

Oracle® Fusion Middleware

Installation Guide for Oracle WebCenter Portal

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Preface

The *Oracle Fusion Middleware Installation Guide for Oracle WebCenter Portal* provides information and instructions for installing, configuring, and troubleshooting Oracle WebCenter Portal in a simple, non-clustered environment.

Audience

This guide is intended for users who are installing Oracle WebCenter Portal for the first time and are comfortable running some system administration operations, such as creating users and groups, adding users to groups, and installing operating system patches on the computer where your products will be installed. Users on UNIX systems who are installing need root access to run some scripts.

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Related Documents

For more information, see the following documents in the Oracle Fusion Middleware 11g Release 1 (11.1.1) documentation set or on Oracle Technology Network (OTN) at <http://www.oracle.com/technology/index.html>.

- *Oracle Fusion Middleware Installation Planning Guide*. This book contains useful information you should read before installing any Oracle Fusion Middleware product.
- *Oracle Fusion Middleware Concepts*. This book introduces the common terms and concepts in an Oracle Fusion Middleware environment.
- *Oracle Application Server Administrator's Guide*. This book contains information for managing your Oracle Fusion Middleware environment after installation and configuration is complete.

- *Oracle Fusion Middleware Interoperability and Compatibility Guide*. This book contains important information regarding the ability of Oracle Fusion Middleware products to function with previous versions of other Oracle Fusion Middleware, Oracle, or third-party products.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
<code>monospace</code>	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Installation Overview

This chapter provides an overview of Oracle WebCenter Portal and outlines the tasks involved in installing and configuring it in a simple, non-cluster topology. It includes the following sections:

- Section 1.1, "Introducing Oracle WebCenter Portal"
- Section 1.2, "Starting Points for WebCenter Portal Installation"
- Section 1.3, "Oracle WebCenter Portal Products"
- Section 1.4, "WebCenter Portal Managed Servers"
- Section 1.5, "Directory Structure of an Oracle WebCenter Portal Installation"
- Section 1.6, "WebCenter Portal Installation Roadmap"

1.1 Introducing Oracle WebCenter Portal

Oracle WebCenter Portal, an Oracle Fusion Middleware product, is an integrated suite of components designed for creating portals, web sites, and composite applications. WebCenter Portal combines the standards-based, declarative development of Java Server Faces (JSF), the flexibility and power of portals, and a set of integrated WebCenter Portal services to boost end-user productivity. With the set of components offered through WebCenter Portal, you can create social applications, enterprise portals, composite applications, and Internet/Intranet web sites.

WebCenter Portal provides an open and extensible solution that allows users to interact directly with services like instant messaging, documents, content management, discussion forums, wikis, blogs, and tagging directly from within the context of a portal or an application. These tools and services empower end users and IT to build and deploy next-generation collaborative applications and portals.

1.2 Starting Points for WebCenter Portal Installation

This guide describes WebCenter Portal installation and configuration in a simple, non-cluster topology.

Refer to *Oracle WebCenter Portal Installation and Configuration Roadmap* to find instructions about how to install, upgrade, or patch WebCenter Portal based on the starting point that best describes your current environment.

If you are installing WebCenter Portal in an environment that contains other Fusion Middleware or third-party products and you intend to configure your WebCenter Portal components to be used in conjunction with these other products, refer to *Oracle*

Fusion Middleware Interoperability and Compatibility Guide to verify compatibility and interoperability.

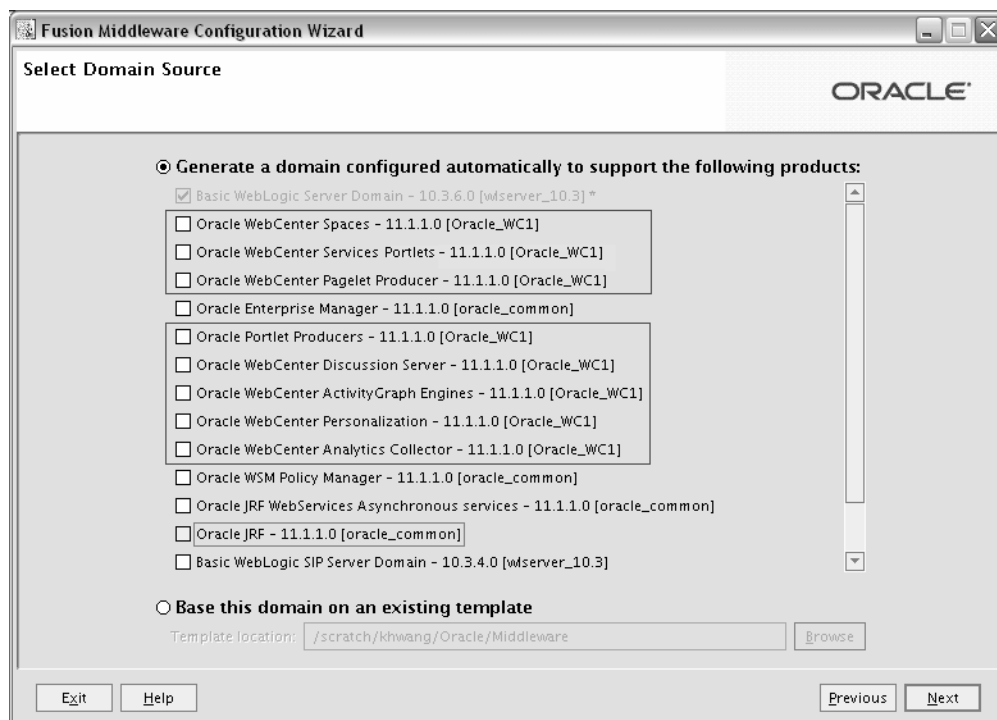
1.3 Oracle WebCenter Portal Products

WebCenter Portal includes components that provide a full range of functionality to develop customer-facing internet web sites, intranets, extranets, and social networking applications.

WebCenter Portal provides Oracle WebCenter Portal: Spaces - the Spaces application that furnishes the tools users require to rapidly create portals, communities, and social networking sites. Also, WebCenter Portal enables application developers to develop WebCenter Portal: Framework applications and Portlet Producer applications using an IDE like Oracle JDeveloper.

In WebCenter Portal applications, users can choose to include portlets and various WebCenter Portal services. Depending on the functionality required in your WebCenter Portal applications, you can choose the WebCenter Portal components that need to be installed. Figure 1–1 shows a list of WebCenter Portal components highlighted.

Figure 1–1 Configuration Wizard - Oracle WebCenter Portal Products



You can install the following WebCenter Portal components while either creating or extending a domain. It is optional to install these components.

- **Oracle WebCenter Spaces**
Oracle WebCenter Portal: Spaces offers a single, integrated, web-based environment for social networking, communication, and personal productivity through a robust set of services and applications.
- **Oracle WebCenter Services Portlets**

Oracle WebCenter Services Portlets provides a preconfigured, out-of-the-box producer that enables application developers to expose WebCenter Portal service task flows as WSRP portlets or pagelets in the following applications: Oracle Portal, Oracle WebLogic Portal, and Oracle WebCenter Interaction. These portlets are not intended to be consumed in WebCenter Portal applications.

- **Oracle WebCenter Pagelet Producer**

Oracle WebCenter Portal's Pagelet Producer provides the ability to create and manage a diverse set of web resources—applications, components, and programmable functions—and blend those resources together into existing web applications or new, developer-driven mashups. It enables you to use a wide variety of web technologies, such as AJAX, REST, and JavaScript, to build pagelets.

- **Oracle Portlet Producers**

Oracle WebCenter Portal's Portlet Producers supports deployment and execution of both standards-based portlets (JSR 286 and WSRP 1.0 and 2.0) and traditional Oracle PDK-Java based portlets. Includes the following preconfigured portlet producers: OmniPortlet, Web Clipping, WSRP Parameter Form Portlet, sample WSRP portlet producers, and sample PDK-Java portlet producers.

- **Oracle WebCenter Discussions Server**

Oracle WebCenter Portal's Discussion Server supports integration of discussion forums and announcements into the Spaces applications and Framework applications.

- **Oracle WebCenter ActivityGraph Engines**

Oracle WebCenter Portal's Activity Graph Engines provides a central repository for actions that are collected by enterprise applications. Actions include tasks such as making a connection, uploading a document, visiting a discussion forum, and so on. Enables users to analyze various statistics collected by WebCenter Analytics. The output of a WebCenter Activity Graph analysis is the collected scores for objects and users, which are used to give recommendations.

- **Oracle WebCenter Personalization**

Oracle WebCenter Portal's Personalization provides the ability to deliver application content to targeted users based on selected criteria.

- **Oracle WebCenter Analytics Collector**

Oracle WebCenter Portal's Analytics Collector delivers comprehensive reporting on activity and content usage within portals and composite applications.

Note: For deploying Framework applications and Portlet Producer applications, you must create custom managed servers. You can create a custom managed server by extending a WebCenter domain with the required template.

1.4 WebCenter Portal Managed Servers

When you install WebCenter Portal, you need to configure a domain for it. The basic domain infrastructure consists of one Administration Server and various optional managed servers. When you configure a domain for WebCenter Portal, the WebLogic Administration Server gets created if it is a new domain. Depending on the WebLogic Portal components you choose to install, various WebLogic server instances get created, and each component is deployed to the appropriate managed server.

Managed servers are provisioned with Oracle system libraries (JRF libraries) and Oracle ADF libraries.

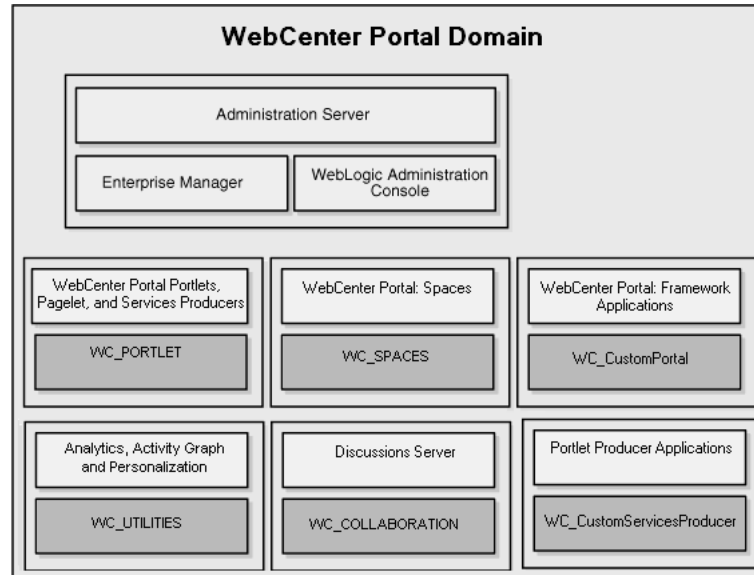
Table 1–1 lists the WebLogic server instances that may get created during WebCenter Portal installation.

Table 1–1 WebLogic Server Instances Created During WebCenter Portal Installation

WebLogic Server instance	Components/Applications Hosted	Description
AdminServer		This is the WebLogic Administration Server. The Administration Server provides a central point for managing a WebLogic Server domain. The Administration Server hosts the Administration Console and the Oracle Enterprise Manager Fusion Middleware Control Console.
WC_Spaces	Oracle WebCenter Portal: Spaces	This managed server gets created if you choose to install Oracle WebCenter Portal: Spaces while creating or extending your WebCenter domain.
WC_Portlet	WebCenter Portal Portlets Pagelet Producer Oracle WebCenter Services Producer	This managed server gets created if you choose to install Oracle WebCenter Portal's Pagelet Producer, Oracle Portlet Producers, or Oracle WebCenter Services Producer while creating or extending your WebCenter domain.
WC_Collaboration	Oracle WebCenter Portal's Discussion Server	This managed server gets created if you choose to install Oracle WebCenter Portal's Discussion Server while creating or extending your WebCenter domain.
WC_Utilities	Oracle WebCenter Analytics Collector Oracle WebCenter Activity Graph Engines Oracle WebCenter Personalization	The managed server gets created if you choose to install any of the products listed in the previous column, while creating or extending your WebCenter domain.
WC_CustomPortal	Framework applications	This is a custom portal managed server that hosts Framework applications. For deploying your Framework applications, you must create this custom managed server by extending your WebCenter domain with the template, <code>oracle.wc_custom_portal_template_11.1.1.jar</code> .
WC_CustomServicesProducer	Portlet Producer applications	This is a custom services producer managed server that hosts Portlet Producer applications. For deploying your Portlet Producer applications, you must create this custom managed server by extending your WebCenter domain with the template, <code>oracle.wc_custom_services_producer_template_11.1.1.jar</code> .

In Figure 1–2, the Administration Server and the applications it hosts are displayed in pink. The WebCenter Portal components/applications are shown in yellow while the managed servers they run on are shown in brown.

Figure 1–2 WebCenter Portal Domain Structure



1.5 Directory Structure of an Oracle WebCenter Portal Installation

Figure 1–3 shows the directory structure of a WebCenter Portal installation on a single host.

When you install WebLogic Server, the installer creates the Middleware Home directory, and the WebLogic Server Home directory underneath. The pink boxes in Figure 1–3 represent the directories created. If you install a Node Manager, it gets installed under the WebLogic Server Home directory.

When you install WebCenter Portal, the following directories are created under the same Middleware Home directory (represented by green boxes in Figure 1–3):

- WebCenter Portal Oracle Home (`Oracle_WC1`) - contains WebCenter Portal's software binaries
- Oracle Common Home (`oracle_common`) - contains the binary and library files required for the Oracle Enterprise Manager Fusion Middleware Control and Java Required Files (JRF). There can be only one Oracle Common home within each Middleware home.

Both the WebCenter Portal Oracle home and Oracle Common home directories must reside inside an existing Middleware home directory.

After WebCenter Portal is installed, you use the Configuration Wizard to configure a WebLogic Server domain. Figure 1–3 shows a typical directory structure created when you configure a new domain--if you use the default values for the location of the domain home.

However, the WebCenter Domain Home and Application Home directories can be created anywhere on the system. It is recommended that you create these directories outside of both the Middleware Home and WebCenter Portal Oracle Home directories

so that in the event you need to patch either the Middleware Home or WebCenter Portal Oracle Home, your domain and application data would remain untouched.

