – On HP_UX platform, the JDK software is not co-packaged with Web Server. During installation, you need to specify a valid JDK path.

Integrated Java Web Services Developer Pack 2.0 Technologies

Web Server 7.0 includes Java Web Services Developer Pack (Java WSDP) 2.0 and XML technologies. Web services developed by using Java WSDP can be deployed on Web Server 7.0 as a web application by using the `wadm` command.

Web Server 7.0 provides support for security features such as XML Encryption, XML Digital Signature, and support for message security provider.

For more information on Java WSDP 2.0, see the following resource:

http://java.sun.com/webservices/jwsdp/index.jsp

Java WSDP 2.0 samples are located at the following location. These samples can be deployed on Web Server 7.0.

http://java.sun.com/webservices/downloads/2.0_preview_webservicespack.html

Lightweight Session Replication Support

Web Server 7.0 supports cluster-based session replication and failover. Session replication and failover provides high availability to web applications by replicating HTTP sessions from one server instance to another in the same server cluster. Because each HTTP session has a backup copy on a remote instance, a server failure that renders one instance in the cluster unavailable does not disturb session continuity.

For more information on Light Weight Session Replication support, *Sun Java System Web Server 7.0 Administrator's Guide*.

URL Redirection and Rewriting with Regular Expressions

Web Server 7.0 introduces enhanced support for regular expressions and conditional processing in the `obj.conf` configuration file.

Key enhancements include the following:

- Support for regular expressions
- A `restart` Server Application Function (SAF) for restarting requests with a new URI
- Support for dynamic SAF parameters that include expressions, variables, regular expression back references
- `<If>`, `<ElseIf>`, and `<Else>` tags for conditional processing
- Support for complex conditions that use `and`, `or`, and `not`operators
- `sed-request` and `sed-response` filters for rewriting request and response bodies

You can use these new features to define flexible URL rewriting and redirection rules such as those possible with `mod_rewrite` from the Apache HTTP server. Unlike `mod_rewrite`, regular expressions and conditional processing in Web Server 7.0 can be used at any stage of request processing, even with third-party plug-ins.

For more information on regular expressions and URL rewrite functions, see the *Sun Java System Web Server 7.0 Administrator's Configuration File Reference*.

Extensive Real-Time Monitoring Support

In addition to the monitoring facilities in earlier versions of Web Server, Web Server 7.0 adds the following enhancements:

- Monitors Servlets, JSPs, and JavaServer Pages Standard Tag Library container characteristics
- Monitors process and virtual server statistics from within the Administration Server
- Integrates with System Management Agent on the Solaris 10 platform. Integrates with the Java Enterprise System Monitoring Framework (Java ES Monitoring Framework) that makes Web Server 7.0 monitoring information available within the Java ES Monitoring Framework.
- Accesses monitoring data as Management Beans (MBeans) using the Java Monitoring and Management Console (`jconsole`) script, Java ES Monitoring Framework or any Java Management Extensions (JMX) compliant client applications.

For more information on Monitoring feature in Web Server 7.0, see the *Sun Java System Web Server 7.0 Administrator's Guide*.

Integrated Reverse Proxy

Reverse Proxy is integrated with Web Server 7.0. Reverse Proxy can be executed as an internal module. In Web Server 6.1, the Reverse Proxy plug-in had to be downloaded separately and installed.

Web Server 7.0 provides GUI and CLI support for configuring the reverse proxy.

For information about configuring reverse proxy, see the *Sun Java System Web Server 7.0 Administrator's Guide.*

FastCGI Plug-in

Web Server 7.0 provides support for the FastCGI plug-in. The FastCGI plug-in is co-packaged with Web Server 7.0.

You can configure the FastCGI plug-in with Web Server using the configuration files.

For more information about using the FastCGI plug-in with Web Server 7.0, see the *Sun Java System Web Server 7.0 Administrator's Guide.*

Enhanced Security

Web Server 7.0 supports a wide variety of technologies that allow data encryption and validation, request authentication, and server process protection. Key security feature enhancements include the following:

- Solaris 10 platform cryptographic framework support. For example, `libpkcs11.so` including support for UltraSPARC® T1 processor hardware acceleration.
- Denial of Service (DoS) attack protection enhancements
- Cross-site scripting protection through the native `sed(1)` based input filtering
- Web services security:
    - IETF XML Digital Signature
    - W3C XML Encryption
- Integrated Platform for Privacy Preferences (P3P) support
- Web-based Distributed Authoring and Versioning (WebDAV) access control support
- The Lightweight Directory Access Protocol (LDAP) `auth-db` is enhanced to make search expressions and match attributes configurable
- The LDAP `auth-db` supports Microsoft Active Directory interoperability
- Support for migration of certificate from Tomcat or other Java keystore file based repositories
- Support for dynamically applied Certificate Revocation Lists (CRLs)

Elliptic Curve Cryptography Support

Sun Java System Web Server has always supported RSA keys. In addition to the continued support for RSA keys, Web Server 7.0 introduces support for Elliptic Curve Cryptography (ECC).

ECC is the next generation of public-key cryptography for mobile or wireless environments. ECC is based on a set of algorithms for key generation, encryption, and decryption for performing asymmetric cryptography.

Important features of ECC are:

- Compared to traditional cryptosystems like RSA, ECC offers equivalent security with smaller key sizes that enable faster computations, lower power consumption and memory, and bandwidth savings.
- ECC operates on elliptic curves. You must pick a curve and a key length. Curves are standardized and given names by various organizations such as, NIST, ANSI, and SECG. Because these standards include the key length, you only have to pick one of the predefined curve names. Web Server 7.0 supports all the curves currently specified.

For more information on how to use ECC in Web Server, see the *Sun Java System Web Server 7.0 Administrator's Guide*.

NetBeans 5.0 and 5.5 Support

Web Server 7.0 provides plug-ins to integrate with the NetBeans™ Integrated Development Environment (IDE) for deploying and debugging web applications. NetBeans is a complete development environment to create Java Platform Enterprise Edition (Java EE) based web applications with the standard components.

In addition to the deployment of web applications, the plug-in also provides support for the following activities:

- Manage instances, such as start or stop server instances
- Enable or disable applications
- Create server wide resources, such as JDBC resources and JDBC connection pools

For information about NetBeans, visit:

http://www.netbeans.org/kb/index.html

For more information about using NetBeans with Web Server, visit:

http://webserver.netbeans.org

Sun Java Studio Enterprise Support

Web Server 7.0 supports Sun Java Studio Enterprise 8.1. Sun Java Studio software is Sun's powerful, extensible IDE for Java technology developers. Sun Java Studio 8.1 is based on the NetBeans software, and integrated with the Sun Java platform.

The plug-in for the Web Server can be obtained in the following ways:

- From the companion CD in the Sun Java System Web Server Media Kit
- By using the companion *AutoUpdate* feature of Sun Java Studio
- From the download center for Sun Java System Web Server

Note – Sun Java Studio 8.1 plug-in for Web Server 7.0 works only with a local web server. That is, the IDE and the web server must be installed on the same machine.

For information about using the web application features in Sun Java Studio 8.1, see the following tutorial:

http://developers.sun.com/
prodtech/javatools/jsenterprise/learning/tutorials/index.jsp

For more information about Sun Java Studio 8, visit:

http://www.sun.com/software/sundev/jde/

Localization Support

Web Server 7.0 is available in the following languages:

- French
- German
- Spanish
- Japanese
- Simplified Chinese
- Traditional Chinese
- Korean

Supported Platforms

Web Server 7.0 can be installed on the Solaris, Linux, HP-UX and Windows operating systems. The following table summarizes platform support. For more information about installation requirements, see "Required Patches" on page 15 in these release notes.

Note –

1. Web Server 7.0 runs as a 32-bit application on Windows, Linux, and HP-UX.
2. Intel Itanium Architecture is not supported.

TABLE 1 Web Server 7.0 Supported Platforms

Vendor	Architecture	Operating System	Minimum Required Memory	Minimum Recommended Disk Space
Sun	UltraSPARC	Solaris 8, 9, 10	256 MB	550 MB
Sun	AMD/x86	Solaris 9, 10 (x86) Solaris 10 (AMD64)	256 MB	550 MB
Microsoft	AMD/x86	Windows 2000 Advanced Server, Windows XP Professional Edition, Windows 2003 Server, Enterprise Edition	256 MB	550 MB
Red Hat	AMD/x86	Red Hat Enterprise Linux AS 3.0 (Update 4 or later), 4.0 (or later updates)	256 MB	550 MB
Novell	AMD/x86	SUSE Linux Enterprise Server 9 (or later updates)	256 MB	550 MB
Hewlett-Packard	PA-RISC 2.0	HP-UX 11iv1 (B.11.11)	256 MB	550 MB

Required Patches

Update your operating system with the latest applicable patches. Required patches are listed in the following sections.

