



# Sun Java System Portal Server 7 Technical Overview



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# Preface

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The *Sun Java System Portal Server 7 Technical Overview* provides an introduction to Sun Java™ System Portal Server concepts and components.

## Who Should Use This Book

This guide is intended for system designers and architects, business managers, and Portal Server installers and administrators who are engaged in portal design and planning or who are already working in production environments. You should read this book if you are responsible for administering and configuring Portal Server software at your site.

This guide assumes that you are already familiar with the following topics:

- Your web container, such as Sun Java System Application Server, or Sun Java System Web Server
- Sun Java System Access Manager
- Sun Java System Directory Server
- Sun Java System Directory Server
- Your operating system
- Basic UNIX® administrative procedures
- LDAP (lightweight directory access protocol)

## How This Book Is Organized

This guide is organized into the following chapters:

- [Chapter 1](#) provides a conceptual overview of key features of Portal Server.
- [Chapter 2](#) presents information about the standard Portal Server Desktop and delivering content to end users.
- [Chapter 3](#) describes community and collaboration features that Portal Server provides for the Desktop to enhance the productivity of enterprises and their end users.
- [Chapter 4](#) provides information about the Portal Server search server.
- [Chapter 5](#) describes the browser interface that Portal Server provides for portal administration and configuration tasks.

- [Chapter 6](#) summarizes how administrators use Access Manager to manage tasks that affect how Portal Server services are delivered.
- [Chapter 7](#) describes how Portal Server provides information about end users, servers, and logging activities.
- [Chapter 8](#) explains the functions of the `perftune()` script.

## Related Books

The docs.sun.com<sup>SM</sup> web site enables you to access Sun technical documentation online. You can browse the archive or search for a specific book title or subject.

For access to the documentation for this release of Portal Server, see:

<http://docs.sun.com/coll/1303.1>.

## Related Third-Party Web Site References

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

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## Documentation, Support, and Training

Sun Function	URL	Description
Documentation	<a href="http://www.sun.com/documentation/">http://www.sun.com/documentation/</a>	Download PDF and HTML documents, and order printed documents
Support and Training	<a href="http://www.sun.com/supporttraining/">http://www.sun.com/supporttraining/</a>	Obtain technical support, download patches, and learn about Sun courses



# Typographic Conventions

The following table describes the typographic changes that are used in this book.

TABLE P-1 Typographic Conventions

Typeface or Symbol	Meaning	Example
AaBbCc123	The names of commands, files, and directories, and onscreen computer output	Edit your <code>.login</code> file. Use <code>ls -a</code> to list all files. <code>machine_name%</code> you have mail.
<b>AaBbCc123</b>	What you type, contrasted with onscreen computer output	<code>machine_name%</code> <b>su</b> Password:
<i>aabbcc123</i>	Placeholder: replace with a real name or value	The command to remove a file is <i>rm filename</i> .
<i>AaBbCc123</i>	Book titles, new terms, and terms to be emphasized	Read Chapter 6 in the <i>User's Guide</i> . Perform a <i>patch analysis</i> . Do <i>not</i> save the file.



# Understanding Portal Server

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This topic provides a conceptual overview of key features of Portal Server. The following sections are provided:

- “About Portal Server” on page 11
- “Deployment” on page 15
- “Administration” on page 14
- “Aggregation and Presentation” on page 12
- “Search Server” on page 13
- “Communities and Collaboration” on page 13

## About Portal Server

Portal Server provides a framework and a set of software modules that offer the following:

- Security
- Mobility
- Identity-based content delivery
- Collaboration
- Business system integration

The product is a component of the Sun Java™ Enterprise System (Java ES), a software system that supports a wide range of enterprise computing needs.

Portal Server allows administrators and delegated administrators to build portal pages and to make them available to individuals throughout an enterprise according to user identities.

Portal Server’s core framework supports the Java Specification Request (JSR) 168 Portlet Specification standard and the web services for remote portlets (WSRP) 1.0 standard for portal content. Portlet developers can use the Sun Java Studio Creator 2 application development tool or open standard tools to build portlets. Portal administrators can then leverage portlets, WSRP consumers, or additional portal tools for adding content to portal pages.

A Portal Server installation provides the following:

- Sun Java System Directory Server
- A web container, such as Sun Java System Application Server or Sun Java System Web Server
- Sun Java System Access Manager for identity and user management, including authentication, authorization, and federation
- Sun Java System Portal Server
- A search server
- A wiki based on JSPWiki . org
- A management console
- Development tools
- Three sample portals
  - Sample enterprise portal
  - Sample developer portal
  - Sample community portal
- Java DB, an open-source database written in the Java programming language, to support collaboration (installed preconfigured)

Portal Server works with previously installed software components as long as the software is an appropriate version. For more information about product requirements, see the *Sun Java System Portal Server 7 Installation Guide*.

## Aggregation and Presentation

Portal Server aggregates and presents content to the end user. The Desktop is the interface that the end user accesses to view the content for a portal site.