Figure 1–3 Directory Structure of an Oracle WebCenter Portal Installation

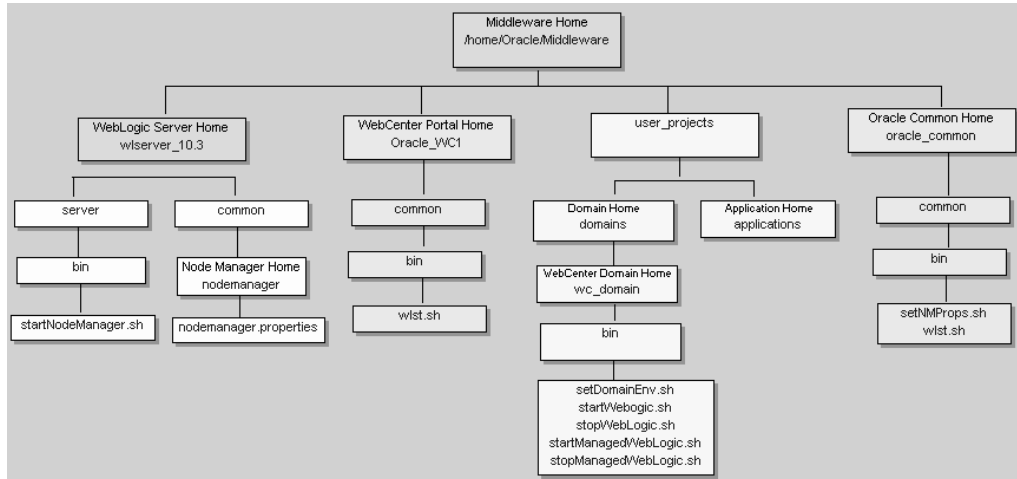


Table 1–2 provides a descriptions of the scripts that are of particular interest for administering the WebLogic Server and the WebCenter Portal domain.

Table 1–2 Scripts for Administering the WebLogic Server and the WebCenter Portal Domain

Script	Description
<code>startNodeManager.sh</code>	Starts the node manager. The Node Manager allows you to start and stop the Managed Servers remotely using the Administration Console or the command line.
<code>setDomainEnv.sh</code>	Sets the environment to start the WebLogic Server for the domain. By default, this script is invoked by the <code>startWebLogic.sh</code> script.
<code>startWebLogic.sh</code>	Starts the WebLogic Server for the domain.
<code>stopWebLogic.sh</code>	Stops the WebLogic Server for the domain.
<code>startManagedWebLogic.sh</code>	Starts a Managed Server for the domain.
<code>stopManagedWebLogic.sh</code>	Stops a Managed Server for the domain.
<code>wlst.sh</code>	This WebLogic Scripting Tool (WLST) allows to execute commands for WebCenter Portal. These commands enable you to configure WebCenter Portal applications from the command line.

1.6 WebCenter Portal Installation Roadmap

Figure 1–4 shows the high-level tasks for installing and configuring WebCenter Portal. Click the required task in the flow chart for information about how to complete the task, or refer to Table 1–3 for a description of various tasks. Table 1–3 specifies whether the tasks are mandatory or optional, and lists the documentation links you can access to get more details about each task.

Figure 1-4 Installing WebCenter Portal in a Simple Topology

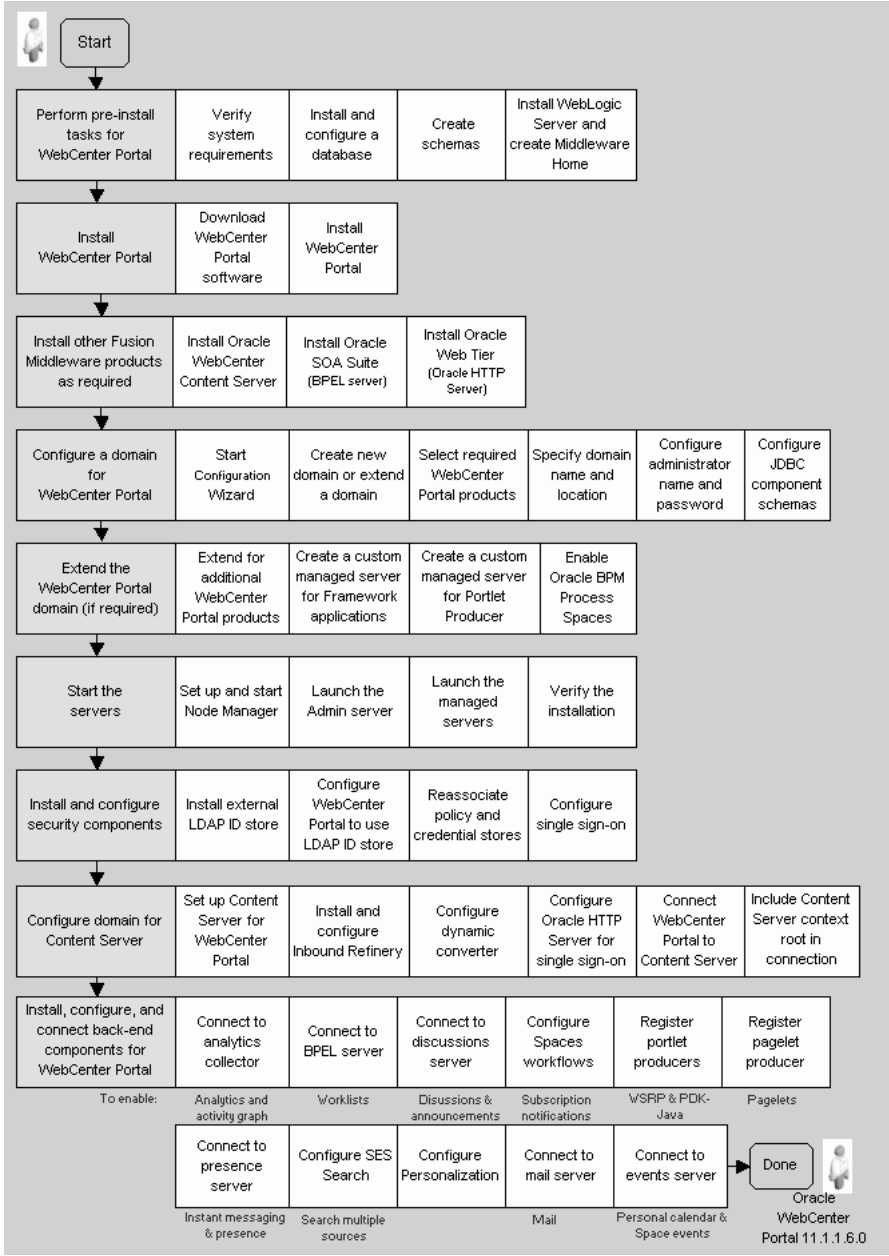


Table 1–3 Installing Oracle WebCenter Portal in a Simple Topology

Task	Description	Mandatory or Optional?	Documentation
Pre-Installation Tasks			
Verify system requirements	Ensure that your environment meets the minimum installation requirements for WebCenter Portal.	Mandatory	Refer to the following links: <ul style="list-style-type: none"> For information about system requirements, such as hardware and software, database schema, minimum disk space and memory, system libraries, see the Oracle Fusion Middleware System Requirements and Specifications page. For certification information, see the System Requirements and Supported Platforms for Oracle Fusion Middleware 11gR1 link on the Oracle Fusion Middleware Supported System Configurations page. For interoperability and compatibility, see <i>Oracle Fusion Middleware Interoperability and Compatibility Guide</i>.
Install and configure a database	Ensure that you have a supported database up and running. Oracle WebCenter can be installed on a supported version of any of the following databases: Oracle Database, Microsoft SQL Server, and IBM DB2.	Mandatory	Refer to the following links: <ul style="list-style-type: none"> For information about the supported versions of databases, see the System Requirements and Supported Platforms for Oracle Fusion Middleware 11gR1 link on the Oracle Fusion Middleware Supported System Configurations page. For information about RCU requirements for supported databases, see the Oracle Fusion Middleware System Requirements and Specifications page:
Create schemas	Use the RCU to create WebCenter Portal schemas: MDS, WEBCENTER, PORTLET, ACTIVITIES, and DISCUSSIONS. The schemas that you need to create depend on the WebCenter Portal products you plan to install. For each WebCenter Portal application, you must create a distinct WebCenter schema. Note: If you are using an IBM DB2 database, make sure you create the operating system users (one for each schema) before running the RCU.	Mandatory	Refer to the links for the following tasks: <ul style="list-style-type: none"> Determining the WebCenter schemas that you must create Obtaining the RCU Starting the RCU Creating Schemas

Table 1–3 (Cont.) Installing Oracle WebCenter Portal in a Simple Topology

Task	Description	Mandatory or Optional?	Documentation
Install Oracle WebLogic Server	<p>WebCenter Portal requires Oracle WebLogic Server. When you install the WebLogic server, it also creates the Middleware Home. You use this Middleware Home when you install WebCenter Portal.</p> <p>Note: If you are installing WebLogic Server on 64-bit platforms using a 64-bit JDK, then you must install the 64-bit JDK before installing WebLogic Server.</p>	Mandatory	<p>See the links for the following tasks:</p> <ul style="list-style-type: none"> ■ Determining the Oracle WebLogic Server version required for your installation ■ Installing Oracle JRockit 64 bit JDK ■ Downloading the installer ■ Installing WebLogic Server
Installation Tasks			
Install WebCenter Portal	<p>Download the WebCenter Portal software.</p> <p>Use the installer to install WebCenter Portal. The installer lays down the binaries for all WebCenter Portal products.</p>	Mandatory	Install WebCenter Portal
Install other Fusion Middleware products as required	<p>Based on your requirements, install other Fusion Middleware products like:</p> <ul style="list-style-type: none"> ■ Oracle WebCenter Content Server - mandatory for Content Presenter, and recommended for the Documents service. ■ Oracle SOA Suite - mandatory for the Worklist service and Spaces Workflows ■ Oracle Web Tier (Oracle HTTP Server) - recommended for Content Server integration and for SSO (since SSO is needed to stop multiple login prompts), and is required for REST and SOA. 	Optional	<p>Refer to the links for the following tasks:</p> <ul style="list-style-type: none"> ■ Install Oracle WebCenter Content Server ■ Install Oracle SOA Suite ■ Oracle Web Tier (Oracle HTTP Server)
Configure a domain for WebCenter Portal	Create a domain for WebCenter Portal and choose the components you want to install.	Mandatory	Configure WebCenter Portal
Extend a WebCenter Portal domain	<p>While creating your WebCenter Portal domain, if you choose not to configure one or more WebCenter Portal components, you can add them later by extending your WebCenter Portal domain.</p> <p>If your organization plans to use Framework applications and Portlet Producer applications, then you must extend the domain to create custom managed servers for deploying these applications.</p> <p>You can extend a domain anytime, and not necessarily immediately after configuring the WebCenter Portal for the first time.</p>	Optional	<p>Extend a domain to:</p> <ul style="list-style-type: none"> ■ Install additional WebCenter products ■ Create a custom managed server for Framework applications ■ Create a custom managed server for Portlet Producer applications ■ Enable Oracle BPM Process Spaces
Post-Installation Tasks			

Table 1–3 (Cont.) Installing Oracle WebCenter Portal in a Simple Topology

Task	Description	Mandatory or Optional?	Documentation
Start the Servers	<p>To start WebCenter Portal, you must first start the Administration Server. If a Node Manager has been configured to perform common operations for Managed Servers, start the Node Manager.</p> <p>To start working with any WebCenter Portal component, you must first start the managed server to which that component is deployed. You can then access the component's URL and configure the component according to your requirements.</p>	Mandatory	<p>Refer to the links for the following tasks:</p> <ul style="list-style-type: none">■ Starting the Administration Server■ Starting the Node Manager■ Starting managed servers■ Verifying the installation

Table 1–3 (Cont.) Installing Oracle WebCenter Portal in a Simple Topology

Task	Description	Mandatory or Optional?	Documentation
Install and configure security components	<p>Install an external LDAP-based authentication provider, and configure WebCenter Portal to use it. By default, WebCenter Portal uses Oracle WebLogic Server's embedded LDAP identity store, which is not recommended for production environment.</p> <p>An external LDAP-based ID store is mandatory for Oracle WebCenter Content Server and Discussions. For integration with Oracle WebCenter Content Server, it is recommended that you configure single sign-on (SSO).</p>	Mandatory for production environment	<p>Refer to the following links:</p> <ul style="list-style-type: none"> ▪ Install an external LDAP-based ID store ▪ Configure WebCenter Portal to use the external LDAP-based ID store ▪ Configure the policy and credential store ▪ Configure SSO
Configure the domain for Oracle WebCenter Content Server	<p>Configure Oracle WebCenter Content Server as a content repository for WebCenter Portal.</p> <p>You can also choose to configure other content repositories: Oracle Portal and Microsoft SharePoint.</p>	Mandatory (Oracle WebCenter Content is mandatory for Content Presenter, and recommended for the Documents service and the Spaces application.)	<p>Refer to the following links for configuring a content repository:</p> <ul style="list-style-type: none"> ▪ Oracle WebCenter Content Server ▪ Oracle Portal ▪ Microsoft SharePoint
Install, configure, and connect other back-end components for WebCenter Portal services	<p>Developers and application users can integrate WebCenter Portal services into Framework applications and the Spaces application. Certain services rely on back-end components, like the Mail service relies on a mail server like Microsoft Exchange Server. To provide for service integration into WebCenter Portal applications, you must install and configure the required back-end components.</p> <p>Spaces provides several prebuilt workflows for space membership notifications, space subscription requests, and so on. To enable them, you must install and configure a Business Process Execution Language (BPEL) server.</p>	Optional	<p>Install and configure back-end components for WebCenter Portal services:</p> <ul style="list-style-type: none"> ▪ Connect to Analytics Collector ▪ Connect to BPEL server ▪ Connect to Discussions Server ▪ Configure Spaces workflows ▪ Register portlet producers ▪ Register pagelet producer ▪ Connect to presence server ▪ Configure SES Search ▪ Configure personalization ▪ Connect to mail server ▪ Connect to events server

Installing Oracle WebCenter Portal

This chapter describes how to install Oracle WebCenter Portal.

The following topics are covered:

- Section 2.1, "Preparing to Install"
- Section 2.2, "Installing Oracle WebCenter Portal"
- Section 2.3, "Installing Oracle JDeveloper"

2.1 Preparing to Install

Oracle WebCenter Portal requires the following software and schemas installed before the install:

- Oracle WebLogic Server
- WebCenter Portal schemas installed in the database using the Repository Configuration Utility (RCU).

Before you begin, make sure you have completed pre-installation tasks listed in Table 1–3.

2.2 Installing Oracle WebCenter Portal

By default, all Oracle WebCenter Portal products (see Section 1.3, "Oracle WebCenter Portal Products" for a complete list) are installed onto your system. After the products are installed, you can run the Oracle Fusion Middleware Configuration Wizard to configure the product(s) of your choice.

This section contains the following topics:

- Section 2.2.1, "Obtaining the Software"
- Section 2.2.2, "Starting the Installer"
- Section 2.2.3, "Configuring Your Oracle Inventory (UNIX Only)"
- Section 2.2.4, "Following the Installation Screens and Instructions"

2.2.1 Obtaining the Software

Depending on your specific needs, there are multiple places where you can obtain Oracle Fusion Middleware software. For details, refer to the Oracle Fusion Middleware Download, Installation, and Configuration ReadMe Files page, where you can find the ReadMe file for your specific release.

Select one of the download locations and download "SOA Suite." This will be saved to your system as a .zip archive file.