Note – If you are planning to deploy Web Server 7.0 as part of Java ES 5, refer to the Patch Requirements section in the *Sun Java Enterprise System 2005Q4 Release Notes*.

Solaris Patches

x86 or SPARC users of Solaris 8, 9, or 10 Operating System should have the latest patch cluster installed. This patch cluster is available under "Recommended and Security Patches" on the `http://sunsolve.sun.com/pub-cgi/show.pl?target=patchpage` web site.

Web Server 7.0 installer determines if the required patches are installed on your machine, without which the installation fails. The following patches are required for successful installation and functioning of Web Server 7.0 on a supported platform.

Note – If the patches available at `http://sunsolve.sun.com` are *obsolete*, download the most recent version of these patches as they include the latest bug fixes and product enhancements.

Note – To know the Solaris Operation System version installed on your machine, see the `/etc/release` file.

The `/etc/release` file contains Solaris Operation System version information in the following format:

```
        Solaris 10 6/06 s10x_u2wos_08 X86
  Copyright 2006 Sun Microsystems, Inc.  All Rights Reserved.
           Use is subject to license terms.
                 Assembled 02 May 2006
```

Solaris 8 Platform (SPARC)

- Solaris 8 2/02
- 108434-18 — Shared library patch for C++ (for 32–bit version of Web Server 7.0)
- 108435-18 — Shared library patch for C++ (for 64–bit version of Web Server 7.0)

Solaris 9 Platform (SPARC and x86)

Solaris 9 Platform (SPARC)

- Solaris 9 9/05
- 111711-12 — Shared library patch for C++ (for the 32–bit version of Web Server 7.0)
- 111712-12 — Shared library patch for C++ (for the 64–bit version of Web Server 7.0)

Solaris 9 Platform (x86)

- Solaris 9 9/05
- 117172-17 — Kernel patch
- 111713-09 — Shared library patch for C++

Solaris 10 Platform (x86)

- 119964-03 — Shared library patch for C++
- SUNWlxml (for the 64–bit version of Web Server 7.0)

Incompatible Patches

Some incompatible patches can affect Web Server startup and cause the server not to respond to requests. The following table lists such patches. If you have an incompatible patch installed on your machine, upgrade the patch to a recommended compatible patch.

TABLE 2 List of Incompatible Patches

Operating System	Incompatible Patch	Recommended Compatible Patch
Solaris 8 SPARC	109147-37 (linker patch) 109147-38 (linker patch) 109147-39 (linker patch)	109147–40 (linker patch)
Solaris 9 SPARC	112963-22 (linker patch) 112963-23 (linker patch) 112963-24 (linker patch)	112963-25 (linker patch)
Solaris 10 SPARC	117461-04 (ld patch) 117461-05 (ld patch) 117461-06 (ld patch) 117461-07 (ld patch)	117461-08 (ld patch)
Solaris 9 x86	113986-18 (linker patch) 113986-19 (linker patch) 113986-20 (linker patch)	113986-21 (linker patch)
Solaris 10 x86	118345-08 (ld and libc.so.1 patch) 118345-09 (ld and libc.so.1 patch) 118345-10 (ld and libc.so.1 patch) 118345-11 (ld and libc.so.1 patch)	121208-02 (ld and libc.so.1 Patch)

HP-UX Patches

The requirements for installing Web Server 7.0 on HP-UX platform are as follows:

- HPUX11i-OE B.11.11.0312 (HP-UX 11i Operating Environment Component)

- `HPUXBase64` B.11.11 (HP-UX 64-bit Base OS)

- `HPUXBaseAux` B.11.11.0312 (HP-UX Base OS Auxiliary)

- `FEATURE11-11` B.11.11.0209.5 (Feature Enablement Patches for HP-UX 11i, Sept 2002)

- `HWEnable11i` B.11.11.0412.5 (Hardware Enablement Patches for HP-UX 11i v1)

- `BUNDLE` B.11.11 (Patch Bundle)

- `BUNDLE11i` B.11.11.0306.1 (Required Patch Bundle for HP-UX 11i, June 2003)

- `GOLDAPPS11i` B.11.11.0506.4 (Applications Patches for HP-UX 11i v1, June 2005)

- `GOLDBASE11i` B.11.11.0506.4 (Base Patches for HP-UX 11i v1, June 2005)

- `JAVAOOB` 2.03.01 (Java2 Out-of-box for HP-UX)

- `PHCO_29109` 1.0 (Pthread enhancement and fixes)

- `PHCO_30544` 1.0 (`Pthread.h` fix and new enhancement)

- `PHCO_29495` 1.0 (libc cumulative patch)

- `PHCO_31923` 1.0 (libc cumulative header file patch)

- `PHKL_25842` Thread Abort (or its superseded patch)

Supported Browsers

The following browsers are supported with Web Server 7.0 Admin Console:

UNIX® and Windows platforms:

- Mozilla 1.7 or later
- Firefox 1.0.4 or 1.5 or later
- Netscape Navigator™ 7.0 or later

Windows platform:

- Microsoft Internet Explorer 6 or later

Installation and Migration Notes

This section includes notes about installing and migrating your Sun Java System Web Server. For detailed information about these topics, review the information in the Sun Java System Web Server 7.0 *Installation and Migration Guide*. For known issues in this release of Web Server, see "Known Issues" on page 21 in these release notes.

Installation

You cannot install Web Server 7.0 to a directory that contains an earlier version of Web Server. You can, however, migrate the existing installation after installing Web Server 7.0 to a new directory.

Migration

Web Server 6.0 and 6.1 configurations can be migrated. Direct migration from a Web Server version lower than 6.0 is not supported. Earlier versions such as Web Server 4.0 or later must first be migrated to Web Server 6.1, then to Web Server 7.0. For information about migrating from Web Server 4.0 or later to Web Server 6.1, see the latest *Sun Java System Web Server 6.1 Installation and Migration Guide* and the *Sun Java System Web Server 6.1 Release Notes*.

For detailed information on migrating from Web Server 4.1 to Web Server 7.0, and from all versions of Web Server 6.0 to Web Server 7.0, see the *Sun Java System Web Server 7.0 Installation and Migration Guide*.

Product Documentation

Documentation for Web Server 7.0is available online in PDF and HTML format. The following table lists the topics and concepts described in each document.

TABLE 3   Web Server 7.0 Documentation Roadmap

For Information About	See the Following
Web Server documentation topics organized by tasks and subject	*Documentation Center*
Late-breaking information about the software and documentation	*Release Notes*
Performing installation and migration tasks: ■ Installing Sun Java System Web Server and its various components, supported platforms, and environments ■ Migrating from a previous version of Sun Java System Web Server	*Installation and Migration Guide*

TABLE 3 Web Server 7.0 Documentation Roadmap   *(Continued)*

For Information About	See the Following
Performing the following administration tasks: ■ Using the Administration Console and CLI ■ Configuring server preferences ■ Using server instances ■ Monitoring and logging server activity ■ Using certificates to secure the server ■ Configuring access control to secure the server ■ Using Java 2 Platform, Enterprise Edition (J2EE) platform security features ■ Deploying applications ■ Managing virtual servers ■ Searching the contents and attributes of server documents, and creating a text search interface ■ Configuring the server for content compression ■ Configuring the server for web publishing and content authoring by using WebDAV ■ Using regular expressions for setting up redirection	*Administrator's Guide*
Using programming technologies and APIs to do the following: ■ Extend and modify Sun Java System Web Server ■ Generate content dynamically, in response to client requests ■ Modify the content of the server	*Developer's Guide*
Creating custom Netscape Server Application Programmer's Interface (NSAPI) plug-ins	*NSAPI Developer's Guide*
Implementing servlets and JavaServer Pages™ (JSP) technology in Sun Java System Web Server	*Developer's Guide to Web Applications*
Editing configuration files	*Administrator's Configuration File Reference*
Tuning Sun Java System Web Server to optimize performance	*Performance Tuning, Sizing, and Scaling Guide*
Resolving issues with Web Server 7.0	*Troubleshooting Guide*

Known Issues

This section lists the important known issues and limitations at the time of Web Server 7.0 release.

Administration

The following table lists the known issues in the administration of Web Server.