The Desktop organizes content into channels. Channels can display content that is provided in many formats, such as:

- XML (extensible markup language)
- JavaServer Pages™ (JSP™) specification
- RSS (really simple syndication)
- HTML (hypertext markup language)

Portal Server implements a number of standards to simplify delivering content to the Desktop. These standards include the following:

- The Java Specification Request (JSR) 168 standard, which allows portlets to run in multiple portal environments. Integrating custom applications is not necessary when the JSR 168 specification is used.
- The J2EE™ Connector Architecture (JCA), which allows application servers to access any data sources for which a resource application has been written.
- Web services for remote portlets (WSRP) 1.0 standard, a web services protocol for integrating content and interactive web applications from remote sources.

For more information about the Desktop, see [Chapter 2](#).

## Communities and Collaboration

Portal Server provides collaboration and communication services for end users.

End users can use communities to work with others. A portal *community* consists of the following:

- An owner who sets up the community
- A portal page available to community members
- A list of members who subscribe to the community
- A set of services (usually portlets) available to the users
- A set of data that the community uses

End users create communities. Community members use communities to interact with others in the community and to manage content and business processes.

Portal Server provides four Desktop channels that enable end-users to organize, schedule, and communicate with each other. The channels are the following:

- Address Book
- Calendar
- Instant Messaging
- Mail

For more information about communities and collaboration, see [Chapter 3](#).

## Search Server

Portal Server search server provides interfaces that allow end users to locate resources in a database. The search server provides the following:

- A robot to discover, convert, and summarize document resources
- An end-user interface, provided by the Desktop, using JSP providers
- Configuration tools provided by the Portal Server management console
- A command-line interface for system management

The search server supports *federated search*, a single search to multiple search engines, including Google. LDAP directory (using Java Naming and Directory Interface™ or JNDI), relational database management system or RDBMS (using Java DataBase Connectivity or JDBC™), and remote resource description messages (RDM) interface. Federated search results are displayed on a single page.

Administrators use the Portal Server management console to perform search server administrative and configuration tasks. The Portal Server command-line interface provides `psadmin` subcommands for managing the search server.

For more information about the search server, see [Chapter 4](#).

# Administration

Administrators can use a browser interface, a command-line interface, or the Desktop to manage Portal Server. This topic provides the following sections:

- “Management Console” on page 14
- “Command-Line Interface” on page 14
- “Administration Tag Library and Portlets” on page 15

## Management Console

Portal Server provides a management console, a browser interface, for performing administrative tasks required for managing the Portal Server. The tasks include:

- Managing multiple portals and their operations
- Setting up and managing containers and channels
- Customizing the Desktop for end users
- Enabling end users to personalize the Desktop
- Managing multiple search servers
- Tracking both end-user and system activities
  - End-user clicks on the standard Desktop
  - Configuration settings, statistics about channel actions, and statistics about Desktop requests and responses
  - Runtime information about the Portal Server and the Secure Remote Access server

For more information about the management console, see [Chapter 5](#)

## Command-Line Interface

Portal Server software provides a command-line interface (CLI). The CLI allows portal administrators to do the following:

- Perform administrative tasks by typing commands using the keyboard
- Automate regularly recurring management tasks by incorporating them into scripts

The CLI offers a number of `psadmin` subcommands for managing portal tasks. These include subcommands for:

- Managing multiple portals and portal instances
- Deploying portal and portlet WAR files
- Managing the search server
- Managing Secure Remote Access server
- Managing monitoring

- Managing portal logging

Most subcommands commands are written specifically to mimic functions in the browser interface. For management functions that have no special commands, administrators use standard UNIX commands.

For information about all `psadmin` subcommands, see the *Sun Java System Portal Server 7 Command-Line Reference*.

## Administration Tag Library and Portlets

Portal Server provides an administration tag library for developing administration portlets that enable a portal to be managed from the Desktop instead of from the management console. Administrators can use this tag library to do the following:

- Modify out-of-the-box administration portlets
- Develop portlets with new administration functionality
- Support user management, provider management, and portlet and WSRP management tasks
- Create and administer channels that are based on `JSPProvider`
- Write custom administration portlets with a custom user interface
- Write administrative portlets to manage any custom channel

Administrators can use administration portlets to grant delegated administration status to specified users. Portal Server provides a sample set of administration portlets that can be used to design a basic Desktop for delegated administrators.

For more information see *Sun Java System Portal Server 7 Developer Sample Guide* and *Tag Library for Delegated Administration*.

## Deployment

Portal Server enables enterprises to design a variety of deployment scenarios. This section provides the following topics:

- “Open and Secure Modes” on page 16
- “Multiple Portals” on page 16
- “Single Sign-On Authentication” on page 16

Each enterprise assesses its own needs and plans its own deployment of Java Enterprise System. The optimal deployment for each enterprise depends on a variety of factors, including:

- The types of applications that Java ES is supporting
- The number of users
- What hardware is available

For more information about deployment planning and deployment scenarios, see the *Sun Java System Portal Server 7 Deployment Planning Guide*.

## Open and Secure Modes

You can run Portal Server in open mode or secure mode, with or without Sun Java System Portal Server Secure Remote Access server.

In *open mode*, Portal Server is installed without the Secure Remote Access server. The typical public portal runs without secure access using HTTP or HTTPS.

In *secure mode*, Portal Server is installed with the Secure Remote Access server. Secure mode provides end users with secure remote access to required intranet file systems and applications. Only the IP address of the Gateway is published to the Internet.