After you download the archive file, unpack the archive file into a directory of your choice on the machine where you will be performing the installation.

2.2.2 Starting the Installer

To start the installer, go to the directory where you unpacked the archive file and switch to the `Disk1` directory.

On UNIX operating systems:

```
cd unpacked_archive_directory/Disk1
./runInstaller -jreLoc JRE_LOCATION
```

On Windows operating systems:

```
cd unpacked_archive_directory\Disk1
setup.exe -jreLoc JRE_LOCATION
```

The installer requires the full path to the location of a Java Runtime Environment (JRE) on your system. When you installed Oracle WebLogic Server, a JRE was installed on your system in the `jdk160_27` directory inside the Middleware home. You can use this location as the `JRE_LOCATION` to start the installer.

If you choose to start the installer without using the `-jreLoc` parameter, see Section 2.2.2.1, "Specifying the JRE Location From the Command Line".

2.2.2.1 Specifying the JRE Location From the Command Line

If you do not specify the JRE location with the `-jreLoc` option, you will be prompted to provide the location of your JRE before the installer is started. For example, on a UNIX operating system:

```
./runInstaller
Starting Oracle Universal Installer...

Checking if CPU speed is above 300 MHz.    Actual 2999 MHz    Passed
Checking Temp space: must be greater than 150 MB.    Actual 66070 MB    Passed
Checking swap space: must be greater than 512 MB.    Actual 4047 MB    Passed
Checking monitor: must be configured to display at least 256 colors.    Actual 256
Passed
Preparing to launch Oracle Universal Installer from /tmp/OraInstall2010-02-23_
10-57-58AM. Please wait ...
Please specify JRE/JDK location ( Ex. /home/jre ), <location>/bin/java should
exist :
```

Specify the absolute path to the JRE on your system before you continue.

2.2.2.2 Viewing the Installation Log Files

After the installation is complete, review the installation log files. The installer writes logs files to the `Oracle_Inventory_Location/log` (on UNIX operating systems) or `Oracle_Inventory_Location\logs` (on Windows operating systems) directory. Refer to Section D.2.1, "Installation Log Files" for more information about the log files and their contents.

2.2.3 Configuring Your Oracle Inventory (UNIX Only)

If you are installing on a UNIX operating system, and if this is the first time any Oracle product is being installed on your system with the Oracle Universal Installer, you will be asked to provide the location of an inventory directory. This is where the installer will set up subdirectories and maintain inventory data for each Oracle product that is installed on this system.

Follow the instructions in Table 2–1 to configure the inventory directory information. For more details, click on the screen name in the table, or click the **Help** button in the GUI.

Table 2–1 Inventory Directory and Group Screens

Screen	Description and Action Required
Specify Inventory Directory	Specify the Oracle inventory directory and group permissions for that directory. The group must have write permissions to the Oracle inventory directory.
Inventory Location Confirmation	Run the <code>createCentralInventory.sh</code> script as root.

2.2.4 Following the Installation Screens and Instructions

Table 2–2 lists the screens displayed in Oracle Universal Installer. Follow the instructions in Table 2–2 to install Oracle WebCenter Portal. For details about a screen, click the screen name in the table.

If you need additional help with any of the installation screens, refer to Appendix A, "Oracle WebCenter Portal Installation Screens" or click **Help** in the GUI to access the online help.

Table 2–2 Oracle WebCenter Portal Installation Screens

Screen	Description and Action Required
Welcome	This page introduces you to the Oracle Fusion Middleware installer.
Install Software Updates	Select the method you want to use for obtaining software updates, or select Skip Software Updates if you do not want to get updates. If updates are found, the installer will automatically attempt to apply them at this point; make sure that the server you are using to perform the installation is connected to the Internet. Some updates will require that the installer be restarted; if this happens, the Install Software Updates screen will not be seen the next time.
Prerequisite Checks	Verify that your system meets all necessary prerequisites.
Specify Installation Location	Specify Oracle Middleware home and Oracle home locations. The Oracle Common home (<code>oracle_common</code>) directory will automatically be created inside the Middleware home; do not use <code>oracle_common</code> as the name of your Oracle home directory.
Application Server	Select the application server and specify its location.

Table 2–2 (Cont.) Oracle WebCenter Portal Installation Screens

Screen	Description and Action Required
Installation Summary	Verify the information on this screen, then click Install to begin the installation.
Installation Progress	This screen shows the progress of the installation. When the progress shows 100% complete, click Next to continue.
Installation Complete	Click Save to save your configuration information to a file. This information includes port numbers, installation directories, URLs, and component names which you may need to access at a later time. After saving your configuration information, click Finish to dismiss the installer.

2.3 Installing Oracle JDeveloper

Refer to the following sections for information about Oracle JDeveloper:

- About Oracle JDeveloper
- Special Instructions When Installing Oracle JDeveloper for Oracle WebCenter Portal Application Development

2.3.1 About Oracle JDeveloper

Oracle JDeveloper is a free integrated development environment (IDE) for building Web service-oriented applications, including WebCenter Portal applications, using industry standards for Java, XML, SQL, and Web Services. It supports the complete development life cycle with integrated features for modeling, coding, debugging, testing, profiling, tuning, and deploying applications.

JDeveloper works in tandem with popular open-source frameworks and tools with built-in features for Struts, Ant, JUnit, XDoclets, and CVS, and includes an Extensions SDK that lets developers add capabilities to, and customize, the development environment.

To install Oracle JDeveloper on your development, refer to the *Oracle Fusion Middleware Installation Guide for Oracle JDeveloper*.

2.3.2 Special Instructions When Installing Oracle JDeveloper for Oracle WebCenter Portal Application Development

This section provides important information to consider when you are installing Oracle JDeveloper with Oracle WebCenter Portal.

Typically, you install Oracle JDeveloper on your development machine and connect to a remote Oracle WebCenter Portal domain to deploy and test your applications.

Note: Oracle JDeveloper and Oracle WebCenter Portal must not be installed in the same Middleware home directory. You must create a separate Middleware home for each product.

Note: When you install Oracle JDeveloper on a Windows operating system, be sure that you choose a directory that does not contain spaces. For example, do not use C:\My Home as the installation directory for Oracle JDeveloper. Pages in WebCenter Portal applications are not rendered if there is a space in the path to the installation directory of Oracle JDeveloper.

To build WebCenter Portal applications using JDeveloper, you must install the WebCenter extension bundle. The WebCenter extension bundle is a JDeveloper add-in that provides the complete set of WebCenter capabilities and features to the JDeveloper Studio Edition. For information about obtaining and installing Oracle JDeveloper, see the Oracle JDeveloper page on OTN at the following URL:

<http://www.oracle.com/technetwork/developer-tools/jdev/overview/index.html>

For information about installing the WebCenter extension bundle, see the section "Installing the WebCenter Extension Bundle" in *Oracle WebCenter Framework Developer's Guide*.

Note: Oracle strongly recommends that you set an environment variable for the user home directory (used by JDeveloper to store the runtime files) that is referenced by JDeveloper. By setting this variable, you can avoid receiving long path name errors that are known to occur in some circumstances.

For detailed instructions on setting this variable on Windows, Linux, UNIX, and Mac OS X operating systems, see "Setting the User Home Directory" in *Oracle Fusion Middleware Installation Guide for Oracle JDeveloper (Oracle Fusion Applications Edition)*.

Configuring Oracle WebCenter Portal

This chapter describes how to configure Oracle WebCenter Portal after the binaries for WebCenter Portal products have been laid down using Oracle Universal Installer.

This chapter includes the following subsections:

- Section 3.1, "Preparing to Configure Oracle WebCenter Portal"
- Section 3.2, "Configuration Instructions"
- Section 3.3, "Post-Configuration Tasks"
- Section 3.4, "Setting Up an External LDAP-Based Identity Store"

3.1 Preparing to Configure Oracle WebCenter Portal

You use Oracle Fusion Middleware Configuration Wizard to configure Oracle WebCenter Portal. This section lists the tasks that you must ensure before you run the wizard.

This section includes the following subsections:

- Section 3.1.1, "Using Default Port Numbers for Your Servers"
- Section 3.1.2, "Using Default Settings for Managed Servers"
- Section 3.1.3, "Shutting Down Running Managed Servers"
- Section 3.1.4, "Running the Configuration Wizard with an Oracle RAC Database"

3.1.1 Using Default Port Numbers for Your Servers

By default, the servers that are created in each domain use the same set of port numbers (for example, the Administration Server uses port 7001). If you want to use custom port numbers, you can change the port number when you run the Oracle Fusion Middleware Configuration Wizard:

- The Administration Server port number can be changed on the Configure the Administration Server Screen.
- The port number for all Managed Servers in your domain can be changed on the Configure Managed Servers Screen.

However, Oracle recommends that you use the default port numbers for all servers.

For more information about port numbers, refer to the following:

- "Port Numbers" in *Oracle Application Server Administrator's Guide*.

- "Checking Port Numbers Across Multiple Oracle Homes" in *Oracle Fusion Middleware Installation Planning Guide*.

3.1.2 Using Default Settings for Managed Servers

While configuring Oracle WebCenter Portal, you can choose the components that you want to install. Oracle Fusion Middleware Configuration Wizard automatically creates managed servers in the domain to host the selected WebCenter Portal components. Oracle recommends that you use the default configuration settings for these managed servers.

Table 3–1 shows the Managed Servers that are created.

Table 3–1 Oracle WebCenter Portal Managed Servers

Server	Description
WC_Spaces	Created if Oracle WebCenter Spaces is selected on the "Select Domain Source" screen. This Managed Server hosts Oracle WebCenter Spaces.
WC_Portlet	Created if Oracle Portlet Producers is selected on the "Select Domain Source" screen. This Managed Server hosts Oracle WebCenter Portlets and Oracle Pagelet Producer.
WC_Collaboration	Created if Oracle WebCenter Discussion Server is selected on the "Select Domain Source" screen. This Managed Server hosts Oracle WebCenter Discussions.
WC_Uilities	Created if Oracle WebCenter ActivityGraph Engines is selected on the "Select Domain Source" screen. This Managed Server hosts utility applications, such as Activity Graph and Analytics, as well as the Personalization server.

3.1.3 Shutting Down Running Managed Servers

If you are extending an existing WebLogic Server domain (Section 3.2.3, "Extending an Existing Domain"), you must shut down any Managed Servers that are currently running before you start the Configuration Wizard. If you do not, validation of your Managed Servers will fail due to port number conflicts from the Managed Servers that are currently running.

For more information, see "Starting and Stopping Oracle Fusion Middleware" in *Oracle Application Server Administrator's Guide*.

3.1.4 Running the Configuration Wizard with an Oracle RAC Database

If you are running the Configuration Wizard with a backend Oracle RAC database, Oracle recommends that you keep all the Oracle RAC instances configured for the service to be up and running. This will ensure that JDBC validation checks are reliable and minimize the possibility of accidental mis-configuration.

For more information, refer to *Oracle Fusion Middleware High Availability Guide*.

3.2 Configuration Instructions

You use the Oracle Fusion Middleware Configuration Wizard to configure Oracle WebCenter Portal.

If this is a new installation, you may want to create a new domain for WebCenter Portal. Alternatively, you can choose to extend another existing product domain to add

WebCenter products. For example, if you have an existing Oracle SOA domain with Content Server, you can extend this domain to include Oracle WebCenter Portal products, in which case some configuration tasks become simpler.

If you have a situation where you may want to install multiple products but you do not want to patch them at the same time, then you should keep each product in its own separate domain.

This section contains the following subsections:

- Section 3.2.1, "Starting the Oracle Fusion Middleware Configuration Wizard"
- Section 3.2.2, "Creating a New Domain"
- Section 3.2.3, "Extending an Existing Domain"

3.2.1 Starting the Oracle Fusion Middleware Configuration Wizard

To start the Configuration Wizard, run the following command:

- On UNIX operating systems:

```
cd WebCenter_ORACLE_HOME/common/bin
./config.sh
```

- On Windows operating systems:

```
cd WebCenter_ORACLE_HOME\common\bin
config.cmd
```

You can choose to create a configuration log file when you start the Configuration Wizard. For information, see Section 3.2.1.1, "Creating a Configuration Log File."

Note: If you are using a 32-bit operating system, Oracle JRockit SDK is installed as part of the Oracle WebLogic installation. This is the JDK that the Configuration Wizard will use by default. If you want to invoke the Configuration Wizard with the Sun JDK, do the following prior to starting the Configuration Wizard:

1. Set the `JAVA_HOME` environment variable to the location of the Sun JDK. For example, you can set it to the Sun JDK that was installed with Oracle WebLogic Server in the `MW_HOME/jdk160_27` (on UNIX operating systems) or `MW_HOME\jdk160_27` (on Windows operating systems) directory.
 2. Set the `JAVA_VENDOR` environment variable to "Sun".
-

If this is a new installation and you need to create a new WebLogic domain, follow the instructions in Section 3.2.2, "Creating a New Domain." You can also run the Configuration Wizard to extend an existing WebLogic domain, as described in Section 3.2.3, "Extending an Existing Domain".

3.2.1.1 Creating a Configuration Log File

To create a log file for your configuration session, use the `-log=log_filename` parameter when you start the Configuration Wizard. For more information, see Section D.2.2, "Configuration Log Files".

3.2.2 Creating a New Domain

To create a new WebLogic domain for your Oracle WebCenter Portal products, follow the instructions in "Creating a WebLogic Domain" in *Oracle Fusion Middleware Creating Domains Using the Configuration Wizard*.

This section discusses the naming convention for domains, the WebCenter Portal products that are available for configuration, and manually granting the administrator role to a nondefault user for WebCenter Portal: Spaces and Oracle WebCenter Discussions server. It contains the following subsections:

- Section 3.2.2.1, "Specifying a Domain Name"
- Section 3.2.2.2, "Selecting Oracle WebCenter Portal Products for Configuration"
- Section 3.2.2.3, "Granting Administrator Privileges to a Non-Default User"

3.2.2.1 Specifying a Domain Name

On the "Specify Domain Name and Location" screen, you are asked to provide a directory path and name for the domain you want to create. This is your Domain home directory (see "WebLogic Server Domain" in *Oracle Fusion Middleware Installation Planning Guide* for more information).

When creating a domain on a Windows operating system, make sure neither the directory path nor domain name contain a space character; otherwise, the domain will not be created.