TABLE 4 Known Issues in Administration

Problem ID	Description
6364924	**A node can be registered to multiple administration servers which may cause a configuration conflict.** It is possible to register a node to a second Administration Server without canceling the registration with the first Administration Server. However, this leads to the nodes becoming inaccessible to both the Administration Servers. **Workaround:** On each registration, restart the administration node. The administration node will be available to the most recent Administration Server it has registered to.
6379125	**wadm command allows connecting to a node, shows a certificate and then throws a 'HTTP 400 Error'.** When an administration node receives a connection, the administration node does not check the connection is from the Administration Server before proceeding. It not only prints an inappropriate error message, but also prompts the user to enter the password.

TABLE 4 Known Issues in Administration *(Continued)*

Problem ID	Description
4793938	**User and password dialog presented instead of directory index.** By default, Web Server 7.0 does not send a directory index unless the user has been authenticated. Attempting to access a directory prompts the user to enter a user name and password. This occurs because the default Access Control List (ACL) in Web Server 7.0 grants the list access right only to authenticated users. **Workaround** You can grant the list access right to unauthenticated users using the Admin Console or by editing the default.acl file. For more information on how to grant list access right, see "Configuring Access Control" in *Sun Java System Web Server 7.0 Administrator's Guide.*
6327352	**Session replication enabled instances does not come up normally, if other instances in the cluster are not started.**
6364702	**wadm commands do not return valid error codes [0-125] when success or failure.**
6393534	**After migrating the Java keystore keycerts using the migrate-jks-keycert command, trying to list the migrated jks keycerts using the list-certs command, displays the CN, org and other information instead of the certificate nickname.**
6407486	**While setting the SSL property using the wadm set-ssl-prop command, the server-cert-nickname property accepts any certificate nickname, instead of accepting only the server certificate nickname.**
6439577	**Does not prompt for the token password when the instance is started from the wadm command prompt with a wrong token-pin.**
6443742	**The set-session-replication-prop CLI command does not workif the 'node' option is provided with a qualified domain name.** **Workaround** Use the output of the list-nodes command for the valid names of the nodes in the set-session-replication-prop command.
6450360	**The create-authdb command does not validate the URL at the time of the authentication database (authdb) creation. The create-authdb command successfully creates an authentication database with the wrong URL.**
6450800	**The get-error-log and the get-access-log commands displays cluttered and improper messages.**

TABLE 4 Known Issues in Administration *(Continued)*

Problem ID	Description
6459106	**The wadm deploy fails to deploy the cluster configuration.**
	If any changes occur to the instance configuration files, manually or otherwise, the `deploy-config` command displays an error message stating that the instance has been modified.
	Note – The web applications deployed within the instances' `web-app` directory should not create, delete, or modify files within the web application's `context-root`. If modified, the Administration Server considers the instance to be modified. The `deploy-config` displays an error message.
	Workaround
	Either type the `deploy-config` command with `--force` option, or, type the `pull-config` command.
6462040	**The create-reverse-proxy CLI command creates an unnecessary new obj.conf file for the default virtual server.**
6464953	**Setting digestauthstate property through the set-authdb-prop CLI does not validate the value and allows to set junk value for this property.**
6467665	**Migrating certificate with an invalid file path using the migrate-jks-keycert command, prompts the user to enter the keystore-password and the key-password.**
6468570	**Specifying "yes" at the wadm prompt crashes the CLI.**
6469104	**The create-selfsigned-cert command allows you to define an inappropriate validity period while creating a server certificate.**
6469109	**The delete-cert command does not delete a certificate which is created with token "Sun Software PKCS#11 softtoken".**
6469676	**When you try to connect to the Administration Server after the administration certificates have expired, an incorrect error message is displayed.**
6471649	**The list-events command output is not aligned.**
6471737	**The list-instances command lists the instances even if you do not specify the configuration value.**
6471744	**Incorrect error message is displayed if you execute the list-tokens command without specifying the configuration value.**
6471754	**Incorrect error message is displayed if you execute the list-authdb-userprops command without specifying the authdb value.**
6472210	**No error message is displayed if you execute the get-ssl-prop command with an invalid http-listener value.**
6472314	**The list-certs command prompts for a pin even if you specify an invalid configuration value.**

TABLE 4 Known Issues in Administration   *(Continued)*

Problem ID	Description
6476111	**Cannot edit the MIME types using the Admin Console.**
6478601	**Displays an improper message when you stop an instance that does not exist.** An error message 'Successfully stopped the server instance' is displayed if you try to stop an instance that does not exist.
6480523	**wadm allows you to create a configuration with a negative port number.**
6480600	**The register-node command gives an incorrect error message when the Administration server runs out of disk space.**
6487628	**No appropriate administration error code is printed if a non-existent file is passed with wadm's -f option.**
6489765	**Incorrect error message is displayed if you execute the create-cert-request command with an invalid key-size value.**
6489777	**The delete-group command displays an incorrect error message if you specify an invalid group value.**
6489779	**No error message is displayed when you execute the list-group-members command with an invalid group-ID value.**
6490728	**Cannot set the rewrite-location properties using the set-reverse-proxy-prop command.** You cannot set the -rewrite-location property to false. The value specified for the -rewrite-location is not validated. For example, specifying the = symbol for the i-rewrite-location option corrupts the obj.conf file and results in parser error.
6492315	**The set-token-prop command sets wrong passwords in the server.xml file even if the token pin has not been specified.**
6492469	**Incorrect error message is displayed on LDAP user creation failure.**
6494353	**If an invalid node name is specified while deleting an instance, an incorrect error message is displayed.**
6494950	**The register-node command runs successfully with non SSL port only in shell mode.** In shell mode, typing the register-node command with the -no-ssloption registers the node successfully as the command is falsely executed in the SSL mode.
6405018	The get-jvm-prop **command does not print the command when echo is enabled in shell mode.** **Workaround** Type the get-jvm-prop command in single mode if you want to use the -—echo option.
6495446	**If no disk space is available on the device, wadm throws an incorrect error message "Unable to communicate with the administration server".**

TABLE 4   Known Issues in Administration   *(Continued)*

Problem ID	Description
6499507	**Incorrect error messages are displayed when you execute the list-locks and expire-lock commands.**
6499510	**A 'null' message is displayed if you execute the list-instances, list-crls, list-tokens, and list-certs commands without specifying the configuration name.**
6499512	**The error message for the list-url-redirects command is not localized.**
6500119	**wadm prompts for a token pin if you specify an invalid configuration name while trying to delete an existing certificate.**
6500146	**While creating an HTTP listener using the CLI, the create-http-listener command creates a listener with null value as name.**
6500150	**If you do not specify a virtual server while executing the list-dav-collections command, an incorrect error message is displayed.**
6500151	**If you do not specify the authentication database while executing the list-users, list-org-units, list-groups, and list-group-members commands, an incorrect error message is displayed.**
6500152	**If you do not specify a virtual server while executing the list-uri-patterns command, an incorrect error message is displayed.**
6500154	**If you do not specify a JNDI name or specify an invalid JNDI name while executing the list-jdbc-resource-userprops, list-soap-auth-provider-userprops, list-auth-realm-userprops, list-external-jndi-resource-userprops, list-custom-resource-userprops commands, an incorrect error message is displayed.**
6502631	**When installing the Web Server to have a default instance with a non-root runtime user, the non-root runtime user is unable to use wadm to start the default instance. If the non-root user executes the default instance's startserv script then the user is able to start the instance.**
6502800	**Executing the migrate-server command with both "--all" and "--instance" options does not result in an error.** A warning or an error message should be displayed indicating that the user is attempting the set mutually exclusive options.
6503350	**Error message given when entering invalid wadm command is misleading.** When you type an invalid command, an error message "Invalid command <command name>. Use "help" command for a list of valid commands." is displayed. The help man page does not contain a list of valid command. Therefore this error message is misleading.
6503944	**The create-user command usage for the LDAP authentication database is ambiguous.**
6503949	**The create-group command usage for the keyfile authentication database is ambiguous.**

TABLE 4 Known Issues in Administration   *(Continued)*

Problem ID	Description
6504095	**The set-cert-trust-prop command accepts incorrect properties and does not show proper error message.**
6416328	**The Start Instances. button in the Admin Console is enabled for instance which is already running.** The buttons should be enabled or disabled based on the status of the instance.
6418312	**wadm allows you to define duplicate user properties.** Adding duplicate user properties does not show an error message; however, a new user property is not created.
6421740	**There is no provision to create new Access Control List (ACL) file using the Admin Console or the CLI.**
6423432	**On Windows, using an existing configuration, repeating the process of adding and removing the registered nodes causes validation failure.**
6426116	**Clicking on the Version button in the Admin Console result in "file not found" warning in Administration error logs.**
6430417	**MIME Types allows MIME value with multibyte characters.**
6430780	**While monitoring a virtual server, the rate at which bytes are transmitted is computed erroneously.**
6442081	**Text in Access Control List page is not formatted.**
6442172	**User can be switched between 'available' and 'selected' lists in ACE even though the user is deleted from the authentication database.**
6443845	**Administration Server does not validate the password length and mechanism support of the given token.**
6446162	**No warning is issued before the deletion of key or the digestfile authentication database.**
6446206	**When a single user in group is deleted, an incorrect message "Group Saved Successfully" is displayed.**
6448421	**Administration Interface allows you to create a new user with multi-byte User ID in the keyfile authentication database.**
6449506	**Certificate with same server name as existing certificate cannot be created with the same nickname.**
6450236	**Admin Console: wrong example in localization screen.** Example for default language is wrong (en-us), instead it should be en_US.
6455827	**User and Group table in the Admin Console displays the entire result in a single page.**