## Multiple Portals

Portal Server supports multiple portals using a single user repository. You can design, deploy, and administer each portal independently. Setting up multiple portals allows administrators to do the following:

- Deploy multiple portals and portal server instances on one or more hosts
- Use Access Manager software to manage users for all portals
- Provide different content for different portals
- Offer single sign-on (SSO) between portals
- Enable users to customize their desktops for each portal

To manage users, portal administrators use tools provided by Access Manager. User data in LDAP directories does not need to be synchronized with any other repository.

A *portal* is a collection of one or more Portal Server instances that deliver the same content and are mapped to a single URL. The content and services delivered by a portal are common to all of its instances.

A *Portal Server instance* is a web application deployed into a web container, using a particular portal context URI and serving requests on a specific network port. Each Portal Server instance is associated with a single portal.

*Multiple portals* share the same user repository, or Access Manager. These portals can be deployed on one or more hosts. Portals that use different Access Managers are not multiple portals.

## Single Sign-On Authentication

Single sign-on (SSO) enables end users to enter a password once to gain authenticated access to various *resource servers*, which supply applications or services. The resource servers that an end user can access depend on what implementations of the SSO Adapter interface are available in the system.



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Standard application programming interfaces (APIs) are used to provide user access to a resource server. To access a mail server, for example, an application uses the JavaMail™ API.

To create an authenticated connection using an API, administrators provide the API with the configuration data for the connection. The *SSO Adapter*, which uses standard database terminology, provides this configuration data for an authenticated connection, and the *SSO Adapter service* stores that data.

The SSO Adapter service defines two levels of data:

- *SSO Adapter template* defines a class of connections to be made available to users. Many end users use a single template. The template defines data values that are the same for all users, including default values and what values a user can edit. Therefore, SSO Adapter templates are defined at a global service level.
- *SSO Adapter configuration* provides data values that are specific to an organization, role, or user. A configuration references a template and takes data values from the template for properties that the end user cannot change. Whenever an end user changes the user-editable properties of an SSO Adapter configuration, that configuration change applies only to that one end user.



# Understanding the Standard Desktop

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This topic describes the standard Desktop and how it delivers content to end users. This topic provides the following sections:

- “Delivering Content” on page 19
- “Implementing the WSRP Standard” on page 21

## Delivering Content

The *standard Desktop*, which end users access by using an HTML browser, provides the primary end-user interface for Portal Server.

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**Note** – End users can access and use two additional Desktops, if they are configured to do so:

- The *mobile Desktop*, using a mobile device
- The *voice Desktop*, using one of the following:
  - A phone
  - Software that enables Session Initiation Protocol (SIP) and supports Voice over IP (VoIP)

For information, see the Sun Java™ System Portal Server Mobile Access documentation.

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The standard Desktop displays a web page that arranges content in rows and columns. Each specialized content area within the page occupies a small window.

The mechanism for delivering content to these windows is a container channel or a channel. A *container channel*, often simply called a *container*, generates its content by aggregating the content of other channels.

A *channel* is a component that processes requests and generates content. A channel consists of the following:

- A provider object

- Configuration files
- Data files, such as XML files and HTML templates, that are required to support the channel

Portal Server accepts three types of channels:

- *Community portlets* – Process requests from and generate content for a community. Community members use community portlets to set up and manage communities.
- *Portlets* – Process requests and generate content. Portlets are automatically detected and configured web components. The Portlet Container, an implementation of the JSR 168: Portlet Specification defined by the Java Community, manages portlets.
- *Providers* – Adapt the interfaces of generic resources. For example:
  - JSP providers compile and execute JSP files to generate content
  - XML providers translate XML files to general content

The Portal Server also can query providers for information to display text and graphics in channels.

Portal Server supports portlet content obtained from local as well as remote sources. For information about remote portlets, see [“Implementing the WSRP Standard” on page 21](#).

## ▼ To Manage Containers and Channels

To manage containers and channels on a portal Desktop, use the Manage Containers and Channels page of the Portal Server management console.

- 1 Log on to the Portal Server management console.**
- 2 Click the Portals tab.**

The Portals page displays a list of your existing portals.
- 3 Click the name of the portal whose Desktop you want to manage.**

The Desktop Tasks and Attributes page appears.
- 4 In the Tasks section, click the Manage Containers & Channels link.**

The Manage Containers and Channels page appears.
- 5 To update your Desktop, use the Manage Containers and Channels page selections.**

For additional information, click the Help button.

# Implementing the WSRP Standard

Portlets available from local sources provide most of a portal's base functions. *Remote portlets* allow administrators to provide content without installation effort and without code running locally on the consuming portal server.

Portal Server implements the Web Services for Remote Portlets (WSRP) 1.0 standard, a web services protocol for aggregating content and interactive web applications from remote sources. The implementation includes the following:

- The *WSRP consumer*, a web service client (the portal)
  - Invokes producer-offered WSRP web services
  - Provides an environment for end users to interact with portlets that one or more WSRP producers offer
- The *WSRP producer*, a web server
  - Offers just one portlet or provides a runtime (or a container) for deploying and managing several portlets
  - Implements various WSRP interfaces and operations

Portal Server's implementation of the WSRP producer supports publishing JSR 168 portlets for use by remote WSRP consumers. The JSR 168 portlets are deployed locally on a portal server. An instance of the WSRP producer can publish these portlets.