3.2.2.2 Selecting Oracle WebCenter Portal Products for Configuration

The Select Domain Source screen (Figure 3–1) is where you select the products you want to configure in your domain:

Figure 3–1 Configuration Wizard - Oracle WebCenter Portal Products

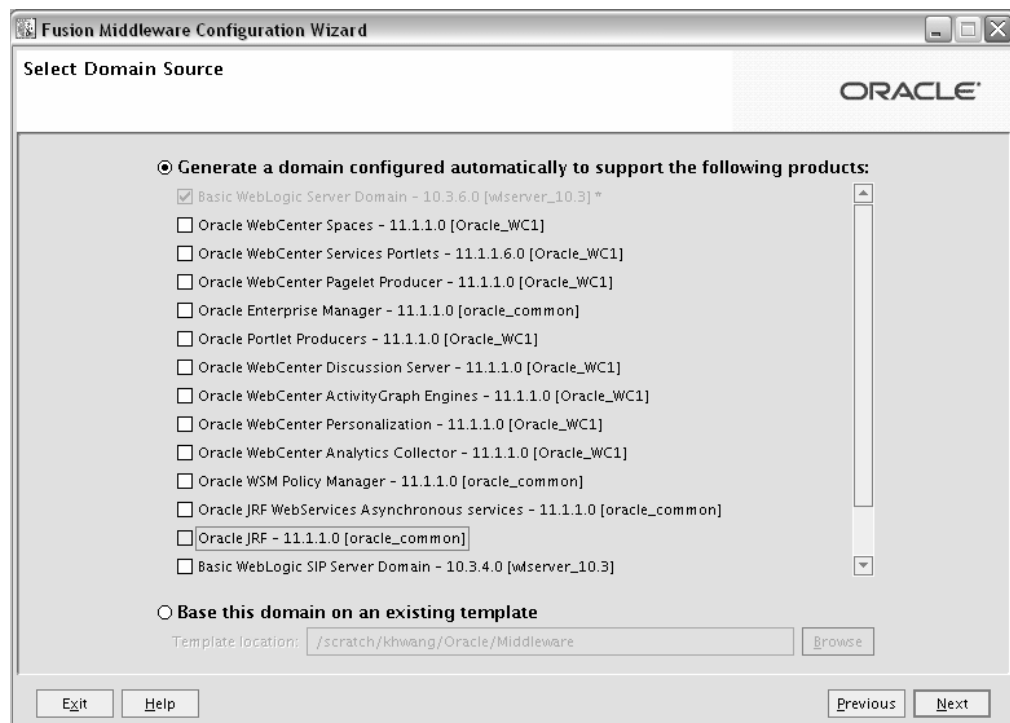


Table 3–2 lists the Oracle WebCenter Portal products available for configuration, and their dependencies. Note that if you select a product that has any dependencies, the dependencies are automatically selected for you on the Select Domain Source screen.

Table 3–2 Oracle WebCenter Portal Products Available for Configuration

Product	Dependencies
Oracle WebCenter Spaces	Oracle Enterprise Manager Oracle WSM Policy Manager Oracle JRF
Oracle WebCenter Services Portlets	Oracle WSM Policy Manager Oracle JRF
Oracle WebCenter Pagelet Producer	Oracle WSM Policy Manager Oracle JRF
Oracle Portlet Producers	Oracle WSM Policy Manager Oracle JRF
Oracle WebCenter Discussion Server	Oracle WSM Policy Manager Oracle JRF
Oracle WebCenter ActivityGraph Engines	Oracle WebCenter Analytics Collector Oracle JRF
Oracle WebCenter Personalization	Oracle JRF
Oracle WebCenter Analytics Collector	Oracle JRF

3.2.2.3 Granting Administrator Privileges to a Non-Default User

The domain administrator you create for Oracle WebCenter Portal is also the administrator for Oracle WebCenter Portal: Spaces and Oracle WebCenter Portal's Discussion Server. While creating a domain, if you specify any user other than `weblogic` as the domain administrator, that user is granted all the domain administrative rights. However, after creating the domain, you must manually grant the administrator role to that nondefault user for Oracle WebCenter Portal: Spaces and Oracle WebCenter Portal's Discussion Server. For information about granting the administrator role to a non-default user for:

- Oracle WebCenter Portal: Spaces, see "Granting the WebCenter Spaces Administrator Role to a WebCenter Spaces User" in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.
- Oracle WebCenter Portal's Discussion Server, see "Granting Administrator Role for Oracle WebCenter Discussions Server" in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

3.2.3 Extending an Existing Domain

You can extend any Fusion Middleware product domain to add WebCenter Portal components. The Configuration Wizard will automatically detect the components that have already been installed and give you the option to add any WebCenter Portal products that do not already exist.

Note: A domain must be completely stopped before you attempt to extend it.

Before you extend a domain, be sure to refer to the *Oracle Fusion Middleware Interoperability and Compatibility Guide* for important information regarding the ability of Oracle Fusion Middleware products to function with previous versions of other Oracle Fusion Middleware, Oracle, or third-party products

This section describes the scenarios in which you may want to extend your existing domain. It includes the following subsections:

- Section 3.2.3.1, "Extending a Domain to Install Oracle WebCenter Portal Products."
- Section 3.2.3.2, "Extending a Domain to Create Custom Managed Servers."
- Section 3.2.3.3, "Extending a Domain to Enable Oracle BPM Process Spaces."

Note: WebCenter Portal relies on the MDS schema. Depending on the WebCenter Portal components used in your applications, your WebCenter Portal installation may also require the following schemas: `WEBCENTER`, `DISCUSSIONS`, `ACTIVITIES`, and `PORTLET`.

- **MDS:** WebCenter Portal applications can share the MDS schema. This means that multiple deployed applications can use the same MDS schema, each having its own partition defined in MDS.
- **WEBCENTER:** There must be a distinct `WEBCENTER` schema for each WebCenter Portal application.
- **DISCUSSIONS:** Two WebCenter Portal applications, both using Discussions, can use a single discussions server. The discussions server is wired to a single `DISCUSSIONS` schema. The only thing that must be unique is the category ID, which is set for each WebCenter Portal application when the Discussion Forum connection is configured. For information about setting the category ID, see how to set `application.root.category.id` using `setDiscussionForumServiceProperty`, in the Oracle WebCenter Custom WLST Commands chapter in *Oracle Fusion Middleware WebLogic Scripting Tool Command Reference*.
- **ACTIVITIES:** Analytics and Activity Graph can be used only by a single application within a domain, whether it is the Spaces application or a Framework application.
- **PORTAL:** Many Portlet Producer applications can be deployed to a single Custom Services Producer managed server. Portlet Producer applications can share a single `PORTLET` schema.

For information about the various schemas that your WebCenter Portal applications may require, see Table 5–1. For information about how to create schemas, refer to "Creating Schemas" in *Oracle Fusion Middleware Repository Creation Utility User's Guide*.

3.2.3.1 Extending a Domain to Install Oracle WebCenter Portal Products

You can extend your existing WebCenter Portal domain to install additional WebCenter Portal products listed in Table 3–2. When you run the Configuration Wizard to extend the domain, you must select **Generate a domain configured automatically to support the following products** on the Select Domain Source screen, then select the product(s) you want to add to the domain (Figure 3–1).

Refer to *Oracle Fusion Middleware Interoperability and Compatibility Guide* for important information. Follow the instructions in "Extending WebLogic Domains" in *Oracle*

Fusion Middleware Creating Domains Using the Configuration Wizard to extend an existing domain.

Note: Before extending a domain, make sure that schemas exist in your database for the components you plan to configure. For example, if you are planning to extend the domain and configure Oracle WebCenter Portal's Discussion Server, make sure the `DISCUSSIONS` schema exists in your Oracle database before you continue.

3.2.3.2 Extending a Domain to Create Custom Managed Servers

WebCenter Portal enables application developers to build two kinds of applications: Framework applications and Portlet Producer applications. To enable deployment of these applications, you must extend your domain with the required domain extension templates to create custom managed servers. While extending the domain, you can also customize the JDBC connections and change the JMS file store. The Configuration Wizard uses your input to update the configuration files, such as `config.xml`, and all other generated components in the domain directory, as required.

For more information about WebCenter custom templates, see "Oracle WebCenter Portal Templates" in *Oracle Fusion Middleware Domain Template Reference*.

This section includes the following subsections:

- Section 3.2.3.2.1, "Creating a Custom Managed Server for Framework Applications"
- Section 3.2.3.2.2, "Creating a Portal Managed Server for Portlet Producer Applications"
- Section 3.2.3.2.3, "Creating Multiple Custom Managed Servers"

3.2.3.2.1 Creating a Custom Managed Server for Framework Applications If your application developers need to develop Framework applications, you must create the Custom Portal managed server for deployment of these applications.

Note: Framework applications can include various WebCenter Portal services. Some of these services require the `WebCenter` schema. There must be a distinct `WEBCENTER` schema for each Framework application. Before you create the Custom Portal managed server, you must run the RCU again to create a second version of the `WebCenter` schema. Note that this schema is separate from the `WebCenter` schema used by Oracle WebCenter Spaces, and therefore, make sure you use a different schema prefix.

For information about WebCenter Portal services that require the `WebCenter` schema, see Table 5–1. For information about how to create schemas, refer to "Creating Schemas" in *Oracle Fusion Middleware Repository Creation Utility User's Guide*.

To create the Custom Portal managed server, extend the domain with the `oracle.wc_custom_portal_template_11.1.1.jar` template. On the Select Domain Source screen, select the **Base this domain on an existing template** option, and click **Browse** to locate the template.

- On UNIX operating systems, the template is located here:

`WebCenter_ORACLE_HOME/common/templates/applications/oracle.wc_custom_portal_template_11.1.1.jar`

- On Windows operating systems, the template is available here:

`WebCenter_ORACLE_HOME\common\templates\applications\oracle.wc_custom_portal_template_11.1.1.jar`

Follow the instructions in "Extending WebLogic Domains" in *Oracle Fusion Middleware Creating Domains Using the Configuration Wizard* to extend an existing domain.

When you extend the WebCenter Portal domain with the custom portal template, it creates the Custom Portal managed server named `WC_CustomPortal` and targets all the necessary resources to it. It also adds the following JDBC data sources:

- `mds-CustomPortalDS` (for accessing the MDS schema)
- `WebCenter-CustomPortalDS` (for accessing the WebCenter schema)
- `Activities-CustomPortalDS` (for accessing the Activities schema)

If your Framework applications use web services or your WebCenter Portal services use the security and policy manager, they require Oracle WSM Policy Manager. You must run the Configuration Wizard a second time to extend your domain with the Oracle WSM Policy Manager template if it is not already installed. This template is available on the Select Domain Source screen.

3.2.3.2 Creating a Portal Managed Server for Portlet Producer Applications If your application developers need to build Portlet Producer applications, you must create a Custom Services Producer managed server for deployment of these applications. To create the managed server, extend the domain with the Custom Portal template, `oracle.wc_custom_services_producer_template_11.1.1.jar`. On the Select Domain Source screen, select **Base this domain on an existing template**, and click **Browse** to locate the template at the following paths:

- On UNIX operating systems:

`WebCenter_ORACLE_HOME/common/templates/applications/oracle.wc_custom_services_producer_template_11.1.1.jar`

- On Windows operating systems:

`WebCenter_ORACLE_HOME\common\templates\applications\oracle.wc_custom_services_producer_template_11.1.1.jar`

When you extend the WebCenter Portal domain with the custom producer services template, it creates the Custom Services Producer managed server named `WC_CustomServicesProducer` and targets all the necessary resources to it. It also adds the following JDBC data sources:

- `mds-CustomServicesProducerDS` (for accessing the MDS schema)
- `WebCenter-CustomServicesProducerDS` (for accessing the WebCenter schema)
- `Activities-CustomServicesProducerDS` (for accessing the Activities schema)
- `Portlet-CustomServicesProducerDS` (for accessing the Portlet schema)

3.2.3.2.3 Creating Multiple Custom Managed Servers A template can be applied only once to a domain. If you want to create multiple custom Managed Servers, you must clone

the existing custom Managed Server with the `cloneWebCenterManagedServer()` WLST command.

For more information, see "cloneWebCenterManagedServer" in *Oracle Fusion Middleware WebLogic Scripting Tool Command Reference*.

3.2.3.3 Extending a Domain to Enable Oracle BPM Process Spaces

Oracle Business Process Management (Oracle BPM) Process Spaces is a workspace built on top of WebCenter Portal: Spaces, and it provides spaces designed specifically for modeling and executing business processes. These spaces include a process workspace, a process modeling space, and a process instance space.

For more information about Process Spaces functionality, refer to "Understanding Oracle Business Process Management Process Spaces" in *Oracle Fusion Middleware User's Guide for Oracle Business Process Management*.

Process Spaces relies on Oracle WebCenter Content Server and Oracle WebCenter Portal's Discussion Server for collaboration purpose. You can enable Process Spaces in Spaces by extending your WebCenter Portal domain with the Oracle BPM Spaces template. You also need to run the `install.xml` script. The installation script can be used for a single-server configuration as well as a cluster configuration.

Note: After you extend your domain using the Oracle BPM Spaces template, you cannot access Oracle WebCenter Portal: Spaces until you complete installing Oracle BPM Process Spaces.

To enable Process Spaces for Spaces:

1. Ensure that the following are installed:
 - Oracle BPM. For information, see *Oracle Fusion Middleware Installation Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.
 - Content Server. For information, see Section 5.3.1, "Oracle WebCenter Content Server Requirements."
 - Discussions Server. For information, see Section 3.2.3.1, "Extending a Domain to Install Oracle WebCenter Portal Products."

Note: Oracle BPM must be installed and up and running before you attempt to extend your domain with the Oracle BPM Spaces template. If you install Process Spaces without first installing Oracle BPM, the entire Spaces application will stop working.

2. Extend your WebCenter Portal domain using the Oracle BPM Spaces template. The template is available at the following location:

On UNIX: `WebCenter_ORACLE_HOME/common/templates/applications/oracle.bpm.spaces_template_11.1.1.jar`

On Windows: `WebCenter_ORACLE_HOME\common\templates\applications\oracle.bpm.spaces_template_11.1.1.jar`

For information, see "Extending a WebLogic Domain in Graphical Mode" in *Oracle Fusion Middleware Creating Domains Using the Configuration Wizard* for instructions.

3. Copy the `SOA_ORACLE_HOME/bpm/process_spaces` (on UNIX) or `SOA_ORACLE_HOME\bpm\process_spaces` (on Windows) folder from the SOA Oracle home directory to any location from where it would be able to connect to the WebCenter Portal installation.
4. Open the `process-portal-install.properties` file located in the `process_spaces` folder and specify the required Oracle BPM and WebCenter Portal properties as listed in Table 3–3.

Note: For security purposes, you can skip specifying the passwords, and provide them later when prompted.