TABLE 4   Known Issues in Administration   *(Continued)*

Problem ID	Description
6461101	**Labeling of the Request Certificate and Install buttons in the Admin Console Create Self-Signed Certificate page needs to be revised.**
6461553	**Virtual Server Web Applications page title help is incorrect.**
6462057	**Add and Remove buttons are enabled in new ACE window even if no items are present in the 'Available' list.**
6462891	**No Admin Console is available to deploy web applications in user specific location.**
6464891	**Admin Console truncates the display of server logs at 50 lines or 2 pages.**
6465382	**No validation exist to check the entry of wrong country code in the certificate request wizard.**
6465421	**In the Admin Console, no text field description is provided for virtual-server, authdb, dav collection, and event fields .**
6465470	**Incorrect text in Groups settings page.** The text should read as "From this page you can add/remove user groups in the selected Authentication Database" instead of "From this page you add/remove user groups in the selected Authentication Database."
6465480	**Incorrect message when you delete a JVM profiler.** The message should read as "Profiler deleted successfully" instead of "Profiler saved successfully".
6466336	**Admin Console shows wrong JDK version while creating a new configuration.** The JDK version displayed in the Admin Console is 5.0 u6 instead of 5.0 u7.
6466409	**Incorrect error message is displayed when you provide a wrong path while adding web application.**
6467164	**The window titles of the Admin Console wizards are not consistent.**
6467785	**Admin Console gives incorrect error message when you provide invalid Directory Server configuration values.**
6470585	**URI prefix of document directories is accepts the value without '\'.**
6471111	**After you change the JDK path in the Node page of the Admin Console, the Administration Server fails to restart.**
6471171	**Style formatting is lost after restarting the Administration Server from Nodes -> Administration Server General tab.**
6471367	**Attempting to access the Admin Console in another tab of the same browser does not work.**

TABLE 4 Known Issues in Administration   *(Continued)*

Problem ID	Description
6471792	**View Log displays result in a single page.** Although the search criteria selected for record size is 25 log entries, the log displays the results in one single page even if there are more than 50 log entries.
6472385	**Token password changes made through the CLI is not reflected in GUI. It requires a browser refresh.**
6472932	**Token mismatch error is displayed when you remove the token password and then reset it in the Common tasks -> Select configuration -> Edit configuration -> Certificates -> PKCS11 Tokens page.**
6473518	**Prompt to enter token pin while starting instance should not appear if configuration has not been deployed.**
6474650	**The 'Next' button in the Admin Console wizards should be disabled if the mandatory fields are empty.**
6476095	**Admin Console does not provide an option to edit document directories and CGI records.**
6476736	**Admin Console should have a tab to add and edit MIME mappings at the Virtual server level.**
6477840	**Admin Console should provide large text region for entering class path prefix, class path suffix, and native library path prefix.**
6478090	**'Current Password' field in the Nodes -> Select Administration Server-> Certificates -> Token Password Management page should be disabled if no token password has been set for the administrator.**
6478165	**Usability issues in the Install CRL page after incorrect file path is entered for CRL file on server.**
6478229	**The Instance->New page has incorrect title.**
6478292	**The Common Tasks->Select configuration ->Select Virtual Server ->Edit Virtual Server ->WebDAV->New page should have the Enter Users field only if the authentication database is PAM.**
6478303	**Admin Console allows you to create an ACE without entering user or group information for ACL. The check is not done if the authentication database is PAM.**
6478612	**Inline help for range of values accepted by Request Header Time-out text field is incorrect.**
6486037	**The Virtual Server Management->Content Handling->Document Directories->Add should have a browse option to choose the path of a additional document directory.**
6490705	**Unable to configure uri-pattern specific configurations using the Admin Console.**

TABLE 4 Known Issues in Administration   *(Continued)*

Problem ID	Description
6492906	**Message displayed about WebDAV collection locks in the Admin Console is misleading.** If you specify the time-out value for the WebDAV collection as `infinite`, the Common Tasks->Select Configuration ->Select Virtual Server->Edit Virtual Sever ->WebDAV->Select collection page displays the message `DOES NOT EXPIRE`. What it actually means is that the lock does not expire automatically after a specified time or the time-out is infinite.
6496545	**Admin Console displays invalid properties when custom authentication database user properties are created through Administration CLI.**
6498484	**Incorrect error message is displayed on setting empty token password using the 'Set passwords' button.**
6498554	**Admin Console displayed incorrect failure messages on certificate creation and deletion.**
6500157	**Instance fails to restart if you try to edit a token password and deploying configuration on an instance which is already running.**
6500228	**The Admin Console displays an exception when you create a duplicate record of a MIME types.**
6501882	**Start SNMP Master Agent button is not working properly.**
6502287	**The Admin Console displays an exception when you delete a configuration and click on the Migrate button.**
6502303	**The Admin Console Migrate wizard creates multiple configurations if you click the Finish button multiple times.**
6502374	**The Admin Console Review screen in wizards should only show fields that have values.**
6502793	**During migration, the log-dir path permission is not validated.**
6504050	**The Results page in all Admin Console wizards should be aligned properly.**
6504495	**Admin Console has 508 compliance issues.**
6504758	**Unable to edit the server configuration using Admin Console if the deployed Web application has symbolic links.**
6504951	**User selection process in the Common Tasks->Edit Virtual Server->WebDAV->New page needs validation.**
6266358	**Cannot log in through the Administration CLI if the administration password has extended ASCII characters.**
6360666	**Installed CRL should have a meaningful name.**
6361329	**The error-response file name should be validated.**

TABLE 4 Known Issues in Administration   *(Continued)*

Problem ID	Description
6364821	**Administration CLI should support URIs, URI prefixes, URI wildcard patterns, and URI regular expressions for all commands that operate on URI space.**
6365379	**Inconsistent behavior while starting an unregistered administration node.**
6366956	**Search schedule events do not work from the Admin Console.**
6367282	**Administration server starts with expired certificate; wadm should warn about expired certificates.**
6367751	**The create-instance command fails on remote node intermittently and logs HTTP 400 error.**
6375505	**The unregister-node command should also clean up certificates on the administration node.**
6378612	**64–bit instance does not start on 32–bit remote node.**
6408169	**WebDAV lock CLIs do not work in a cluster environment.**
6408186	**Multiple installations of the administration nodes on the same node that is registered to the same administration server should be not be allowed.**
6416369	**Accessing the administration node URL results in Page Not Found error.** As the administration node does not have a GUI, accessing the administration node URL results in Page Not Found error.
6416705	**The default server.xml should not contain the <stack-size> element.**
6422936	**No validation for class path prefix and suffix, and native library path in JVM Path Settings in Java.**
6423310	**The server.xml elements should be grouped based on functionality.**
6423391	**When a server certificate with data in non-DER format is installed, an incorrect error message is displayed.**
6426108	**Exception in administration error logs on creating new configuration with instance.**
6431984	**Web Server should store its pid file and UNIX domain sockets in /var/run instead of /tmp.**
6439132	**Exceptions in Certificate Installation wizard not clear.**
6441773	**On Windows. Administration server moves the Web application files physically before stopping the Web application.**
6451307	**Executing the create-instance command immediately after starting a remote node fails on the remote node.**
6454559	**View server logs page throws error if the access log format is not in Common Log Format (CLF).**

TABLE 4   Known Issues in Administration   *(Continued)*

Problem ID	Description
6462515	**The Admin Console misleads user with "Instance modified" message when runtime files gets created in the config directory.**
6462579	**Trust store does not deleted on uninstalling the administration node after unregistering it with the administration server.**
6468132	**The list-cert command does not list the certificates if the certificate nickname contains a colon.**
6468330	**Changes made to the JavaHome property does not get saved after restarting the instance.**
6468676	**No validation exists for 'Java Home' field; accepts invalid data.**
6473577	**<pkcs11> element not removed from server.xml even when child elements are absent.**
6473589	**<pkcs11/> added to server.xml when token pin is set.**
6474668	**HTTP Listener field accepts names with spaces. This is invalid.**

6475536	**No obvious way to reset the administration server password.**
	
	Workaround
	1. Comment out the `security-constraint` in
	    install_dir`/lib/webapps/jmxconnectorapp/WEB-INF/web.xml`.
	