Before a portal that acts as a WSRP consumer can access a remote portlet, the portal must find the producer's web service definition language (WSDL). The producer can register the WSDL, as well as other information related to the producer, in the UDDI (universal description discovery interface) service registry. Registration makes the portlet available to the consumer.

For additional information, see the WSRP 1.0 standard set by the Organization for the Advancement of Structured Information Standards (OASIS):

[http://www.oasis-open.org/committees/tc\\_home.php?wg\\_abbrev=wsrp](http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsrp)



# Understanding Communities and Collaboration

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This topic describes the community and collaboration features that Portal Server provides for the Desktop to enhance the productivity of enterprises and their end users.

This topic provides the following sections:

- “Services for End-User Communities” on page 23
- “Channels for End-User Collaboration” on page 24

## Services for End-User Communities

Portal Server enables end users to set up and participate in online communities, which are associations of members and services. Communities provide services and content on a long-term basis or a short-term basis. Three end-user roles are defined:

- **Member**—An end user who belongs to a community and interacts with a community’s services and content
- **Owner**—The community member who starts and removes a community
- **Visitor**—An end user (and non-member) who views a community’s services but does not interact with the services

The following community services are available:

- **File Sharing**—Community members can share files, create folders, and upload and download documents.
- **Wiki**—A wiki container and portlets enable a community to provide an interactive site for community-related content. Community members can edit existing pages and files, and community members can add new pages and files.
- **Events and Tasks**—Community members can use a community calendar built on Sun™ Calendar Server software to track and edit community projects, tasks, and events.
- **Survey and Polls**—Community members can respond to surveys and view the results of surveys and polls. Question formats are multiple choice, yes or no, and open-ended.

- **Discussions**—Community discussions allow members to create, read, rate, replay, search and subscribe to online exchanges by community members.
- **Search**—Community members can search for content within the community's pages.
- **Community Information**—Community members can view general information about the community. Community owners can delete the community.
- **Membership**—Community members can view members who subscribe to the community. Community owners can delete members and transfer community ownership to another member.

Portal Server provides three templates for controlling which services a community provides and how the services are presented on the standard Desktop. The portal administrator uses the command-line interface to manage the templates.

## Channels for End-User Collaboration

Portal Server offers four channels that enable end users to do the following:

- Communicate effectively and efficiently with others who use the same applications
- Organize and schedule tasks and appointments

The channels are the following:

- **Mail**—Displays mail messages sent to end users. Allows end users to view and manage mail messages.
- **Address Book**—Displays name and address entries. Allows end users to view and manage the entries.
- **Calendar**—Displays calendar events and tasks. Allows end users to view and manage the events and tasks.
- **Instant Messaging**—Displays the presence status of users with access to Sun Java™ System Instant Messenger. Allows end users to conduct real-time communication with other end users on their contact list.

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**Note** – These portlets are not specific to portal community pages. They are also available for portal pages delivered to organizations, suborganizations, and roles.

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End users use the Desktop to access these channels. By designing each channel's edit page, administrators control whether the end user can edit the communications channels. Options granted to end users are limited or extended. The administrator:

- Can configure channels to work without the need for end-user server configuration
- Can select which specific features end users can edit by using the channel's Edit button
- Can allow end users to configure a second channel, such as a mail application, on the Desktop, if a site provides more than one instance of a particular application



# Understanding the Search Server

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This topic describes the Portal Server search server. The following sections are provided:

- “Search Robot” on page 25
- “Database Taxonomy” on page 27

## Search Robot

The Portal Server search server robot discovers, converts, and summarizes document resources that are available to end users. A *robot* is a program that:

- Extracts and follows links to resources (also called *crawling* or *enumeration*)
- Describes those resources
- Puts the descriptions in the database (also called *indexing* or *generation*)

The search server provides utilities to control robot actions. Administrators use the Portal Server management console to run the utilities. The ways that portal administrators can control robot processes include the following:

- When the robot runs by starting, stopping, and scheduling the robot
- Where the robot looks for resources by defining the sites the robot visits
- How aggressively the robot searches by defining the crawling attributes
- What types of resources the robot indexes by defining filters

Portal Server provides a scheduling utility for running the search server robot. Administrators can set multiple start and stop times.

### ▼ To Configure the Robot

- 1 **Log in to the Portal Server management console.**

The Common Tasks page is displayed.

**2 Click the Search Servers tab.**

The Search Server page is displayed.

**3 Click the name of the server whose robot you want to configure.**

The Search Server Settings page is displayed.

**4 Click the Robot tab.**

The Robot Status and Control page is displayed.

**5 Select the activity that you want.**

- To update where the robot crawls, click the Sites tab.
- To update site definition rules, click the Filters tab.
- To set up or modify how the robot assigns resources to categories, click the Classifications Rules tab.
- To control robot operations and property settings, click the Properties tab.
- To run robot utilities, click the Utilities tab.

For more information, click the Help button to view online help

## ▼ **To Schedule the Robot**

**1 Log in to the Portal Server management console.**

The Common Tasks page is displayed.

**2 Click the Search Servers tab.**

The Search Server page is displayed.

**3 Click the name of the server whose robot you want to run.**

The Search Server Settings page is displayed.

**4 Click the Robot tab.**

The Robot Status and Control page is displayed.

**5 Click the Scheduling tab.**

The Schedule Robot page is displayed.