Table 3–3 Properties Specified in `process-portal-install.properties`

Property	Description
<code>extendSoa</code>	Specify the value as <code>true</code> if WebCenter Portal and SOA are in the same domain, else <code>false</code> .
<code>promptForPasswords</code>	The flag to decide whether to prompt for passwords or read them from the <code>process-portal-install.properties</code> file while running the installer.
Oracle BPM Schema Details	
<code>bpmDBUser</code>	User name to connect to the database configured for Oracle BPM
<code>bpmDBPassword</code>	Password to connect to Oracle BPM's database
<code>bpmDBType</code>	Database type configured for Oracle BPM
<code>bpmDBDriver</code>	Driver used to connect to Oracle BPM's database
<code>bpmDBUrl</code>	URL of Oracle BPM's database, like <code>jdbc:oracle:thin:@host:1521</code>
Oracle BPM MDS Details	
<code>bpmMDSUser</code>	User name for the MDS schema used for Oracle BPM
<code>bpmMDSPassword</code>	Password for Oracle BPM's MDS schema
Oracle BPM Runtime Details	
<code>bpmServerURL</code>	Oracle BPM server URL. For a single BPM server: <code>t3://<bpmHost>:<bpmRuntimePort></code> For example: <code>t3://myHost:8001</code> For BPM cluster, specify separated list of BPM server URLs for all servers in the cluster in the following format: <code>t3://host1:port1,host2:port2,...</code> For example, <code>t3://myHost1:8001,myHost2:8002,myHost3:8003</code>
<code>bpmAdminUser</code>	Name of the user that has Administrator privileges on the Oracle BPM server
<code>bpmAdminPassword</code>	Password for the Oracle BPM Admin user
Spaces Installation Details	
<code>wcOracleHome</code>	Path to the WebCenter Portal Oracle home directory

Table 3–3 (Cont.) Properties Specified in process-portal-install.properties

Property	Description
wcDomainName	Name of the domain where WebCenter is installed. If <code>extendSoa</code> flag is set to <code>true</code> , point to the BPM domain.
wcSetDomainRealmPassword	Flag to control whether to set the domain realm password; set the value to either <code>true</code> or <code>false</code> . Note: This property is for setting up Global Trust. It is recommended that you set Global Trust manually; so set this property to <code>false</code> .
wcDomainRealmPassword	Password to set up trusted domains. Same password must be set on Oracle BPM domain as well. Note: This property is for setting up Global Trust. It is recommended that you set Global Trust manually, and not by using this property.
wc.server.port	Port on which <code>WC_Spaces</code> managed server is hosted
WebCenter's WebLogic Installation Details	
wcHost	Host name on which WebCenter's Admin server is running
wcAdminPort	Port number on which WebCenter's Admin server is running
wcAdminUser	Admin user for the WebCenter Admin server
wcAdminPwd	Password of the WebCenter Admin server
wcManagedServerName	In a single-server environment, specify the name of the managed server where Spaces is deployed. In a clustered environment, specify the name of any one of the Spaces managed servers that is part of the cluster.
wcConfigServices	Flag to configure the Oracle Content Server and Discussions Server to work with Oracle WebCenter. The Content Server and Discussion Server details listed later in this table must be specified only if <code>wcConfigServices</code> is set to <code>true</code> . Note: It is strongly recommended that instead of using the <code>install.xml</code> script, you manually configure Oracle Content Server and Discussions Server to work with Oracle WebCenter. For information, see the "Managing Content Repositories" and "Managing the Announcements and Discussions Services" chapters in <i>Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal</i> .
isWebcenterClusterConfig	Flag to specify whether WebCenter Portal installation is configured for a cluster. Set to 'true' if it is a cluster configuration.
wcSpacesClusterName	Name of the Spaces application's cluster. Set this property only if <code>isWebcenterClusterConfig</code> is set to <code>true</code> .
Content Server Details	
wcContentServerName	Set these properties if <code>wcConfigServices</code> is set to <code>true</code> . Name of the Oracle Content Server configured for Oracle WebCenter
wcContentServerPort	Port on which Oracle Content Server is running.
wcContentSpacesRoot	Name of the Spaces root folder on Oracle Content Server
wcContentAdminUser	Name of the Admin user for Oracle Content Server

Table 3–3 (Cont.) Properties Specified in process-portal-install.properties

Property	Description
Discussions Server Details	Set these properties if <code>wcConfigServices</code> is set to <code>true</code> .
<code>wcDiscussionServerUrl</code>	Name of the Discussion Server configured for WebCenter
<code>wcDiscussionAdminUser</code>	Name of the Admin user for Discussion Server

5. Make sure you have `ant` and Java JDK installed.
 Ant is shipped with Oracle BPM. You can find the installer under the path `SOA_ORACLE_HOME/modules/org.apache.ant_1.7.0`.
6. Ensure that the `PATH` and `CLASSPATH` environment variables are set for both `ant` and Java JDK.
7. Run the `ant` script `install.xml` located in the `process_spaces` folder:

```
ant -f install.xml -DpromptForPasswords=true
```
8. If `wcConfigServices` has been set to `true` in `process-portal-install.properties`:
 - a. Restart `WC_Spaces`.
 - b. Run the following `ant` command:

```
ant -f install.xml post-install -DpiArgs -importGSONly
```
9. If Oracle BPM and WebCenter Portal have been configured in different domains, configure Trusted Domain Credentials in both the Oracle BPM and WebCenter Portal domains.
 For more information, see "Enabling Trust Between WebLogic Server Domains" in *Oracle Fusion Middleware Securing Oracle WebLogic Server*.
10. Start Oracle BPM. For information, see "Configuring Oracle SOA Suite and Oracle Business Process Management Suite" in *Oracle Fusion Middleware Installation Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

Note: If you do not start Oracle BPM, you may face problems logging into Spaces.

3.3 Post-Configuration Tasks

This section contains general information that will help you verify your installation and configuration. Some components may require custom or manual configuration, and this information is also included in this section:

- Section 3.3.1, "Starting the Servers"
- Section 3.3.2, "Verifying the Installation"

3.3.1 Starting the Servers

This section includes the following subsections:

- Section 3.3.1.1, "Starting the Administration Server"
- Section 3.3.1.2, "Starting the Node Manager"

- Section 3.3.1.3, "Starting Managed Servers"

3.3.1.1 Starting the Administration Server

The Administration Server serves as a central location from which to monitor all resources in a domain. It maintains the domain's configuration and distributes changes in the configuration to Managed Servers. There is one Administration Server for each domain.

To get your deployments up and running, you must start the Administration Server.

1. Navigate to the `DOMAIN_HOME/bin` directory.
2. Run either of the following scripts:
 - `startWebLogic.sh` (on UNIX)
 - `startWebLogic.cmd` (on Windows)

To interact with the Administration Server, you can use Oracle WebLogic Server Administration Console, Oracle Enterprise Manager Fusion Middleware Control, or Oracle WebLogic Scripting Tool (WLST). The Oracle WebLogic Server Administration Console and Fusion Middleware Control run in the Administration Server.

You can access the Administration Server console by using the following URL format:

```
http://administration_server_host:administration_server_port/console
```

For example: `http://example.com:7001/console`

Supply the username and password that you specified on the Configure Administrator Username and Password Screen of the Configuration Wizard.

To access the Oracle Enterprise Manager Fusion Middleware Control Console, use the following URL format:

```
http://administration_server_host:administration_server_port/em
```

For example: `http://example.com:7001/em`

3.3.1.2 Starting the Node Manager

The Node manager allows starting and stopping the Managed Servers remotely. Once you start the Node Manager, you can start Managed Servers using the Administration Console, the Enterprise Manager Control Console, or the command line. The Node manager can also be used for:

- Automatically restarting failed servers.
- Automatic Service Migration when using consensus-based leasing.
- Whole Server Migration.

While use of Node Manager is optional, it provides valuable benefits if your WebLogic Server environment hosts applications with high-availability requirements. It also allows for OPatch, which is a tool used to update or patch your existing software, to be run in an automated fashion.

If you want to use Node Manager to start Managed Servers, you must first configure it. For information, see "General Node Manager Configuration" in *Oracle Fusion Middleware Node Manager Administrator's Guide for Oracle WebLogic Server*.

For information about starting the Node Manager, see "Using Node Manager" in *Oracle Fusion Middleware Node Manager Administrator's Guide for Oracle WebLogic Server*.

3.3.1.3 Starting Managed Servers

To get your deployments up and running, you must start the various Managed Servers. This section describes the different ways in which you can start Managed Servers.

Note: WebCenter Spaces supports automatic configuration of certain WebCenter services. For automatic service configuration to work, you must first start the managed servers associated with the services, and then start the `WC_Spaces` managed server. When starting managed servers, `WC_Spaces` must be started last.

This section includes the following subsections:

- Section 3.3.1.3.1, "Starting Managed Servers with a Startup Script"
- Section 3.3.1.3.2, "Starting Managed Servers Using Node Manager"
- Section 3.3.1.3.3, "Starting Managed Servers from the Administration Console"
- Section 3.3.1.3.4, "Associating a Machine with the WebCenter Managed Servers"

3.3.1.3.1 Starting Managed Servers with a Startup Script After configuring your WebCenter Portal domain, you will have a start script named `startManagedWebLogic` that you can use to start Managed Servers in the domain.

- On UNIX operating systems:

```
Run DOMAIN_HOME/bin/startManagedWebLogic.sh managed_server_name admin_url
```

- On Windows operating systems:

```
Run DOMAIN_HOME\bin\startManagedWebLogic.cmd managed_server_name admin_url
```

Where `managed_server_name` specifies the name of the Managed Server that you want to start, and `admin_url` specifies the listen address (host name, IP address, or DNS name) and port number of the domain's Administration Server. This command also requires that you specify a server name. The servers that you may need to start are:

- `WC_Portlet` - Hosts WebCenter Portal Portlets and Pagelet Producer
- `WC_Collaboration` - Hosts Oracle WebCenter Portal's Discussion Server
- `WC_Uutilities` - Hosts Oracle WebCenter Analytics Collector, Oracle WebCenter Activity Graph Engines, and Oracle WebCenter Personalization
- `WC_Spaces` - Hosts Oracle WebCenter Portal: Spaces

For example, use the following command to start `WC_Spaces`, the managed server for Oracle WebCenter Portal: Spaces:

- On a UNIX operating system

```
DOMAIN_HOME/bin/startManagedWebLogic.sh WC_Spaces http://example.com:7001
```

- On Windows operating systems

```
DOMAIN_HOME\bin\startManagedWebLogic.cmd WC_Spaces http://example.com:7001
```


When you run the command, you are prompted for the WebLogic Server username and password. Supply the username and password that you specified on the Configure Administrator Username and Password Screen of the Configuration Wizard.

If you do not know the names of the managed servers that need to be started, you can view the contents of the following file:

- On UNIX operating systems

```
DOMAIN_HOME/startManagedWebLogic_readme.txt
```

- On Windows operating systems

```
DOMAIN_HOME\startManagedWebLogic_readme.txt
```

Or, you can access the Administration Server console at the following URL:

```
http://administration_server_host:administration_server_port/console
```

Supply the username and password that you specified on the Configure Administrator Username and Password Screen of the Configuration Wizard.

Note: When you run the command to start a managed server, wait until the output of the command shows up. Before starting WC_Spaces, wait until all other managed servers are started.

3.3.1.3.2 Starting Managed Servers Using Node Manager For information about starting Managed Servers using the Node Manager, see "Using Node Manager" in *Oracle Fusion Middleware Node Manager Administrator's Guide for Oracle WebLogic Server*.

Note: Node Manager must be up and running if you want to use it to start Managed Servers.

3.3.1.3.3 Starting Managed Servers from the Administration Console You can start managed servers from the Administration Console if the following two conditions are met:

- Managed servers are associated with a machine.
- Node Manager is up and running

3.3.1.3.4 Associating a Machine with the WebCenter Managed Servers You can associate Managed Servers to a machine either by using Oracle Fusion Middleware Configuration Wizard or the Administration Console.

While creating the WebCenter Portal domain you must have already created a machine and associated the same to the managed servers. In the Configuration Wizard:

- Use the Configure Machines screen to create a machine.
- Use the Assign Servers to Machines screen to associate your Managed Servers with the machine.

To create a machine and associate a managed server with it (or verify the configuration) using the Administration Console:

1. Log in to the WebLogic Administration Server Console using the following URL:

```
http://administration_server_host:administration_server_port/console
```

2. Under your WebCenter domain, navigate to **Environment > Machines**.
3. Click **New**.
4. Enter a machine name (for example, *Machine-WC*).
When creating the machine use the server name where WebCenter is installed.
5. Click **Next**, and then click **Finish**.
6. Navigate to **Environment > Servers** and select the managed server with which you want to associate this machine (*Machine-WC*). Use the drop-down list to associate the managed server with the machine.

Note: This procedure only works if the Managed Servers are shut down. If the Managed Servers are up and running, then no values will appear in the drop-down list.

7. Repeat step 6 for all the other managed servers.
After this procedure, the Managed Server will start successfully and be accessible from the Administration Console and also Node Manager.

3.3.2 Verifying the Installation

Start your browser and enter the following URLs:

- To access the Administration Server:

`http://administration_server_host:administration_server_port`

This information was visible on the Creating Domain Screen (the last screen) of the Configuration Wizard.

- To access the Administration Server console:

`http://administration_server_host:administration_server_port/console`

You will be prompted for the username and password credentials that you specified on the Configure Administrator Username and Password Screen of the Configuration Wizard.

- To access Enterprise Manager:

`http://administration_server_host:administration_server_port/em`

- To access Oracle WebCenter Portal: Spaces:

`http://WC_Spaces_server_host:WC_Spaces_server_port/webcenter`

The default port number for Oracle WebCenter Portal: Spaces is 8888.

- To access Pagelet Producer:

`http://WC_Portlet_server_host:WC_Portlet_server_port`

The default port number for Pagelet Producer is 8889.

To access the Pagelet Producer console:

`http://WC_Portlet_server_host:WC_Portlet_server_port/pageletadmin`

- To access Oracle WebCenter Analytics Collector, Oracle WebCenter Activity Graph Engines and Oracle WebCenter Personalization:

`http://WC_Uilities_server_host:WC_Uilities_server_port/activitygraph-engines`

To access Oracle WebCenter Activity Graph Engines:

`http://WC_Uilities_server_host:Wc_Uilities_server_port/activitygraph-engines/Login.jsp`

To access Oracle WebCenter Personalization:

`http://WC_Uilities_server_host:Wc_Uilities_server_port/wcps/api/property/resourceIndex`

The default port number for Oracle WebCenter Analytics Collector, Oracle WebCenter Activity Graph Engines and Oracle WebCenter Personalization is 8891.

- To access WebCenter OmniPortlet and Web Clipping Portlets:

`http://WC_Portlet_server_host:WC_Portlet_server_port/portalTools/`

The default port number for WebCenter Portlets is 8889.

- To access Oracle WebCenter Portal's Discussion Server:

`http://WC_Collaboration_server_host:WC_Collaboration_server_port/owc_discussions`

The default port number for Oracle WebCenter Portal's Discussion Server is 8890.

3.4 Setting Up an External LDAP-Based Identity Store

By default, WebCenter Portal applications use Oracle WebLogic Server's embedded LDAP identity store for storing user accounts and groups, and an XML file-based policy store for storing policy grants. Although secure, the embedded LDAP identity store is not a "production-class" store. You must replace it with an external LDAP-based identity store, such as Oracle Internet Directory, for enterprise production environments. Further, the default XML file-based policy store can be used only for single-node WebCenter Portal configurations. For multi-node configurations, you must reassociate the policy store and the credential store with an external LDAP-based identity store. An external LDAP-based identity store manages identities of users across diverse servers and enables you to configure single sign-on (SSO) authentication across applications.