	2. Restart the Administration Server.
	    This action turns off the authentication on the administration server.
	
	3. Set the administration password by using the `set-admin-prop` command.

6476111	**Unable to edit MIME types either using the Admin Console or the CLI.**
6483365	**GUI and CLI accept Web Server 7.0's server root for migration** The Admin Console and the CLI accept the Web Server 7.0 path instead of Web Server 6.1 or Web Server 6.0 path during migration. Web Server 7.0 path is not a valid path for the `server-root` property in the `migrate-server` command.
6483902	**Error in Configuration Virtual Servers page.** Trying to enter a combination of $@ string for the Denied Access Response field in the Virtual Server page results in an error.
6489727	**[JESMF CONFORM] CP when stopping should call MfManagedElementServer_stop().**
6491749	**Need better validation in certain text fields to prevent obj.conf file corruption.** Most of the functional validation of the data in a form is done in the back end. The GUI has only minimal checks such as empty fields, integer values, and ASCII values. Hence, the GUI stores the data in the `obj.conf` when parsed gets corrupted .

TABLE 4 Known Issues in Administration   *(Continued)*

Problem ID	Description
6492176	**Default and null values get stored in obj.conf when a new configuration is created and saved using the Admin Console.** Administration Server stores the values passed by the Admin Console into `obj.conf` file without any validation.
6493971	**Admin Server does not time-out if the server instance restart does not respond.** On UNIX systems, the Administration Server waits until the server instance is restarted when the `restart-instance` command is executed. If the instance is not successfully restarted, the Administration Server does not respond to requests.
6497004	**SaveConfigException displayed on CLI during set-authdb-prop.** If a nonexistent file path is provided to the `path` property for keyfile authdb by using the `set-authdb-prop` command, results in SaveConfigException instead of a File does not exist message. See the error log for the Administration Server.
6497143	**At times, the execution of stop-admin command displays the "Admin Server Not Running" message when the Administration Server is actually running.**
6497213	**Executing the restart-admin command followed by the stop-admin command throws exception in administration error logs.**
6498411	**The get-cert-prop does not display only those properties mentioned in the <displayproperties> element.**
6500715	**Server error on trying to access a file in the cgi-bin directory.**
6292582	**SNMP Management Information Base (MIB) for "iwsFractionSysMemUsage" does not show correct results** SNMP MIB "Fraction of process memory in system memory" which is part of `iws.mib` gives wrong results when queried by the SNMP manager utility.
6425144	**On Windows, wadm does not update classpath correctly if classpath contains a semicolon (;)** The semicolon in `tcl` is interpreted as a command terminator, which is used to group multiple commands in a single line. On Windows, semicolon is used as a path separator. **Workaround** Use `wadm` in single mode if the semicolon is used in property values.
6479247	**On Windows, dialog box to enter the token password appears on restarting an instance after the deployment. This behavior is not see on other platforms.**

Configuration

The following table lists the known issues in the configuration of Web Server.

TABLE 5   Known Issues in Configuration

Problem ID	Description
6482536	**<listen-queue-size> upper bound is set to 65535, which is too small. Need to increase the <listen-queue-size> upper bound.**

Core

The following table lists the known issues in the core of Web Server.

TABLE 6   Known Issues in Core

Problem ID	Description
6296993	**When there is an error executing an obj.conf directive, the filename and line number where the offending directive was found are not logged.**
6365160	**When server.xml schema validation fails due to a data type constraint violation, it displays an error message that does not describe the set of valid values for the element.**
6366843	**Limited capability for searching web applications, servlet , virtual server or nodes by names in core monitoring.**
6368605	**Configuration error can cause child processes to be re-spawned in a loop.** If a configuration error is introduced after server startup, for example, obj.conf is deleted, and a child process is killed, the primordial process attempts to re-spawn that child process in an infinite loop.

6375367	**Improper error response to time-out following incomplete request.**
	
	If you telnet to Web Server, press Enter, and wait for the time-out, the following error response is returned:
	
	`HTTP/1.1 400 Bad Request`
	
	`Your browser sent a message this server could not understand.`

6378940	**All HTTP header parsing error are not logged with the client IP and a description of the error.**
6470552	**set-variable SAF could not set predefined variable.**
6479062	**Cannot dynamically reconfigure HTTP listener family. The Instance does not start on setting the protocol family to nca.**

TABLE 6 Known Issues in Core *(Continued)*

Problem ID	Description
6485965	**If-modified-since processing is slow.** The server's handling of *If-modified-since* headers assumes that the header field value will typically match a previously sent Last-modified header field value. This is true of normal, real world clients. This is not true, however, of the SPECweb2005 driver.
6486480	**service-nsfc-dump entry hit counts are 0 with <replacement>false</replacement>.** If <replacement>false</replacement> is specified in server.xml file, entry hit counts show as 0 in the service-nsfc-dump output. However, the cache hit counts are displayed correctly.
6489220	**Server treats non-interpolated strings that contain $$ character constants as interpolated.** When a parameter value contains a $$ escape, the server constructs a PblockModel for the parameter block. This is unnecessary because $$ is a constant.
6489269	**'external' expression function with quoted path is not working.**
6492407	**Front-end file accelerator cache.** Depending on ACLs and obj.conf configuration, a front end accelerator cache can service static file requests for URIs that were previously processed using NSAPI. The accelerator cache must work with the default configuration.
6496332	**File cache does not store small files on the heap and send large files with sendfilev.** With <sendfile>true</sendfile> in server.xml, the server should use sendfilev() only for files that does not fit in the heap. This enables the server to use writev() for small files and sendfilev() for large files.
6498452	**Server should not respond with '413 Entity Too Large'.** The server currently responds with a 413 Entity Too Large message when the request header is too big. 413 Entity Too Large message refers to the entity, not the header.
6498928	**Output directives are not invoked for 0-byte files.** Output directives are not invoked for 0-length responses unless protocol_start_response() is called. send-file does not call protocol_start_response() function. Output directives are not invoked when sending 0-byte files.
6501180	**Buffer-size 0 does not work.** If <buffer-size>0</buffer-size> is specified in server.xml, the server fails to correctly serve the files.

TABLE 6 Known Issues in Core   *(Continued)*

Problem ID	Description
6502258	**Server crash with large output buffers.** If the output stream buffer size is bigger than the input buffer size, the server might attempt to buffer data at an invalid address. The default input buffer size is 8192 bytes.
6504755	**Cannot disable access logging in default server instance.** The value of the `<access-log> <enabled>` element is ignored in the `server.xml` file.
6505390	**Accelerator cache does not handle ssl-unclean-shutdown properly.** The accelerator cache does not interact correctly with the `AuthTrans fn="match-browser" browser="*MSIE*" ssl-unclean-shutdown="true"` directive in the default configuration. When such a directive is present, the accelerator cache applies the "unclean shutdown" setting to every connection, regardless of the browser used.
6432375	**On HP-UX, SNMP fails for some oid values.** **Workaround** Due to lack of the HP-UX API support and complexity, network in and out traffic statistics is not implemented. Use HP tools for monitoring the traffic statistics.

6483212	**On HP-UX 11.11, Web Server fails to start when max heap size is 2048 MBytes or greater.**
	
	Workaround
	
	1. Ensure that patch `PHKL_28428` or its updated version is present on the system. If it is not present, install the patch.
	
	2. Type the following commands before starting the Web Server:
	
	   ■ For 1500 MBytes to 2400 MBytes of Java heap: Type the following command before starting the Web Server:
	     `chatr +q3p enable /opt/sun/webserver7/lib/webservd`
	
	   ■ For 2400 MBytes to 3.8 GBytes of Java heap: type the following command before starting the Web Server:
	     `chatr +q3p enable +q4p enable /opt/sun/webserver7/lib/webservd`
	
	3. Start the server.
	   `/opt/sun/webserver7/lib` is the default location of the `webservd` binary.

Documentation and Online Help

The following table lists the known issues in Web Server 7.0 documentation and online help.