**6 Set the Start Robot times and the Stop Robot times, and click the Save button.**

The robot schedule is set.

For more information, click the Help button to view online help

# Database Taxonomy

So that end users can type direct queries to search the database or browse through the database contents, administrators set up categories. A hierarchy of categories is called a *taxonomy*. Categorizing database resources is similar to creating a list of contents for the database.

Administrators use the Portal Server management console to manage taxonomy.

## ▼ To Manage Taxonomy

Use the Manage Categories page to define taxonomy for a search server.

**1 Log in to the Portal Server management console.**

The Common Tasks page is displayed.

**2 Click the Search Servers tab.**

The Search Server page is displayed.

**3 Click the name of the server you want to configure.**

The Search Server Settings page is displayed.

**4 Click the Categories tab.**

The Manage Categories page is displayed.

**5 Select the activity that you want.**

- To define or edit categories for browsing or search, click the Browse/Search tab.
- To update matching rules for categories, click the Autoclassify tab.

For more information, click the Help button to view online help



# Understanding the Management Console

---

This topic describes the Portal Server management console, a browser interface that simplifies a variety of portal administration and configuration tasks. This topic provides the following sections:

- “About the Management Console” on page 29
- “About the User Interface” on page 30
- “Security Features” on page 33

## About the Management Console

The Portal Server management console is a Java™ 2 Platform, Enterprise Edition (J2EE™) application that:

- Is accessible through a web browser
- Logs messages to a debug log according to configured debug level
- Logs setting changes that include name and value pairs
- Provides online help with step-by-step instructions for performing management tasks

The Portal Server management console enables portal administrators to manage a variety of functions, including tasks for the following:

- Multiple portals and Portal Server instances
- The Desktop
- Search server
- Secure Remote Access server
- Single Sign-On (SSO) adapters

The management console also enables portal administrators to perform the following activities:

- Track user behavior to help portal administrators diagnose, troubleshoot, and analyze issues related to end-user activities and how end users interact with various Portal Server components
- Obtain runtime statistics about Portal Server’s Desktop and Secure Remote Access components
- Log information about Portal Server applications

## ▼ To Log In to the Management Console

Portal administrators access the Portal Server management console using a browser client from a distinct uniform resource identifier (URI).

**1 Type this URL in your browser: `http://hostname:port/psconsole`**

*hostname*     The name of the system that the management console is running on.

*port*             The management console's port number assigned during installation.

The log in window is displayed.

**2 In the text boxes, type the Admin User Name and Password.**

The admin user should be a top-level administrator. A typical Admin User Name is `amadmin`.

**3 Click the Log In button.**

The management console's Common Tasks page is displayed.

## About the User Interface

The management console's user interface arranges administration functions into pages. Across the top of each page is a tab strip. The tabs present pages that group management functions in an organized manner. To navigate from page to page, administrators click a tab.

This section provides a description of the following interface elements:

- “Common Tasks Tab” on page 30
- “Portals Tab” on page 31
- “Search Servers Tab” on page 31
- “Secure Remote Access Tab” on page 32
- “SSO Adapter Tab” on page 32
- “Wizards” on page 32
- “Online Help” on page 33

## Common Tasks Tab

The Common Tasks page displays a series of links. The links are shortcuts that provide direct access to tasks that portal administrators frequently perform. When administrators log on to the management console, the Common Tasks tab is active. The tasks are organized into four categories:

- Configuration
- Reports and Logs
- Maintenance
- Documentation

Selecting a task provides direct access to the page or wizard for that task. For example, to update logger settings, click the [Logger Settings](#) link under the [Maintenance](#) heading.

## Portals Tab

The [Portals](#) page lists the deployed portals by their portal IDs. This page allows administrators to do the following:

- Create new portals
- Remove portals
- Import and export portal resources

In addition, administrators can click the name of a specific portal to access pages for managing that portal. The pages allow administrators to do the following:

- Manage containers, channels, and portlets
- Manage the display profile
- Create and remove portal instances
- Manage web services for remote portlets (WSRP)
- Edit subscription component attributes
- Create reports that track user behavior
- View portal log files
- Monitor statistics for how a Desktop and a channel are used

During Portal Server installation, the portal1 portal is set up and listed on the [Portals](#) page.

## Search Servers Tab

The [Search Servers](#) page allows portal administrators to manage the search server. This page allows administrators do the following:

- Set up a search server
- Remove a search server
- View basic identifying information about each search server

In addition, administrators can click the name of a specific search server to access pages for managing it. The pages allow administrators to do the following:

- View configuration details for a search server
- Manage a search server databases, and on nonfederated databases, re-index, purge, analyze, manage, and expire resource descriptions
- View and manage search server taxonomy
- View the status of a search server robot and manage robot behavior
- Schedule robot start and stop times

- View robot reports

## Secure Remote Access Tab

The Secure Remote Access tab allows administrators to manage how remote users securely access a portal and its services over the Internet. This page allows administrators to do the following:

- Create, maintain, and remove Gateway profiles
- Specify options and rules for providing secure access to applications that run over insecure networks
- Define rules preferences for giving users access to remote file systems and directories
- Control user access to specific URLs through the Gateway
- Manage how client machines read and modify proxy settings in proxy autoconfiguration (PAC) files
- View attributes of resources
- Start and stop Secure Remote Access proxy instances and view details about the instances
- Copy an existing rewriter ruleset to a new location or obtain a new ruleset from another location