Oracle WebCenter Content Server and Oracle WebCenter Portal's Discussion Server rely on external LDAP-based identity stores. Therefore, if you want to use the Documents, Discussions, or Announcements services, you must install and configure an external LDAP-based identity store.

Table 3–4 describes the tasks that you must perform to configure an external LDAP-based identity store for WebCenter Portal.

Table 3–4 Tasks for Configuring an External LDAP-Based Identity Store

Task	Description	Mandatory/Optional?
1. Install an external LDAP-based identity store	Install an external LDAP-based identity store, such as Oracle Internet Directory. For information about how to install Oracle Identity Management, see <i>Oracle Fusion Middleware Installation Guide for Oracle Identity Management</i> .	Mandatory
2. Configure WebCenter Portal to use the external LDAP-based identity store	Reassociate the identity store with an external LDAP, rather than the default embedded LDAP. For information, see the "Reassociating the Identity Store with an External LDAP Server" section in <i>Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal</i> . While creating a domain, if you specified any user other than <code>weblogic</code> as the domain administrator, you must manually grant the administrator role to that nondefault user for the Spaces application, as described in section "Granting the Spaces Administrator Role" in <i>Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal</i> .	Mandatory
3. Configure the policy and credential stores	Reassociate WebCenter Portal's policy store and credential store with an external LDAP server or database. For information, see the "Configuring the Policy and Credential Store" chapter in <i>Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal</i> .	Mandatory

If you configure an external LDAP-based identity store, Oracle WebCenter Portal: Spaces and all the back-end components configured for any WebCenter Portal services must use the *same* external LDAP-based identity store. Table 3–5 describes whether additional configuration is required for any back-end component if a shared external LDAP-based identity store is used.

For information about installing and configuring back-end components for WebCenter Portal services, see Chapter 5, "Preparing Back-End Components for WebCenter Portal Services."

Table 3–5 Configuring Back-End Components for a Shared External LDAP-Based Identity Store

Back-End Component	Out-Of-The-Box Support	Additional Configuration Requirement
Oracle WebCenter Portal's Discussion Server	Embedded LDAP store	No additional configuration required on Oracle WebCenter Portal's Discussion Server to use an external LDAP-based identity store.

Table 3–5 (Cont.) Configuring Back-End Components for a Shared External LDAP-Based Identity Store

Back-End Component	Out-Of-The-Box Support	Additional Configuration Requirement
Content Server	Database	<p>Configure Content Server to use the same external LDAP-based identity store as Oracle WebCenter Portal.</p> <p>For information, see the "Reassociating the Identity Store with an External LDAP Authentication Provider" section in <i>Oracle WebCenter Content Installation Guide</i>.</p>
Oracle SES	None	<p>Configure Oracle SES to use the same external LDAP-based identity store as Oracle WebCenter Portal.</p> <p>For information about configuring LDAP in Oracle SES, see either of the following sections depending on your Oracle SES version:</p> <ul style="list-style-type: none"> ▪ "Security in Oracle Secure Enterprise Search" in the <i>Oracle Secure Enterprise Search Administrator's Guide</i> in the Secure Enterprise Search Online Documentation Library 10g Release 1 (10.1.8.2). ▪ "Security in Oracle Secure Enterprise Search" in the <i>Oracle Secure Enterprise Search Administrator's Guide</i> in the Secure Enterprise Search Online Documentation Library 11g Release 1 (11.1.2).
Oracle SOA Suite (BPEL server)	Embedded LDAP store	<p>Configure Oracle SOA Suite to use the same external LDAP-based identity store as Oracle WebCenter. For information about:</p> <ul style="list-style-type: none"> ▪ Configuring LDAP authentication providers, see the "Configuring Authentication Providers" chapter in <i>Oracle Fusion Middleware Securing Oracle WebLogic Server</i>. ▪ Listing Oracle Internet Directory as the first authentication provider, see the "Listing Oracle Internet Directory as the First Authentication Provider" section in <i>Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite</i>.

WebCenter Portal can use libOVD to allow multiple identity stores to be used with WebCenter Portal applications. Sites with multiple identity stores can use libOVD to aggregate their user profile information. For information, see the section "Aggregating Multiple Identity Store LDAP Servers Using libOVD" in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

Getting Started with WebCenter Portal Components

After you have installed the required WebCenter Portal components, you may need to configure them to get them up and running and ready for use. This chapter outlines the configuration tasks that you may need to perform.

This chapter includes the following sections:

- Section 4.1, "WebCenter Portal Components and Managed Servers"
- Section 4.2, "Working with Oracle WebCenter Portal: Spaces"
- Section 4.3, "Working with Oracle WebCenter Portal's Discussion Server"
- Section 4.4, "Working with Oracle WebCenter Portal's Portlet Producers"
- Section 4.5, "Oracle WebCenter Portal's Pagelet Producer"
- Section 4.6, "Working with Oracle WebCenter Portal's Analytics Collector"
- Section 4.7, "Working with Oracle WebCenter Portal's Activity Graph Engines"
- Section 4.8, "Working with Oracle WebCenter Portal's Personalization"
- Section 4.9, "Working with Custom Managed Servers"
- Section 4.10, "Working with Oracle WebCenter Services Portlets"

4.1 WebCenter Portal Components and Managed Servers

When you install WebCenter Portal, the components that you choose to install are deployed to various default managed servers. Table 4–1 lists the managed server and the port number on which WebCenter Portal components are deployed.

Table 4–1 *WebCenter Portal Components and Managed Servers*

Component	Managed Server	Port
Oracle WebCenter Portal: Spaces	WC_Spaces	8888
Oracle WebCenter Portal's Discussion Server	WC_Collaboration	8890
Oracle Portlet Producers	WC_Portlet	8889
Oracle WebCenter Pagelet Producer	WC_Portlet	8889
Oracle WebCenter Activity Graph Engines	WC_Uilities	8891
Oracle WebCenter Personalization	WC_Uilities	8891
Oracle WebCenter Analytics Collector	WC_Uilities	8891

Table 4–1 (Cont.) WebCenter Portal Components and Managed Servers

Component	Managed Server	Port
Custom Portal managed server	WC_CustomPortal	8892
Custom Services Producer managed server	WC_ CustomServicesProduce r	8793

4.2 Working with Oracle WebCenter Portal: Spaces

Oracle WebCenter Portal: Spaces is a web-based application that offers the very latest technology for social networking, communication, collaboration, and personal productivity. To access the Spaces application, start the WC_Spaces managed server. Then, log on to Spaces as an administrator using the following URL format:

```
http://host:port/webcenter
```

Where, *host:port* refers to the host name and port number of the system where Spaces is installed. By default, Spaces is installed on port 8888.

While creating your WebCenter Portal domain, if you specified any user other than `weblogic` as the domain administrator, you must manually grant the administrator role to that nondefault user for Spaces. For information, see the section "Granting the Spaces Administrator Role" in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

Spaces supports automatic service configuration for certain WebCenter Portal services. Every time you start Spaces, it tries to automatically create connections for certain WebCenter Portal services, unless they already exist. So, you do not need to manually create certain connections. Table 4–2 lists the services for which Automatic Service Configuration is implemented.

Table 4–2 Connections Automatically Configured for Spaces

Component/Service	Default Connection Name
Discussions and Announcements services	WebCenterSpaces-Discussions
Documents service	WebCenterSpaces-ucm
Pagelet producer	WebCenterSpaces-PageletProducer
Preconfigured portlet producers	wc-OmniPortlet
	wc-WebClipping
	wc-WSRPTools
Worklist service and Spaces workflows	WebCenterSpaces-Worklist

For Spaces connections to be automatically configured, the following general conditions must be met:

- Spaces and the target component must be installed in the same domain.
- The managed server of the target component must have an explicit listening address. If its listening address is empty or null or "localhost", then it must have a system associated to it that has an explicit address. For information about listening address, see "Configure Managed Servers" in *Oracle Fusion Middleware Creating Domains Using the Configuration Wizard*.

- The target component must not be deployed to a cluster.
- You must start the managed servers associated to the WebCenter Portal services first. Then, start the WC_Spaces managed server.

If the target component has already been automatically configured on application startup, it will not be configured again regardless of the result (Fail or Success). Automatic connection configuration of a service fails if the target component does not pass the target component-specific rules. If the automatic configuration fails for a specific component, then you must manually configure the service. For information, refer to the required target component-specific section in this chapter.

If required, you can disable the auto-configuration feature by setting the following Java property:

```
-Dwebcenter.spaces.disableAutoConfigure=true
```

You can set this Java property in two ways. You can add the property to JAVA_PROPERTIES in `domain_home/bin/setDomainEnv.sh` (on UNIX) or `domain_home\bin\setDomainEnv.cmd` (on Windows). Alternatively, you can append it at the end of the script when starting up the WC_Spaces managed server. For example:

```
domain_home/bin/startManagedWebLogic.sh WC_Spaces
-Dwebcenter.spaces.disableAutoConfigure=true
```

For information about getting started with Spaces, see the "Getting the Spaces Application Up and Running" chapter in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

Note: You cannot directly start or stop the Spaces application from Oracle WebLogic Server Administrator Console. You must start or stop the WC_Spaces managed server to which the Spaces application is deployed.

4.2.1 Verifying Services are Configured with Automatic Service Configuration

To verify that service connections are automatically configured for the Spaces application when you start the managed servers:

1. Access the Oracle Enterprise Manager Fusion Middleware Control Console using the following URL format: `http://host_name.domain_name:port_number/em`

For example: `http://myhost.mycompany.com:7001/em`

2. Enter a valid administrator User Name and Password details for the farm, and click **Login**.
3. Navigate as follows in Enterprise Manager Console:

```
farm_wc_domain > WebCenter > Portal > Spaces -> webcenter
```

The Spaces application home page displays a **WebCenter Portal** menu.

4. From the **WebCenter Portal** menu, select **Settings**, and then **Service Configuration**.
5. Select the different services and confirm that the services that support Automatic Service Configuration are configured.

Figure 4–1 shows the portlet producer connections configured for the Spaces application.

Figure 4–1 Automatic Service Configuration for Spaces

WebCenter Portal Service Configuration
Use this page to configure services for the WebCenter Portal application. Choose a service to view or modify the current configuration, and to configure new service connections.

Manage Portlet Producer Connections		
Name	Producer Type	URL Endpoint
wc-OmniPortlet8691	Oracle PDK-Java	http://wcdk
otest	Oracle PDK-Java	http://slc0C
testjpdkproducer	Oracle PDK-Java	http://slc0C
wc-WebClipping	Oracle PDK-Java	http://slc0C
testunitysamplesrpr	WSRP Producer	http://www
WebCenterSpaces-PageletProdi	Pagelet Producer	http://slc0C
wc-WSRPTools	WSRP Producer	http://slc0C
myproducer	WSRP Producer	http://portl

4.3 Working with Oracle WebCenter Portal's Discussion Server

Oracle WebCenter Portal's Discussion Server provides the ability to integrate discussion forums and announcements into your Framework applications and the Spaces application. It is deployed to the `WC_Collaboration` managed server. You can choose to install Oracle WebCenter Discussions while installing WebCenter Portal or later by extending your WebCenter Portal domain, as described in Chapter 3, "Configuring Oracle WebCenter Portal."

To access Oracle WebCenter Portal's Discussion Server:

1. Start the managed server `WC_Collaboration`.

For information, see "Starting and Stopping Oracle Fusion Middleware" in *Oracle Application Server Administrator's Guide*.

2. Go to the following URL:

`http://host:port/owc_discussions`

Where, *host:port* refers to the host name and port number of the system where Oracle WebCenter Portal's Discussion Server is installed. By default, Oracle WebCenter Portal's Discussion Server is installed on port 8890.

Note: You cannot directly start or stop Oracle WebCenter Portal's Discussion Server from Oracle WebLogic Server Administrator Console. If you want to start or stop the discussions server, you must start or stop the managed server, `WC_Collaboration`.

The default domain administrator created for WebCenter Portal is also the administrator for the Oracle WebCenter Portal's Discussion Server. While creating a domain, if you specify any user other than `weblogic` as the domain administrator, that user is granted all the domain administrative rights. After creating the domain, you must manually grant the administrator role to that nondefault user for the discussions server. For information, see section "Granting Administrator Role for

Oracle WebCenter Portal's Discussion Server" in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

To prepare Oracle WebCenter Portal's Discussion Server to work with WebCenter Portal, perform the following tasks:

1. Enable the WS-Security trusted authentication for Oracle WebCenter Portal's Discussion Server, depending on your topology. In a simple topology, the discussions server is in the same domain as Oracle WebCenter Portal: Spaces and consequently no extra keystore configuration is needed since the keystore configured for the WebCenter Portal domain is used for the Discussions service as well. However, for production environments you must protect the Discussion service Web Service end points with an OWSM policy and configure the discussions server connection settings.

WS-Security establishes a trust relationship between your WebCenter Portal applications and WebCenter Portal's discussions server so that your application can pass the user identity information to the server without knowing the user's credentials. For information, see section "Discussions Server - Security Considerations" in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

2. Register a connection to WebCenter Portal's discussions server.

For information, see the "Registering Discussions Servers" section in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

Note: For Spaces, you may not need to manually register a connection to Oracle WebCenter Portal's Discussion Server. When you start the Spaces application, a connection named `WebCenterSpaces-Discussions` is automatically configured and set as the default connection, unless it already exists, if the following conditions are met:

- Spaces and Oracle WebCenter Portal's Discussion Server are within the same domain.
- The `WC_Collaboration` managed server has an explicit listening address or has a system associated to it with an explicit address.
- Oracle WebCenter Portal's Discussion Server is not deployed to a cluster.
- The user granted the Administrative role exists.

For more information, refer to Section 4.2, "Working with Oracle WebCenter Portal: Spaces."

4.4 Working with Oracle WebCenter Portal's Portlet Producers

Oracle Portlet Producers provides several preconfigured portlet producers. When you install Oracle Portlet Producers, the `WC_Portlets` managed server gets created, and the following applications are deployed to the server:

- `portalTools` - Supports OmniPortlet and Web Clipping
- `wsrp-tools` - Supports WSRP Tools

To access preconfigured portlet producers, you can use the following URLs, depending on the preconfigured portlet producer you want to access:

- OmniPortlet and Web Clipping portlets

`http://host:port/portalTools`

- WSRP Tools

`http://host:port/wsrp-tools/`

Where, *host:port* refers to the host name and port number of the system where Oracle Portlet Producers is installed. The default port number is 8889.

To work with the preconfigured portlets available in WebCenter Portal, you must:

1. Start the `WC_Portlet` managed server.

For information, see "Starting and Stopping Oracle Fusion Middleware" in *Oracle Application Server Administrator's Guide*.