TABLE 7   Known Issues in Documentation and Online Help

Problem ID	Description
6358250	**Admin Console help resources and links properties files needs to be updated.** The 'Help' button on each page of the Admin Console does not have `helpFileName` to display in the help popup window. The `HelpLink.properties` file needs to be updated.
6474011	**The basic-search.html has unclear description.**
6479045	**Admin Console online help needs to be updated.** The online help needs to be updated for the following: 1. Context-based help should be provided. 2. All screens must have a corresponding help page. 3. Help pages must reflect the changes in the GUI. 4. Inconsistent usage of terminology between the GUI and online help. 5. Fix grammatical errors. 6. Detailed description for some topics.
6482764	**Mismatch between online help and the Admin Console.**
6498477	**Missing help file under config tokens page.** Common Tasks > Edit Configuration > Certificates > PKCS11 Tokens, the help file for this screen is missing.

FastCGI Plug-in

The following table lists the known issues in the FastCGI plug-in.

TABLE 8   Known Issues in FastCGI Plug-in

Problem ID	Description
6347905	**No CLI support to configure FastCGI. Need to manually edit obj.conf or magnus.conf files to configure FastCGI.**
6485248	**The fastcgi stub does not properly close all the processes when reuse-connection is set to true.** Configure Web Server 7.0 to work with PHP as a FastCGI plug-in and set `reuse-connection=true`. When you shutting down the server or reconfiguring the server, the `fastcgi()` process and its child processes are left behind and not killed properly.
6504587	**Memory leak found in FastCGI.**

Installation

The following table lists the known issues in the installation of Web Server.

TABLE 9   Known Issues in Installation

Problem ID	Description
4988156	**Installing the stand-alone product over an existing Java ES installation and vice-versa is not supported.** Installing Web Server 7.0 as a stand-alone product over an existing Java Enterprise System (Java ES) installation is not supported. Java ES users of the Web Server must use the Java ES installer to upgrade to the newer version of the Web Server.
6414481	**Web Server cannot be installed without installing compat-libstdc++.** **Workaround**: On newer versions of Linux, for example, Red Hat Enterprise Linux 3, install `compat-libstdc++` before installing Web Server 7.0.
6414539	**Uninstalling the administration node does not delete itself from the administration server node.** After installing the administration node and registering it with the administration server in the Node tab, the administration node is listed in the Node tab. When the administration node is uninstalled, the administration node entry remains in the Node tab.
6503505	**On Linux, the installer does not increment or assign a new administration port number, if the default port is already in use.**
6504748	**With delete instance option, instead of deleting the symbolic links, the uninstaller deletes files from symbolic links.**
6287206	**Cannot install if the setup is started from a shared folder on the network.** On the Windows platform, unable to install the product when the installer `setup.exe` is started from a shared network folder on another machine.
6311607	**On Windows, installer crashes in CLI mode, if the administration password is >= 8 characters.** If the administration user password is greater than eight characters, then any invalid input to the administration port, web server port, or the administration user ID crashes the installer. **Workaround**: When installing Web Server 7.0 on the Windows platform using the command-line interface (CLI), the administration password must be set to less than (<) eight characters.
6408072	**On Windows, need icons for objects in Programs folder.** The objects in the Sun Java System Web Server 7.0 folder on Windows are created with default Windows program icons and do not have specific icons that denote Sun programs.

TABLE 9   Known Issues in Installation   *(Continued)*

Problem ID	Description
6492144	**On Windows, CLI installer does not handle ctrl+c while entering the password.**
	The installer does not accept `ctrl+c` and hence the terminal becomes unusable.

Migration

The following table lists the known issues in the migration area of Web Server 7.0.

TABLE 10   Known Issues in Migration

Problem ID	Description
6407877	**Incorrect migration occurs while migrating from Web Server 6.0 to 7.0 if the installed.pkg file is not found.**
	In Web Server 6.0 to 7.0 migration, if the `installed.pkg` file is missing, Web Server incorrectly migrates the `NSServlet` entries in the `magnus.conf` file.
6490124	**6.x -> 7.0: Migrated scheduled events still points to 6.x paths in the server.xml file.**
6502529	**6.1->7.0: Migration does not handle relative path set for search-collection-dir correctly.**
	During instance migration, specifying a relative path for the target path into which the search collections should be copied, results in the search collection directory being created with respect to the `config-store`. When the instance is instantiated, the indexes are created without properly migrating the search collections.
6502769	**6.x->7.0: Migration ignores any "document-root" NameTrans specified in the obj.conf file.**
6498806	**On Windows, Web Server Admin Console does not appropriately warn users during migration.**
	Administration Server does not detect if the selected new configuration or the service name already exists on Windows and hence does not appropriately warn the users to select a different configuration name or suggest a different configuration name as default.
6500509	**Web Server 7.0 migration tool is unable to successfully migrate from Web Server 6.1 if it has Root Certs installed in it.**

Reverse Proxy

The following table lists the known issues in the reverse proxy functionality of Web Server.

TABLE 11   Known Issues in Reverse Proxy

Problem ID	Description
6356234	**The NameTrans map should accommodate ;- delimited URI parameters.** The NameTrans map SAF's `from` parameter specifies a prefix that is compared against the requested URI. If the requested URI begins with this prefix but is suffixed with a ;-delimited URI parameter, the map SAF fails to map the request.
6424569	**Map to parameter is not optional.** The map SAF's to parameter is not optional. This is useful for terminating NameTrans processing and assigning an object: NameTrans fn="map" from="/.perf" name="perf"
6424570	**All mapping SAFs should accept a name parameter.**

Sample Applications

The following table lists the known issues in Sample Applications of Web Server.

TABLE 12   Known Issues in Sample Applications

Problem ID	Description
6302983	**Samples refer to "Sun ONE" instead of "Sun Java System".** The servlet sample, `LocaleCharsetServlet.java`, co-packaged with Web Server 7.0 refers to "SunONE" instead of "Sun Java System".
6472796	**sendmail.jsp shows incorrect file to be edited to specify resource.host for javamail sample application.** **Workaround** To set `javamail.resource.host`, edit the `javamail.build.properties` and not the `build.xml` as specified in *install_dir*/samples/java/webapps/javamail/src/docroot/sendmail.jsp.
6475485	**digest plug-in README has an outdated documentation URL and possibly an old product name for Directory Server.**
6495588	**sampleapps/java/webapps/simple docs invalid.** The documents for a simple sample application shows an incorrect pathname. The path should be *install_dir*/plugins/java/samples/webapps/simple/src instead of *install_dir*/samples/java/webapps/simple/src.

Search

The following table lists the known issues in the search functionality of Web Server 7.0.

TABLE 13 Known Issues in Search

Problem ID	Description
6413058	**server.xml does not store the full file pattern for converting and including search .** The schema does not store the full file pattern allowed by both the Admin Console and the search administration tools in this version of the Web Server. It also has no way to represent the full file pattern that might sometimes need migration from the previous versions of the Web Server.

Security

The following table lists the known issues in the security area of Web Server.

TABLE 14 Known Issues in Security

Problem ID	Description
6433752	**ssl-check is not working with NSAPI based plug-in.** `"PathCheck fn="ssl-check" secret-keysize=128 bong file="xxxxx.yyy.html"` For static file requests, if the `secret-keysize` of the client is less than the size specified by the server and a bong file is present, then the bong file is sent back as the response. However, requests for dynamic content (for example, `JSP` files) return the actual requested object (for example, the `JSP` file) rather than the bong file.
6421617	**Problem having server-parsed HTML (ParseHTML) and .htaccess with restricted group option.** Authentication succeeds when parsing through a HTML file which has the shtml include entries and is configured to authenticate through `.htaccess` which has the "restricted by group" option enabled. If the group user gets authenticated, then the result page does not get shtml include entries. This however works fine with the user in `.htaccess` file has "restricted by user" option.
6376901	**Limitation supporting basic and digest-based ACLs for resources in the same directory.** If the server uses digest and basic-based ACLs in different parts of their doc tree, attempting to use both simultaneously on different files or resources in the same directory is not possible.
6431287	**TLS_ECDH_RSA_* require the server cert signed with RSA keys.** Cipher suites of the form `TLS_ECDH_RSA_*` requires server to have an ECC keypair with a cert signed using RSA keys. Note that this precludes using these cipher suites with self-signed certificates. This requirement is inherent to these cipher suites and is not a bug. The server should detect and warn about wrong configurations related to these cipher suites but currently it does not do so.

TABLE 14 Known Issues in Security   *(Continued)*

Problem ID	Description
6467621	**Request to the server fails with using of "Sun Software PKCS#11 softtoken".** Refer to the following documents for additional info on configuring the Web Server with Solaris 10 `libpkcs11`: http://www.sun.com/bigadmin/features/articles/web_server_t1.html http://www.sun.com/blueprints/browsedate.html#0306

6474584	**dayofweek does not take "*" as an option.**
	
	For example, set an ACL as follows:
	
	`acl "uri=/";`
	`deny (all) dayofweek="*";`
	`allow (all) dayofweek="Sat,Sun";`
	
	In this program, you are restricting access on all days of week except Saturday and Sunday. This program does not work as you can you can successfully access the ACL on a Monday.
	