## SSO Adapter Tab

The SSO Adapters page allows administrators to manage how end users gain authenticated access to applications after signing in once. This page allows administrators to do the following:

- View a list of SSO Adapter configurations for the current location distinguished name (DN)
- Add or remove users who have permission to use the SSO adapter without authentication
- Create, view, and remove SSO adapter templates

In addition, administrators can click the name of a specific meta-adapter that is set up to access pages for managing that portal. The pages allow administrators to do the following:

- Add and remove meta-adapters
- Add and remove adapters
- Change attributes of adapters and meta-adapters

## Wizards

The management console provides easy-to-use wizards for tasks that require more than one step. The wizards:

- Collect information about a task
- Ask administrators to verify task information before the task is performed



An example of a wizard is the New Instance wizard, which provides the step-by-step process for creating a new portal instance.

## Online Help

Online help provides assistance for completing management tasks and viewing information. To view online help, administrators click the Help button that is available on each page.

## Security Features

The management console performs the following actions to provide security:

- Activates session timeouts for idle sessions
- Validates user sessions for every request
- Configures secure HTTP connections
- Masks display of user log on passwords



# Understanding Access Manager Functions

---

The topic summarizes how Portal Server administrators use the Access Manager to manage tasks that affect how Portal Server services are delivered.

This topic provides the following sections:

- “About Access Manager Functions” on page 35
- “Identity-Specific Content” on page 35
- “Delegated Administration Functions” on page 36
- “Login Accounts” on page 36

## About Access Manager Functions

Portal Server administrators use the Access Manager administrative console to manage tasks related to identity. These tasks are provided by Sun Java™ System Access Manager, not Portal Server. Administrators can perform the following tasks:

- Manage identity-based objects, including users, roles, and organizations to administer and assign appropriate access to users according to roles they have within organizations or suborganizations
- Delegate administrative functions to specific end users by authorizing the end users to administer organizations, suborganizations, users, policy, roles, and channels
- Reset administrator passwords, in the same way other passwords are changed

## Identity-Specific Content

Access Manager allows portal administrators to deliver portal content that is based on identities of specific end users. Administrators can define portal pages, attributes and access policies so that portal content is available only to the following:

- A specific organization
- A specific suborganization

- A role
- An individual

Individual end users who access the portal see a combined view of all portal pages.

## Delegated Administration Functions

Portal Server enables portal administrators to delegate the responsibility for managing various tasks in a particular organization to other individuals, called *delegated administrators*. In complex enterprises, delegated administration can decentralize the administrative function to improve portal management.

To make delegated administration functions available to other users, portal administrators give them access to the Admin tab on the standard Desktop. The tab includes the following portlets:

- User Administration portlets
  - Reset Password Admin
  - Role Admin
  - Create/Delete User Admin
- Tab administration portlets
  - Create Tab Admin
  - Delete Tab Admin
  - Tab Configuration Admin
- Channel administration portlets
  - Create Channel Admin
  - Delete Channel Admin
  - URLScrapper Admin
  - Create WSRP Channel Admin

## Login Accounts

A default administrator's account for logging in to the management console is set up during Portal Server installation.

Administrators can set up additional login accounts for other portal administrators. Each new user must have the following:

- A valid user entry in the Access Manager console
- A Top-level Admin Role assignment

# Understanding Reports

---

This topic describes how Portal Server provides information about end-user behavior, servers, and log activities.

This topic provides the following sections:

- “User Behavior Tracking” on page 37
- “Monitoring” on page 38
- “Logging” on page 40

## User Behavior Tracking

Administrators can diagnose, troubleshoot, and analyze issues related to end-user activities and end-user interaction with various portal system components. User behavior tracking (UBT) follows end-user clicks on the standard Desktop and logs the information in external data stores. The Portal Server user behavior tracking API is an implementation of the JSR 47: Logging API Specification.

Portal Server’s user behavior tracking conforms to the ELF (extended log format) standards defined by the World Wide Web Consortium (W3C). To analyze end-user data, administrators can use the management console or other tools.

Portal Server provides these reports about user behavior:

- **Portal User Identity Report**—Lists end users and times end users last accessed the Desktop. Groups end users by server, domain, and relative DN.
- **Portal User Login Rate**—Reports login activity rates.
- **Portal Channel View Report**—Lists which end users viewed a channel and the number of times end users viewed the channel. Groups channels by the containers channels belong to.
- **User Customization of Portal Containers**—Reports end-user changes to containers, including Desktop content, layout or theme alterations.
- **Portal Request Rate**—Reports the rate of request of each top container per hour over a period of time.

- **User Customization of Portal Channels**—Lists end users and actions end users performed on channels.
- **Portlet Actions Report**—Provides the rate of portlet action requests in the portal.
- **Portlet Render Report**—Reports the number of times a portlet is displayed in a particular portlet mode or window state.

## ▼ To Track User Behavior

Use the User Behavior Tracking tab to configure and generate reports about the end-user activity.

### 1 Log in to the Portal Server management console.

The Common Tasks page is displayed.

### 2 Click the Portals Tab.

The Portals page is displayed.

### 3 Click the name of the portal whose end users you want to track.

The Desktop Tasks and Attributes page is displayed.