2. Register the required preconfigured portlet producers.

For information about portlet registration, see the "Managing Portlet Producers" chapter in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

If you want to secure your portlet producers, refer to the chapter "Configuring Security for Portlet Producers" in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

Note: For the Spaces application, you may not need to manually register connections to preconfigured portlet producers. When you start Spaces, a connection is automatically configured if the following conditions are met:

- Spaces and Oracle Portlet Producers are in the same domain.
- The `WC_Portlet` managed server is running.
- The `WC_Portlet` managed server has an explicit listening address or has a system associated to it with an explicit address.
- Oracle Portlet Producers is not deployed to a cluster.

For more information, refer to Section 4.2, "Working with Oracle WebCenter Portal: Spaces."

After you have registered preconfigured portlet producers, application developers or Spaces users can add portlets to their application pages.

4.5 Oracle WebCenter Portal's Pagelet Producer

Oracle WebCenter Portal's Pagelet Producer (previously called Oracle WebCenter Ensemble) provides a collection of useful tools and features that facilitate dynamic pagelet development.

Pagelet Producer is deployed to the `WC_Portlet` managed server. To access Pagelet Producer, use the following URL:

`http://host:port/pagelets/`

Where, *host:port* refers to the host name and port number of the system where Pagelet Producer is installed. The default context root is `pagelets`, but Pagelet Producer can be deployed to any location of your choice.

For example:

`http://myhost.com:8889/pagelets/`

To access the Pagelet Producer console, use the following URL:

`http://host:port/pageletadmin`

All post deployment connection configuration is stored in the Oracle Metadata Services (MDS) repository. Pagelet Producer stores all configuration data on a separate partition in the MDS schema of RCU. Typically, this schema is installed as part of the WebCenter Portal installation. This configuration data does not conflict with data that belongs to other services. When you deploy the Pagelet Producer domain template, Configuration Wizard prompts for connectivity information to the database in which the schema has been created. The names that the Pagelet Producer expects are:

- Datasource Name: `mds-PageletProducerDS`
- JNDI name: `jdbc/mds/PageletProducerDS`
- MDS partition name: `pageletproducer`

To work with Pagelet Producer:

1. Start the `WC_Portlet` managed server.
2. Register the Pagelet Producer for Framework applications and the Spaces application. For information, see the "Managing the Oracle WebCenter Pagelet Provider" chapter in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

You can also access the Pagelet Producer using the JavaScript or REST API.

Note: For the Spaces application, you may not need to manually register a connection. When you start the Spaces application, a connection named `WebCenterSpaces-PageletProducer` is automatically configured and set as the default connection, unless it already exists, if the following conditions are met:

- Spaces and Pagelet Producer are in the same domain.
- The `WC_Portlet` managed server has an explicit listening address or has a system associated to it with an explicit address.
- Pagelet Producer is not deployed to a cluster.

For more information, refer to Section 4.2, "Working with Oracle WebCenter Portal: Spaces."

4.6 Working with Oracle WebCenter Portal's Analytics Collector

Oracle WebCenter Portal's Analytics Collector supports the Analytics service that enables users to display usage and performance metrics for WebCenter Portal applications. The Analytics service requires the Analytics schema (`ACTIVITIES`) to be installed. By default, Analytics Collector is installed on the `WC_Uutilities` managed server on port 8891.

Out-of-the-box, the Analytics Collector is configured to receive events using installation defaults. However, Spaces is not configured to *send events* to the Analytics Collector. If you want to collect usage and performance metrics for the Spaces application (or any Framework application) you must register the Analytics Collector and enable event collection. If Activity Graph is installed, the `ACTIVITIES` schema cannot be shared across applications.

To work with Oracle WebCenter Portal's Analytics Collector:

1. Start the `WC_Utilities` managed server.
2. Register an Analytics Collector for your applications. For information, see the "Managing the Analytics Service" chapter in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

4.7 Working with Oracle WebCenter Portal's Activity Graph Engines

Oracle WebCenter Portal's Activity Graph Engines enables users to analyze various statistics collected by Analytics. The output of an Activity Graph analysis is the collected scores for objects and users, which are used to give recommendations. The scores are stored in the Activity Graph database. Activity Graph Engines is installed as an application on the `WC_Utilities` managed server.

To access Activity Graph Engines, use the following URL:

`http://host:port/activitygraph-engines`

The default port number for Activity Graph is 8891.

When the Activity Graph Engines template is deployed, the Configuration Wizard prompts for connectivity information to the database in which the schema has been created. The names that the Activity Graph Engines expects are:

- Datasource Name: `ActivitiesDS`
- JNDI name: `jdbc/ActivitiesDS`

To work with Oracle WebCenter Portal's Activity Graph Engines:

1. Start the `WC_Utilities` managed server.
2. Register an Analytics Collector for your applications. For information, see the section "Registering an Analytics Collector for Your Application" in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

For more information, refer to the "Managing the Activity Graph Service" chapter in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

Note: "Analytics and Activity Graph can be used only by a single application within a domain, whether it is the Spaces application or a Framework application. If Activity Graph is not installed, the `ACTIVITIES` schema may be shared across applications. However, if Activity Graph is installed, the `ACTIVITIES` schema cannot be shared.

4.8 Working with Oracle WebCenter Portal's Personalization

Oracle WebCenter Portal's Personalization enables you to deliver application content to targeted users based on selected criteria. It is installed as an application on the `WC_Utilities` managed server, on port 8891.

Customer applications access Personalization remotely over HTTP using RESTful services. The WebCenter Portal's Personalization contains the Conductor and Property Service. The Conductor contains and runs units of work called scenarios. The Property Service uses Java REST APIs to store and retrieve properties about a user, such as their age or gender.

To access Personalization server's Property Service, use the following URL:

`http://host:port/wcps/api/property/resourceIndex`

Where, `host:port` refers to the host name and port number of the system where Oracle WebCenter Portal's Personalization is installed.

To access Personalization server's Conductor, use the following URL:

`http://host:port/wcps/api/conductor/resourceIndex`

To work with Oracle WebCenter Portal's Personalization:

1. Start the `WC_Uutilities` managed server.
2. Register a connection to the Oracle WebCenter Portal's Personalization. This involves registering the Conductor and Properties connections. For information, see the "Managing WebCenter Personalization" chapter in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

Note: For the Spaces application, you may not need to manually register a connection. When you start Spaces, the following Conductor and Properties connections are automatically configured if they do not exist already: `Conductor-WCPSSpaces` and `Properties-WCPSSpaces`. These connections are created if the following conditions are met:

- Spaces and Oracle WebCenter Portal's Personalization are in the same domain.
- The `WC_Uutilities` managed server has an explicit listening address or has a system associated to it with an explicit address.
- Oracle WebCenter Portal's Personalization is not deployed to a cluster.

For more information, refer to Section 4.2, "Working with Oracle WebCenter Portal: Spaces."

4.9 Working with Custom Managed Servers

Application developers can use Oracle JDeveloper to develop Framework applications and Portlet Producer applications. To enable deployment of these applications, you must create custom managed servers as described in Section 3.2.3.2, "Extending a Domain to Create Custom Managed Servers." No additional configuration is required to work with these custom managed servers.

Note: Oracle does not recommend deploying Framework applications or Portlet Producer applications to the Administration Server or any of the default managed servers created during the installation of WebCenter Portal.

For Framework applications and Portlet Producer applications, you must run the RCU to create the `WebCenter` schema. Note that this schema is separate from the `WebCenter` schema used by the Spaces application. For information about the WebCenter Portal services that require the `WebCenter` schema, see Table 5–1. For information about how to create schemas, refer to the "Creating Schemas" section in *Oracle Fusion Middleware Repository Creation Utility User's Guide*.

4.10 Working with Oracle WebCenter Services Portlets

Oracle WebCenter Services Portlets is a preconfigured, out-of-the-box producer that enables application developers to expose WebCenter Portal service task flows as WSRP portlets or pagelets in the following applications: Oracle Portal, Oracle WebLogic Portal, and Oracle WebCenter Interaction. WebCenter Services Portlets includes the following task flows as portlets: Document Manager, Content Presenter, Blogs, Discussion Forums, Announcements, Lists, Polls Manager, Take Polls, and Worklist. Most of the services included in WebCenter Services Portlets require connections to back-end servers to be fully functional. For example, the Documents service requires a connection to an Oracle WebCenter Content repository.

To work with WebCenter Services Portlets:

1. Start the `WC_Portlet` managed server.

For information, see "Starting and Stopping Oracle Fusion Middleware" in *Oracle Application Server Administrator's Guide*.

2. Ensure the required back-end components are installed, and configure back-end connections for the required WebCenter Portal services.

For information, see Chapter 5, "Preparing Back-End Components for WebCenter Portal Services."

3. Configure security for WebCenter Services Portlets. For information, see the "Securing a WSRP Producer" section in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

For more information about configuring WebCenter Services Portlets, see the section "Configuring WebCenter Services Portlets" in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*. For information about consuming WebCenter Services Portlets in applications, see the section "Consuming WebCenter Services Portlets" in *Oracle WebCenter Framework Developer's Guide*.

Preparing Back-End Components for WebCenter Portal Services

Oracle WebCenter Portal provides a set of WebCenter Portal services that expose social networking and personal productivity features for inclusion in Framework applications and the Spaces application. Some of these services, such as Worklist and Search, rely on back-end components. This chapter describes how to install such back-end components and integrate them with WebCenter Portal.

This chapter includes the following sections:

- Section 5.1, "Introduction to WebCenter Portal Services"
- Section 5.2, "Back-End Requirements for the Instant Messaging and Presence (IMP) Service"
- Section 5.3, "Back-End Requirements for the Documents Service"
- Section 5.4, "Back-End Requirements for the Events Service"
- Section 5.5, "Back-End Requirements for the Mail Service"
- Section 5.6, "Back-End Requirements for the Search Service"
- Section 5.7, "Back-End Requirements for the Worklist Service"
- Section 5.8, "Back-End Requirements for WebCenter Portal: Spaces Workflows"

5.1 Introduction to WebCenter Portal Services

WebCenter Portal services help to create a dynamic and interactive environment for users. These services can be integrated into Framework applications and the Spaces application.

All WebCenter Portal services rely on a database for their functionality. To integrate any WebCenter Portal service into your applications, you must ensure that a supported database is available with the MDS schema. For information about:

- Supported databases, refer to the following link:

http://www.oracle.com/technology/software/products/ias/files/fusion_certification.html

- Installing a database and creating schemas, see Chapter 2, "Installing Oracle WebCenter Portal."

In addition to a database, certain WebCenter Portal services rely on a back-end component. To enable application developers or users to integrate such service into applications, you must perform the following tasks:

- Install the back-end component
- Configure the back-end component, if required
- Set up a connection to the back-end component

Table 5–1 describes WebCenter Portal services and lists the back-end component, if any, required for each service.

Table 5–1 Back-End Requirements for WebCenter Portal Services

Service	Description	Back-End Component Required in Addition to a Supported Database with MDS Schema	Connection Configuration
Activity Graph	Provides suggestions of people that users may be interested in connecting with, based on their existing connections and shared interaction with objects within the application.	Oracle WebCenter Activity Graph Engines, Oracle WebCenter Analytics Collector, and a supported database containing the <code>Activities</code> schema	Connection required. Connection automatically configured for Spaces if conditions are met. For information, see Section 4.7, "Working with Oracle WebCenter Portal's Activity Graph Engines."
Analytics	Displays usage and performance metrics	Oracle WebCenter Analytics Collector, and a supported database containing the <code>Activities</code> schema	Connection required.
Announcements	Enables users to post, personalize, and manage announcements.	Oracle WebCenter Portal's Discussion Server, and a supported database containing the <code>Discussions</code> schema	Connection required. Connection automatically configured for Spaces if conditions are met. For information, see Section 4.3, "Working with Oracle WebCenter Portal's Discussion Server."

Table 5–1 (Cont.) Back-End Requirements for WebCenter Portal Services

Service	Description	Back-End Component Required in Addition to a Supported Database with MDS Schema	Connection Configuration
Discussions	Provides the ability to create and participate in threaded discussions.	Oracle WebCenter Portal's Discussion Server, and a supported database containing the <code>Discussions</code> schema	Connection required. Connection automatically configured for Spaces if conditions are met. For information, see Section 4.3, "Working with Oracle WebCenter Portal's Discussion Server."
Documents	Provides content management and storage capabilities, including content upload, file, folder, wiki and blog creation and management, file check out, file versioning, and so on.	A content repository such as Content Server 11g or Oracle Portal 11g	Connection required. Connection automatically configured for Spaces if conditions are met. For information, see Section 5.3.1.3, "Content Server - Integration."
Events	Provides personal and space-specific calendars that users can use to schedule meetings, appointments, or any other type of team get-together. Note: This service is available only in the Spaces application.	A supported database containing the <code>WEBCENTER</code> schema For personal events, Microsoft Exchange Server 2003 or Microsoft Exchange Server 2007	Connection required for personal calendars, but not for space calendars.
Instant Messaging and Presence (IMP)	Provides the ability to observe the online presence status of other authenticated users (whether online, offline, busy, or idle), and to contact them instantly.	A supported communication server like Microsoft Live Communication Server 2005	Connection must be created manually.
Links	Provides the ability to view, access, and associate related information; for example, you can link to a solution document from a discussion thread.	A supported database, containing the <code>WEBCENTER</code> schema	No separate connection required.

Table 5–1 (Cont.) Back-End Requirements for WebCenter Portal Services

Service	Description	Back-End Component Required in Addition to a Supported Database with MDS Schema	Connection Configuration
Lists	Enables users to create, publish, and manage lists.	A supported database containing the <code>WEBCENTER</code> schema	No separate connection required.
Mail	Provides easy integration with IMAP and SMTP mail servers to enable users to perform simple mail functions such as viewing, reading, creating, and deleting messages, creating messages with attachments, and replying to or forwarding existing messages.	A mail server based on IMAP4 and SMTP, such as Microsoft Exchange Server 2003	Connection must be created manually.
Notes	Provides the ability to "jot down" and retain quick bits of personally relevant information. Note: This service is available only in the Spaces application.	A supported database containing the <code>WEBCENTER</code> schema	No separate connection required.
People Connections	Provides online social networking tools for creating, interacting with, and tracking the activities of one's enterprise connections.	A supported database containing the <code>WEBCENTER</code> schema	No separate connection required.
Personalization	Delivers targeted content based on both user and application context.	Oracle WebCenter Personalization Server	Connection required. Connection automatically configured for Spaces if conditions met. For information, see Section 4.8, "Working with Oracle WebCenter Portal's Personalization."
Polls	Enables users to create, edit, and take online polls. With polls, users can survey their audience (such as their opinions and their experience level), check whether they can recall important information, and gather feedback on the efficacy of presentations.	A supported database containing the <code>WEBCENTER</code> schema	No separate connection required.