	Workaround
	
	Set the ACL as follows to restrict access to ACL on Monday through Friday.
	
	`acl "uri=/";`
	`deny (all) dayofweek="Mon,Tue,Web,Thu,Fri";`
	`allow (all) dayofweek="Sat,Sun";`
	
	This denies the request on a Monday.

6489913	**SSL session cache cannot be disabled.** Session cache is enabled by default. When the session cache is disabled and URL is accessed through the HTTPs protocol, the URL does not go through and the server log displays an error message indicating that the SSL cannot be configured without `session-cache`. **Workaround** Reduce the SSL cache size and expiration to the minimum supported values.
6510486	**htaccess rules can become corrupted in memory.** If a single `.htaccess` file has more than five allow or deny rules, it is possible that some of the rules may become corrupted in memory. If this occurs, some of the rules may be bypassed. **Workaround** Limit a single `.htaccess` file to five rules or less. Or, Use the ACL subsystem instead of `htaccess` to control access to server resources. For information on setting up ACLs, see the *Sun Java System Web Server 7.0 Administrator's Guide*.

Session Replication

The following table lists the known issues in the session replication functionality of Web Server 7.0.

TABLE 15   Known Issues in Session Replication

Problem ID	Description
6370032	**Session failover does not happen with RequestDispatcher include call.** While deploying two web applications on a cluster where the first application calls on the second application using the `RequestDispatcher()` include call, the persistence valves are not called during the `RequestDispatcher()`'s `invoke()` method, and session replication does not occur.
6381950	**Incorrect load factor set for BaseCache.** Session replication does not support more than two web applications.
6381954	**Session replication fails to work on multiple web applications involving RequestDispatcher due to bad sequence.**
6383313	**Incorrect path is set on SR-intanceId cookie.** The `SR-instanceId` cookie should be set to the web application's path instead of the servlet's path.
6324321	**Descriptive error message is not displayed when an error occurs remotely.** When an exception occurs remotely, error messages are logged in the error log of the remote instance. However, the local instance currently displays a generic remote exception which does not clearly indicate which error log that the user must view.
6396820	**Session replication does not failover correctly when cookies are disabled on the client.**
6406176	**When enabled, session replication should be the default session manager.** After enabling session replication by using the Admin Console or the CLI, or by editing the `server.xml` file, session replication is not really enabled. Instead, `sun-web.xml` needs to be manually edited.

Web Container

The following table lists the known issues in the web container of Web Server.

TABLE 16 Known Issues in Web Container

Problem ID	Description
6390112	**Java LDAP connection pool interaction issue - initial connection is never timed out.** Specifying a Java LDAP connection pool through the JVM options in the `server.xml` file and referencing this with an external JNDI resource when the web server is started, creates a pooled LDAP connection. With this connection, it is always marked as busy and the connection never expires.
4858178	**Web container writes to stderr.**
6349517	**Incorrect web application session statistics for MaxProcs > 1 mode.** Web Server runs in multi-process mode. The `MaxProcs` configuration variable in the `magnus.conf` is used to set the maximum number of processes. If the value for `MaxProcs` is set to greater than 1, the Web Server uses mmap-based session manager so that the session could be shared among different JVMs. While collecting statistics from multiple processes, web application MBeans provide session for individual MBeans. There is no way to find the true number of sessions by seeing individual MBean's web application session statistics.
6394715	**Web container deletes the disabled web application MBeans object.** When the web application is disabled by setting the `<enabled>` element to false in the `server.xml` file, the web container deletes the web application's MBeans and hence treats it as a closed or deleted web application. Since disabled objects are deleted, statistics are also lost.
6419070	**No information is logged in error logs at the finest log level on successful JNDI resource creation.**
6422200	**com.sun.org.apache.xerces.internal.jaxp. DocumentBuilderImpl.parse does 1 byte reads.** When reading the `server.xml` file, the first line containing the XML version number and the encoding is read 1 byte at a time.
6432870	**Servlet container collects statistics when stats enabled element is set to false in the server.xml file.**
6440064	**Servlet container creates a thread per virtual server.**
6472223	**Values of 'mail-resource' sub elements are not getting set on mail session object.**
6487083	**NSAPIRequest.setupRequestFields is slow.** `com.sun.webserver.connector.nsapi.NSAPIRequest.setupRequestFields` is slow primarily because of excessive String-->byte and byte-->String conversion when parsing Cookie headers.

TABLE 16   Known Issues in Web Container   *(Continued)*

Problem ID	Description
6493271	**Java garbage collector activity is higher in Web Server 7.0 when compared against Web Server 6.1.** The servlet container in Web Server 7.0 creates many Java objects.
6497803	**If a servlet is mapped to req URI formed by partial req + welcome file, the behavior is wrong.** If a web container receives a valid partial request, the web container must examine the welcome file list defined in the deployment descriptor. The welcome file list is an ordered list of partial URLs with no trailing or leading /. The Web Server must append each welcome file in the order specified in the deployment descriptor to the partial request and check whether a static resource or a servlet in the WAR file is mapped to that request URI. The web container must send the request to the first resource in the WAR that matches.
6501184	**REQ_EXIT causes javax.servlet.ServletException.**
6501785	**The servlet container does not use accelerator cache when processing RequestDispatcher includes.**
6500647	**On Windows, dynamic reloading of JSP produces incorrect output.**

Web Services

The following table lists the known issues in the web services area of Web Server.

TABLE 17 Known Issues in Web Services

Problem ID	Description

6467808	**Web Services application running on Web Server 7.0 throws "NAMESPACE_ERR: Unable to create envelope from given source" exception.**
	
	This issue is with the Java API for XML Processing JAR file, primarily the xerces.jar file part of JDK version 1.5.0_08 or later. Because Web Server 7.0 uses JAXP JAR files of JDK version 1.5.0_09, the issue is seen on Web Server. Latest JAXP JAR files of Web Services 2.0 pack has the fix for this issue but the fixed JAR files are not yet part of JDK software.
	
	Workaround
	
	Use the JAXP 1.3.1 JAR files instead of JAXP JAR files co-packaged with JDK software.
	
	Follow the steps below:
	1. Create endorsed directory if it does not exist under `<JRE>/lib` directory.
	
	2. Place the JAXP 1.3.1 JAR files in the endorsed directory.
	Or,
	Pass the java.endorsed.dirs system property as a JVM option in `<instance_dir>/config/server.xml` file.
	
	3. Set the property to the directory containing the JAXP 1.3.1 JAR files. For Example:
	
	`<jvm>`
	`<jvm-options>-Djava.endorsed.dirs=/opt/SUNWjax/share/lib</jvm-options>`
	`</jvm>`

Localization

The following table lists the known issues in the localized version of Web Server 7.0.

TABLE 18 Known Issues in Localization

Problem ID	Description
6385933	**After creating the configuration, a multi-byte name becomes garbage.** 1. Click on the Configurations tab. 2. Select Copy or Create Configuration. 3. Type a multi-byte string in the Name of Configuration filed and enter other information in the screen. 4. Click the Finish button. Displays the list of configurations that includes a string ??? instead of the entered name. You cannot restart the instance.
6412711	**In the localized Admin Console, a part of the Configuration Deployed successfully message is garbled on the Internet Explorer.**
6431022	**The files are missing in online help for the link 'Tips on Searching' on all locales.** 1. Login to the Admin Console as an administrator. 2. Open the online help window. 3. Click on the 'Search' tab in the navigator frame. 4. Click on the link 'tips on Searching'. The message 'Not found' appears.
6442607	**Failed to install RH_AS3 at ConfigureServer.** **Workaround**: On newer versions of Linux, such as , Fedora Core 3 and Red Hat Enterprise Linux 3, install `compat-libstdc++` before installing Web Server 7.0.
6442101	**Online help Search does not work on non-English locales.**
6316881	**Multi-byte characters in headers can not be retrieved by req.getHeader().** The characters are not parsed correctly, when `request.getHeader()` is called.
5046634	**There is no functionality equivalent to use-responseCT-for-headers in Web Server 7.0.**
6471145	**Non-localized JDK option in the Web Server 7.0 stand-alone installer.** The Java Configuration screen of the stand-alone Web Server 7.0 installer contains non-localized option 'Install J2SE xxxx' on Spanish and French locale.
6503931	**schema.properties file is not localized.** `SchemaValidationExceptions` caused by the Administration Server result in exception messages being read from the `schema.properties` file. This file is not localized.