### 4 Click the User Behavior Tracking tab.

The Reports page is displayed.

### 5 Select the activity that you want.

- To create a report, click the Reports tab.
- To configure a report, click the Setting tab.

For more information, click the Help button to view online help

## Monitoring

Monitoring provides runtime information about Portal Server's Desktop and Secure Remote Access components. The framework for maintaining system statistics is based on Java™ Management Extensions (JMX™) technology.

Information collected from monitoring these components can help portal administrators do the following:

- Make appropriate tuning decisions
- Establish reliable benchmarks
- Deploy additional portal instances to support increased end-user activity on a portal
- Configure alarms to flag significant events (such as server threadpools reaching 95% utilization)

---

The Portal Server management console provides pages for configuring and generating reports about the how the Desktop and Secure Remote Access components perform. Administrators can use the command-line interface to perform other monitoring tasks. For information, see the *Sun Java System Portal System 7 Command-Line Reference*.

## ▼ To Monitor Desktop Performance

### 1 Log in to the Portal Server management console.

The Common Tasks page is displayed.

### 2 Click the Portals Tab.

The Portals page is displayed.

### 3 Click the name of the portal that you want to monitor.

The Desktop Tasks and Attributes page is displayed.

### 4 Click the Monitoring tab.

The Desktop Request/Response Statistics page is displayed.

### 5 Select the activity hat you want.

- To update the Desktop statistics, click the Refresh button.
- To create a channels report, click the Channel Action Statistics tab.
- To enable or disable monitoring, click the Settings tab.

For more information, click the Help button to view online help

## ▼ To Monitor Secure Remote Access Performance

### 1 Log in to the Portal Server management console.

The Common Tasks page is displayed.

### 2 Click the Secure Remote Access tab.

The Profiles page is displayed.

### 3 Click the Monitoring tab.

The Monitoring page is displayed.

For more information, click the Help button to view online help

# Logging

The Portal Server logging API is an implementation of the JSR 47: Logging API Specification. Each Portal Server application has its own configuration file. Portal administrators can do the following:

- Associate a configuration file with its corresponding application
- Make specific configuration changes that affect only that application
- Achieve easier cleanup of applications

By default, the log file directory is

`/var/opt/sun/portal/portals/portal1/logs/portal-server-instance`. The `com.sun.portal.log.config.file` properties file provides the default configuration of the logging system. You can specify the location and names of the portal log files specified in this file.

Administrators can define the following logging attributes:

- Maximum size of the log file
- Number of history files
- Type of log level

If a portal administrator uses a tool to view web container logs, the Portal Server logging framework enables the administrator to use the tool to view portal logs as well.

## Application Log Configuration Files

Each Portal Server application has at least one log configuration file associated with it. This topic lists file names for the following applications:

- “Portal Instance” on page 40
- “Portlet Applications” on page 41
- “Search Application” on page 41
- “Administrative CLIs” on page 41
- “Portal Administration Server” on page 42
- “Management Console” on page 42
- “Gateway” on page 42
- “Netlet Proxy” on page 42
- “Rewriter Proxy” on page 43

### Portal Instance

The log configuration file name is:

- `portal_server_data_directory/portals/portal_ID/config/PSLogConfig.properties`  
Example: `/var/opt/SUNWportal/portals/myPortal/config/PSLogConfig.properties`

The log file location is:

- `portal_server_data_directory/portals/portal_ID/logs/instance_ID`



Example: `/var/opt/SUNWportal/portals/myPortal/logs/myInstance/`

By default, one file is created. The file name is `portal.0.0.log`.

## Portlet Applications

The log configuration file name is:

- `portal_server_data_directory/config/portal_ID/config/PSLogConfig.properties`

Example: `/var/opt/SUNWportal/portals/myPortal/config/PSLogConfig.properties`

The log file location is:

- `portal_server_data_directory/portals/portal_ID/logs/instance_ID`

Example: `/var/opt/SUNWportal/portals/myPortal/logs/myInstance/`

By default, one file is created. The file name is `portal.0.0.log`. The content is logged through `PortletContext.log()`.

## Search Application

The log configuration file name is:

- `portal_server_data_directory/searchserver/search_ID/config/SearchLogConfig.properties`

Example:

`/var/opt/SUNWportal/searchserver/mySearch/config/SearchLogConfig.properties`

The log file location is:

- `portal_server_data_directory/searchserver/search_ID/logs/`

Example: `/var/opt/SUNWportal/searchserver/mySearch/logs/`

By default, three files are created. The file names are:

- `rdmserver.0.0.log`
- `rdm.0.0.log`
- `rdmgr.0.0.log`

## Administrative CLIs

The log configuration file name is:

- `portal_server_configuration_directory/PSAdminLogConfig.properties`

Example: `/etc/opt/SUNWportal/PSAdminLogConfig.properties`

The log file location is:

- `portal_server_data_directory/logs/admin/`

Example: `/var/opt/SUNWportal/logs/admin/`

By default, one file is created. The file name is `portal.admin.cli.0.0.log`.

## Portal Administration Server

The log configuration file name is:

- `portal_server_configuration_directory/PSAdminLogConfig.properties`  
Example: `/etc/opt/SUNWportal/PSAdminLogConfig.properties`

The log file location is:

- `portal_server_data_directory/logs/admin/`  
Example: `/var/opt/SUNWportal/logs/admin/`

By default, one file is created. The file name is `portal.0.0.log`.

## Management Console

The log configuration file name is:

- `portal_server_data_directoryportals/portal_ID/config/PSLogConfig.properties`  
Example: `/var/opt/SUNWportal/portals/myPortal/config/PSLogConfig.properties`

The log file location is:

- `portal_server_data_directory/logs/admin/`  
Example: `/var/opt/SUNWportal/logs/admin/`

By default, one file is created. The file name is `portal.admin.console.0.0.log`.

## Gateway

The log configuration file name is:

- `portal_server_configuration_directory/platform.conf.profile`  
Example: `/etc/opt/SUNWportal/platform.conf.default`

The log file location is:

- `portal_server_data_directory/logs/sra/profile/`  
Example: `/var/opt/SUNWportal/logs/sra/default/`

By default, one file is created. The file name is `portal.gateway.0.0.log`.

## Netlet Proxy

The log configuration file name is:

- `portal_server_configuration_directory/platform.conf.profile`  
Example: `/etc/opt/SUNWportal/platform.conf.default`

The log file location is:

- *portal\_server\_data\_directory/logs/sra/profile/*  
Example: `/var/opt/SUNWportal/logs/sra/default/`

By default, one file is created. The file name is `portal.nlproxy.0.0.log`.

## Rewriter Proxy

The log configuration file name is:

- *portal\_server\_configuration\_directory/platform.conf.profile*  
Example: `/etc/opt/SUNWportal/platform.conf.default`

The log file location is:

- *portal\_server\_data\_directory/logs/sra/profile/*  
Example: `/var/opt/SUNWportal/logs/sra/default/`

By default, one file is created. The file name is `portal.rwproxy.0.0.log`.

## ▼ To Manage Portal Server Logging

### 1 Log in to the Portal Server management console.

The Common Tasks page is displayed.

### 2 Click the Portals tab.

The Portals page is displayed.

### 3 Click the name of the portal that you want to examine.

The Desktop Tasks and Attributes page is displayed.

### 4 Click the Logging tab.

The Log Viewer page is displayed.

### 5 From the Instance Name scrollbar, select a portal instance.

The logging options are displayed.

### 6 Set the search criteria, and click Search.

The information is displayed in the Search Results section.

For more information, click the Help button to view online help.

## ▼ To Manage Search Server Logging

**1 Log in to the Portal Server management console.**

The Common Task page is displayed.

**2 Click the Search Servers tab.**

The Search Servers page is displayed.

**3 Click the name of the search server that you want to examine.**

The Search Server Settings page is displayed.

**4 Click the Reports tab.**

The Log Files page is displayed.

**5 Select the reports that you want.**

- To view log file contents, click the Logs tab.
- To view robot report files, click the Advanced Robot Reports tab.
- To view information about end-user searches, click the Manage Popular Searches tab.
- To view information about URLs that were excluded during a robot run, click the Manage Excluded URLs button.

For more information, click the Help button to view online help.

# Tuning Portal Server Performance

---

This topic describes the Sun Java™ System Portal Server `perftune()` script.

This topic provides the following sections:

- “About the `perftune` Script” on page 45
- “Configuration Changes” on page 45

## About the `perftune` Script

Administrators typically run the Portal Server `perftune` script before performance tests or during system production.

The script does the following:

- Invokes the Access Manager `amtune` script and modifies the `desktopconfig.properties` file
- Tunes the Solaris™ Operating System kernel and transmission control protocol (TCP) settings
- Prevents the script from tuning a system that lacks adequate memory

## Configuration Changes

This section identifies configuration changes that the `amtune` script makes for the following Portal Server components:

- “Web Server” on page 46
- “Application Server” on page 46
- “Directory Server” on page 46
- “Access Manager” on page 46
- “Portal Server Desktop” on page 46

For more information about the `amtune` script, see *Sun Java System Access Manager 7 2005Q4 Performance Tuning Guide*.

## Web Server

The `amtune` script modifies the following Sun Java System Web Server configuration files:

- `web-server-base/SUNWwbsvr/web-server-instance/config/magnus.conf`
- `web-server-base/SUNWwbsvr/web-server-instance/config/server.xml`

## Application Server

The `amtune` script modifies the following Sun Java System Application Server configuration files:

- `deploy_domain/deploy_instance/config/init.conf`
  - `deploy_domain/deploy_instance/config/server.xml`
  - `deploy_domain/deploy_instance/config/server.policy`
- `deploy_domain`      Application Server domain directory and the application server domain. For example: `/var/opt/SUNWappserver7/domains/domain1`
- `deploy_instance`      Application Server domain directory and the application server domain. For example: `/var/opt/SUNWappserver7/domains/domain1`

## Directory Server

The `amtune` script modifies the following Sun Java System Directory Server configuration file:

- `/var/opt/mps/serverroot/slapd-hostname/config/dse.ldif`

## Access Manager

The `amtune` script modifies the following Sun Java System Access Manager configuration file:

- `/etc/opt/SUNWam/config/serverconfig.xml`
- `/etc/opt/SUNWam/config/AMConfig.properties`

## Portal Server Desktop

The `amtune` script modifies the following Portal Server Desktop configuration file:

- `/etc/opt/SUNWps/desktop/desktopconfig.properties`

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