TABLE 18 Known Issues in Localization   *(Continued)*

Problem ID	Description
6471170	**Many missing apostrophes in Web Server 7.0 point product installer on foreign locale.**
6483354	**On Windows and HP-UX, file handle is not released by webservd process under certain conditions.** 1. Access the Web Server Admin Console through the login URL. 2. Select the 'Configuration' tab from the administration page. 3. Select a configuration link, and then select the 'Virtual Server' link. 4. Set 'Negotiate Client Language' to enabled and note your language, such as "zh-CN". 5. Click the 'Save' button. 6. Restart Web Server by clicking the 'Deployment pending' link in the Admin Console or manually. 7. In Internet Explorer, type a nonexistent URL, for example, `http://yourmachine/xyz`. The "page not found" is displayed in Internet Explorer 6. Expected Result: The "Not found" page should be displayed correctly in Internet Explorer instead of the "page not found" error.
6507819	**Localized online help content have some differences from English.**

Java Enterprise System

The following table lists the known issues in the Java Enterprise System (Java ES).

TABLE 19   Known Issues in Java ES

Problem ID	Description
6484181	**Portal Server configures JVM stack size to 128K (too low) for Web Server 7.0 64–bit to start.**
	If Web Server 7.0 is already configured in 64–bit mode, and the Portal Server installation is started, Portal Server configuration does not set stack size to 128K. However, if both Portal Server and Web Server are already installed and configured in 32–bit mode, switching to 64–bit mode involve series of manual steps that are described in the Workaround section.
	Workaround
	If Portal Server part of Java ES 5 is deployed on top of the 32–bit version of Web Server 7.0, and if you would like to start the server in 64-bit mode, perform the following steps:
	1. # *install_dir*/bin/wadm delete-jvm-options --user=admin --port=8989 --password-file=passfile --config=*HOST_NAME* "-Xms512M -Xmx768M -Xss128k"
	2. # *install_dir*/bin/wadm create-jvm-options --user=admin --port=8989 --password-file=passfile --config=*HOST_NAME* "-Xms512M -Xmx768M -Xss512k"
	3. Increase the native stack size of Web Server 7.0 to 139264 by typing the following command: # *install_dir*/bin/wadm set-thread-pool --user=admin --config=*config_name* --password-file=*filename* native-stack-size=139264
	4. Deploy the configuration. # *install_dir*/bin/wadm deploy-config

TABLE 19 Known Issues in Java ES *(Continued)*

Problem ID	Description
6487041	**schemagen/xjc/wsgen/wsimport scripts not present in Java ES Web Server installation.** schemagen/xjc/wsgen/wsimport scripts are present in different locations in Java ES installation and stand-alone installation of Web Server. **Workaround** The scripts are part of the Web Services components. In a stand-alone Web Server installation, these scripts and JAR files are located in *install_dir*/bin and *install_dir*/lib directories respectively. In Java ES installation, scripts and JAR files are installed as part of the shared component and they reside outside the Web Server installation root. The location of scripts and JAR files on different platforms are listed below: Solaris OS: ■ Scripts are under /opt/SUNWjax/bin directory. ■ JAR files are under /opt/SUNWjax/lib and /usr/share/lib directory. Linux and HP-UX: ■ scripts are under /opt/sun/bin and /opt/sun/share/jaxb/bin directories. ■ JAR files are under /opt/sun/share/jaxb/lib, /opt/sun/share/lib and /opt/sun/private/share/lib directories. Windows: ■ Scripts are under *<JES_installation_dir>*\share\bin and *<JES_installation_dir>*\share\jaxb2\bin directories. ■ JAR files are under *<JES_installation_dir>*\share\jaxb2\lib and *<JES_installation_dir>*\share\lib directories.

TABLE 19 Known Issues in Java ES   *(Continued)*

Problem ID	Description

6432106	**Sun Java System Portal Server search throws exception after Web Server upgrade.**
	
	Portal Server search functionality throws exception when upgrading Web Server from Java ES 4 to Java ES 5.
	
	Workaround
	
	Note – Move the existing `libdb-3.3.so` and `libdb_java-3.3.so` library files to an appropriate location, somewhere outside the Web Server's private directories. Once the Portal Server libraries are in a suitable location, that path must be specified for the *<libdb-3.3.so path>:<libdb_java-3.3.so path>* in the following commands.
	
	On Solaris platform, perform the following steps:
	1. Copy the `libdb-3.3.so` and `libdb_java-3.3.so` files from Web Server 6.1 `lib` directory to an appropriate location.
	
	    Note – For HP-UX, the files are `libdb-3.3.sl` and `libdb_java-3.3.sl`. For windows, the files are `libdb-3.3.dll` and `libdb_java-3.3.dll`.
	
	    Caution – Do not copy the library files to Web Server 7.0 private directories (For example, `lib` directory).
	
	2. Create a directory (`mkdir`) by name `/portal_libraries`. Copy the library files `libdb-3.3.so` and `libdb_java-3.3.so` to `/portal_libraries`.
	
	3. Use the `wadm` command to inform the Web Server about the location of the library files.
	
	4. Get the current native library path setting by typing the following administration CLI command:
	`get-jvm-prop -user=admin --config=`*hostname* `native-library-path-prefix`
	Save the output.
	
	5. Append the copied `libdb-3.3.so` and `libdb_java-3.3.so` path to the existing native library path by typing the following administration CLI command.
	`set-jvm-prop --config=`*hostname* `native-library-path-prefix=<`*existing native library-path*`>:</`*portal-libraries-path*`>`
	where, *portal-libraries-path* is the location of where you copied the `libdb-3.3.so` and `libdb_java-3.3.so` files in Step 1.
	If you do not get any results or output for the `get-jvm-prop` command, at the command prompt, set the *native-library-path-prefix*:
	`native-library-path-prefix=</`*portal-libraries-path*`>`
	
	6. **Note** – For Windows platform, use ';' as the separator for `native-library-path-prefix` parameter as follows:
	
	    `native-library-path-prefix=<`*existing native libarary path*`>;<`*portal-libraries-path*`>`
	
	    For non-Windows platform, use the ':' as the separator for `native-library-path-prefix` parameter as follows:
	
	    `native-library-path-prefix=<`*existing native libarary path*`>:<`*portal-libraries-path*`>`
	
	7. Deploy the modified configuration by typing the following command:
	`deploy-config [--user=`*admin-user*`] config-`*name*

TABLE 19 Known Issues in Java ES *(Continued)*

Problem ID	Description
6504178	**Migration logs reports a bogus "root is not a valid user" message on Java ES 5.** While migrating from Java ES 4 to Java ES 5 on UNIX platforms, the migration log file reports WARNING: "root is not a valid user". This is incorrect as the "root" user is valid on that host.
6453037	**A lot of warnings/info messages displayed at Web Server startup on the standard output instead of routing these messages to the log file.**

How to Report Problems and Provide Feedback

If you have problems with Sun Java System Web Server 7.0, contact Sun customer support using one of the following mechanisms:

- Sun Software Support services online at:

  http://www.sun.com/service/serviceplans/software/

- The telephone dispatch number associated with your maintenance contract

So that we can best assist you in resolving problems, please have the following information available when you contact support:

- 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

Sun Welcomes Your Comments

Sun is interested in improving its documentation and welcomes your comments and suggestions. Send your comments to Sun using the "Send comments" link at: http://docs.sun.com/

Please include identifying information with your comments, such as the part number and the title of the book.

To provide feedback on Sun Java System Web Server 7.0 product, send email to mailto:webserver@sun.com.

Additional Sun Resources

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

- Documentation for Sun Java System Web Server 7.0

  http://docs.sun.com/coll/1308.3
- Sun Software Products and Service

  http://www.sun.com/software
- Sun Developer Information

  http://developers.sun.com/
- Sun Developer Support Services

  http://developers.sun.com/prodtech/support/
- Software Support Services

  http://www.sun.com/service/support/software/
- Sun Support and Training Services

  Support: http://www.sun.com/support

  Training: http://www.sun.com/training/
- Sun Consulting and Professional Services

  http://www.sun.com/service/sunjavasystem/sjsservicessuite.html

Searching Sun Product Documentation

Besides searching Sun product documentation from the docs.sun.com web site, you can use a search engine of your choice by typing the following syntax in the search field:

<*search-term*> site:docs.sun.com

For example, to search for "Web Server", type the following:

Web Server site:docs.sun.com

To include other Sun web sites in your search (for example, java.sun.com, www.sun.com, developers.sun.com), use sun.com in place of docs.sun.comin the search field.