Table 5–1 (Cont.) Back-End Requirements for WebCenter Portal Services

Service	Description	Back-End Component Required in Addition to a Supported Database with MDS Schema	Connection Configuration
Recent Activities	Provides a summary view of recent changes to documents, discussions, and announcements.	None	No separate connection required.
RSS	Provides the ability to publish content from other WebCenter Portal services and external sources as news feeds in the RSS 2.0 and Atom 1.0 formats. RSS news feeds are available from Spaces only. The RSS Viewer task flow is available in both Spaces and Framework applications.	None	No separate connection required.
Search	Provides the ability to search tags, services, an application, or an entire site. WebCenter Portal searches can be extended to external content repositories by connecting applications to Oracle Secure Enterprise Search (Oracle SES)	No separate back-end component required if Oracle Search services adapters are used to search WebCenter Portal objects. To search external repositories outside of WebCenter Portal, Oracle SES 11g updated with latest patches is required.	No separate connection required for the Search service adapters. Connection required for Oracle SES.
Tags	Provides the ability to assign one or more personally relevant keywords to a given page or document, making those items more easily discoverable in search results.	A supported database containing the WEBCENTER schema	No separate connection required.
Worklist	Provides a personal, at-a-glance view of business processes that require attention. These can include a request for document review and other types of business process that come directly from enterprise applications.	Business Process Execution Language (BPEL) server	Connection required. Connection automatically configured for Spaces if conditions listed in Section 4.2, "Working with Oracle WebCenter Portal: Spaces" are met.

5.2 Back-End Requirements for the Instant Messaging and Presence (IMP) Service

The Instant Messaging and Presence (IMP) service relies on a back-end communication server. You can configure any of the following servers as the communication server for the IMP service:

- Microsoft Live Communications Server (LCS) 2005
- Microsoft Office Communications Server (OCS) 2007
- Microsoft Lync 2010

This section includes the following subsections:

- Section 5.2.1, "Communication Server - Installation"
- Section 5.2.2, "Communication Server - Configuration and Integration"

5.2.1 Communication Server - Installation

For information about installing Microsoft Live Communications Server 2005, Microsoft Office Communications Server 2007, or Microsoft Lync, refer to the relevant Microsoft documentation.

5.2.2 Communication Server - Configuration and Integration

Consider the following for configuring a communication server for the IMP service:

- To use Microsoft OCS 2007, you must install the Microsoft Unified Communications Managed API (UCMA) 2.0 SDK, and the Oracle RTC Web service for Microsoft OCS 2007. For information, see the section "Microsoft OCS - Configuration" in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.
- To use Microsoft Live Communications Server 2005, you must install and configure the Microsoft RTC API v1.3, and the Oracle RTC Web service for Microsoft LCS 2005. For information, see the "Microsoft LCS - Configuration" section in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.
- For information about configuring Microsoft Lync, see the section "Microsoft Lync - Configuration" in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

After installing and configuring your communication server, you must set up connections to the communication server to enable integration of the IMP service with the Spaces application and Framework applications. For information about setting up IMP service connections, see the "Registering Instant Messaging and Presence Servers" section in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

Ensure that WebCenter Portal and your communication server are configured to use the same external LDAP-based identity store. If not, you must manually synchronize user entries between WebCenter Portal and communication server environments.

5.3 Back-End Requirements for the Documents Service

The Documents service provides content management and storage capabilities for the Spaces application and Framework applications. To use the Documents service, you must have a content repository at the back end that contains the documents you want

to manage. WebCenter Portal supports content integration with the following external repositories:

- Oracle WebCenter Content Server
- Oracle Portal 11g
- Microsoft Office SharePoint Server (MOSS) 2007 Service Pack 2
- Microsoft Windows SharePoint Services (WSS) version 3 Service Pack 2

Note: Oracle WebCenter Portal: Spaces can use either Content Server or Oracle Portal as its external content repository. However, you must set Content Server 11g as the default content repository for Spaces if you want to enable space and Home space document content and the wiki and blog functionality.

This section includes the following subsections:

- Section 5.3.1, "Oracle WebCenter Content Server Requirements"
- Section 5.3.2, "Oracle Portal Requirements"
- Section 5.3.3, "Microsoft SharePoint Requirements"

5.3.1 Oracle WebCenter Content Server Requirements

This section includes the following subsections:

- Section 5.3.1.1, "Content Server - Installation"
- Section 5.3.1.2, "Content Server - Configuration"
- Section 5.3.1.3, "Content Server - Integration"

5.3.1.1 Content Server - Installation

WebCenter Portal supports Oracle WebCenter Content Server 11.1.1.6.0 or later as an external content repository.

Content Server is installed as a part of Oracle WebCenter Content, which is an Oracle Fusion Middleware component.

While installing Content Server, it is recommended that you also install Oracle WebCenter Content: Inbound Refinery. Inbound Refinery is a conversion server that manages file conversions. It also provides thumbnail functionality for documents and images and storyboarding for video. You can use Inbound Refinery to convert content items stored in Content Server. If Inbound Refinery is not installed, thumbnails or renditions do not display in applications.

For information about how to install Content Server and Inbound Refinery, see *Oracle WebCenter Content Installation Guide*.

Note: Content Server and Inbound Refinery must be installed in the same domain. Oracle recommends that you install Content Server and Inbound Refinery in the same domain as WebCenter Portal. When they are installed in the same domain, no additional configuration is required to use an external LDAP authentication provider.

5.3.1.2 Content Server - Configuration

To use Content Server as an external content repository, you must configure it to work with WebCenter Portal. For information about the mandatory and optional tasks involved in configuring Content Server, see the "Configuring Oracle WebCenter Content Server Repositories" section in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*. To get an overview of tasks required to get Oracle SES working for Framework applications and the Spaces application, see the flowcharts given in "Configuration Roadmaps for Content Server" section of the guide.

Note: By default, Oracle WebCenter Content uses the Oracle WebLogic Server embedded Lightweight Directory Application Protocol (LDAP) server. In a production system, Oracle WebCenter Content applications must use an external LDAP authentication provider rather than the default embedded LDAP server. Therefore, you must reassociate your Content Server's identity store with an external LDAP-based identity store.

If WebCenter Portal and Content Server are installed in the same domain, no additional configuration is required for using an external LDAP authentication provider. Authentication provider configuration is applicable to an entire domain.

If WebCenter Portal and Content Server are installed in separate domains, they must be configured to use the *same* external LDAP authentication provider. Hence, ensure that you reassociate Content Server with the same identity store LDAP server as WebCenter Portal.

5.3.1.3 Content Server - Integration

To use Content Server as a content repository, you must create a repository connection. For Spaces, a repository connection is automatically configured and set as the default connection, if it does not already exist. The connection is configured at application startup if the general conditions specified in Section 4.2, "Working with Oracle WebCenter Portal: Spaces" are met. However, the connection is not configured if the Server Socket Port or the user granted the Administrator Role cannot be found.

For information about how to register content repositories and manage repository connections, see the "Registering Content Repositories" section in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

5.3.2 Oracle Portal Requirements

Oracle Portal offers a complete and integrated framework for building, deploying, and managing enterprise portals.

This section includes the following subsections:

- Section 5.3.2.1, "Oracle Portal - Installation"
- Section 5.3.2.2, "Oracle Portal - Configuration"
- Section 5.3.2.3, "Oracle Portal - Integration"

5.3.2.1 Oracle Portal - Installation

To use Oracle Portal 11g as a content repository for your WebCenter Portal applications, you must install it. For information, see *Oracle Fusion Middleware Installation Guide for Oracle Portal, Forms, Reports and Discoverer*.

5.3.2.2 Oracle Portal - Configuration

Oracle Portal must be up-to-date with all the latest patches. For additional information about patches, see the product release notes. See also *Oracle Fusion Middleware Administrator's Guide for Oracle Portal*.

5.3.2.3 Oracle Portal - Integration

To integrate Oracle Portal content into your WebCenter Portal applications, you must set up content repository connections to Oracle Portal. For information about how you can register content repositories and manage connections for the Spaces application and Framework applications, see the "Managing Content Repositories" chapter in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

5.3.3 Microsoft SharePoint Requirements

You can install and configure Microsoft SharePoint as an external content repository for WebCenter Portal. This section describes the installation and integration requirements for using Microsoft SharePoint. It contains the following subsections:

- Section 5.3.3.1, "Microsoft SharePoint - Installation"
- Section 5.3.3.2, "Microsoft SharePoint - Integration"

Note: WebCenter Spaces does not support Microsoft SharePoint as the primary document store, and therefore, you must use Content Server instead.

5.3.3.1 Microsoft SharePoint - Installation

WebCenter Portal supports the following Microsoft SharePoint versions:

- Microsoft Office SharePoint Server (MOSS) 2007 Service Pack 2
- Microsoft Windows SharePoint Services (WSS) version 3 Service Pack 2

Refer to the appropriate Microsoft SharePoint documentation for installation information.

5.3.3.2 Microsoft SharePoint - Integration

To support Microsoft SharePoint as a content repository for WebCenter Portal applications, the following tasks are involved:

- On the server side: Install Oracle WebCenter Adapter for Microsoft SharePoint on the target managed server to which you plan to deploy your applications. For information, refer to the "Installing Oracle WebCenter Adapter for Microsoft SharePoint" section in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.
- On the development side: In a development environment, to be able to create a Framework application that uses Microsoft SharePoint as a content repository, application developers must first install Oracle WebCenter Adapter for Microsoft SharePoint into JDeveloper. Then they must register a connection to the Microsoft SharePoint server for their application. For information, see the "Installing the Oracle WebCenter Adapter for Microsoft SharePoint" and "How to Create a Content Repository Connection Based on the Oracle WebCenter Adapter for Microsoft SharePoint" sections in *Oracle WebCenter Framework Developer's Guide*.

Post deployment, you can manage WebCenter Portal applications' Microsoft SharePoint connections by using WLST commands. To manage these connections, you must install WLST command scripts. For information, see the "Installing WLST Command Scripts for Managing Microsoft SharePoint Connections" and "Managing Microsoft SharePoint Connections Using WLST" sections in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

Note: To enable Microsoft SharePoint connections in Spaces, read the whitepaper "Integrating the SharePoint 2007 Adapter with WebCenter Spaces" available on Oracle Technology Network at <http://www.oracle.com/technetwork/middleware/webcenter/overview/index.html>.

5.4 Back-End Requirements for the Events Service

The Events service, which is available only in Spaces, provides group calendars and personal calendars. To provide the group calendar functionality, the Events service does not require any separate back-end component. To support personal calendars, the Events service requires either Microsoft Exchange Server 2003 or Microsoft Exchange Server 2007. For information about Microsoft Exchange Server installation, refer to its product documentation.

You must prepare Microsoft Exchange Server for working with WebCenter Portal. You must also create a connection to the mail server. For information, refer to the "Managing the Events Service" chapter in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*. The chapter contains a flowchart that provides a pictorial overview of the configuration process.

5.5 Back-End Requirements for the Mail Service

The Mail service relies on a mail server, such as Microsoft Exchange Server 2003, that supports IMAP4 and SMTP protocols. To install a mail server, refer to the documentation of the mail server you wish to use.

To enable WebCenter Portal users to access the Mail service from within a WebCenter Portal application, it is essential that users created on the mail server correspond with the users created in the identity store used by WebCenter Portal.

To integrate the Mail service in your applications, you must configure a connection to the your mail server. For information about configuring the Mail service, see the "Managing the Mail Service" chapter in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*. The chapter contains flowcharts that provide a pictorial overview of the prerequisites and tasks required to get the Mail service working in Framework applications and the Spaces application.

5.6 Back-End Requirements for the Search Service

The Search service does not rely on any separate back-end component to search for the content created by other WebCenter Portal services within WebCenter Portal applications. However, if you want to extend WebCenter searches to include external content repositories, you must install Oracle Secure Enterprise Search (Oracle SES). Oracle SES provides a crawler-based service that can search a multitude of sources, structured and unstructured, in a variety of file formats, indexed or real-time.

With WebCenter Portal applications, Oracle SES is set as the default search crawler automatically. With the Spaces application, you can override the WebCenter Portal search adapters and use Oracle SES. This provides a faster, more unified search experience across most WebCenter Portal objects.

This section contains the following subsections:

- Section 5.6.1, "Oracle SES - Installation"
- Section 5.6.2, "Oracle SES - Configuration"

5.6.1 Oracle SES - Installation

Supported Oracle SES versions include 11.1.2 or later.

Note: It is strongly recommended that you install Oracle SES version 11.1.2.2.

This section contains the following subsections:

- Section 5.6.1.1, "Installing Oracle SES 11.1.2"
- Section 5.6.1.2, "Installing Oracle SES 11.1.2.2"

5.6.1.1 Installing Oracle SES 11.1.2

To install Oracle SES 11.1.2 for WebCenter Portal:

1. Install Oracle SES 11.1.2.

For information, refer to the Oracle Secure Enterprise Search Online Documentation Library 11g Release 1 (11.1.2) available here on OTN:

<http://www.oracle.com/technetwork/search/oses/documentation/oses-096384.html>

2. Install the patch for Oracle Connector resource bundle 11.1.2.0.1. For this, download patch 10085593.

Note: You can download patches from <http://support.oracle.com>.

3. Install the patch for Oracle XML connector 11.1.2.0.2. For this, download patch 10070215.
4. Install the patch for Oracle Database connector 11.1.2.0.2. For this, download patch 10070226.
5. To set up WebCenter Portal for Oracle SES search, get `webcenter_search_ses_plugins.zip` from the `$WC_ORACLE_HOME/ses` directory on the WebCenter Portal instance, and put it in the `Oracle_Home` directory on the Oracle SES instance.

Note: Oracle_Home represents the software location that you specified at the time of installing Oracle SES.

The WebCenter Portal instance and the Oracle SES instance might be on different computers.

6. Change to the Oracle SES home directory. For example:

```
cd $Oracle_Home
```

7. Delete the file

```
./search/lib/plugins/webcenter/search-crawl-ucm.jar
```

8. Run the following command to install necessary WebCenter Portal plug-ins:

```
unzip webcenter_search_ses_plugins.zip
```

This adds the following WebCenter Portal jar files to an Oracle SES installation:

- Oracle_Home/search/lib/plugins/webcenter/search-auth-share.jar
- Oracle_Home/search/lib/plugins/webcenter/search-auth-plugin.jar
- Oracle_Home/search/lib/plugins/doc/search-crawl-ucm.jar

Note: Check the latest Release Notes for information about the required Oracle SES patches. See Oracle Fusion Middleware on Oracle Technology Network (OTN) at <http://www.oracle.com/technetwork/index.html>.

5.6.1.2 Installing Oracle SES 11.1.2.2

Oracle SES 11.1.12.2 is recommended as the Oracle SES release to use with WebCenter Portal release 11.1.1.6.0.

Download Oracle SES from

<http://www.oracle.com/technetwork/search/oses/downloads/index.html>. No additional Oracle patches are required with Oracle SES release 11.1.2.2.

For information about installing Oracle SES 11.1.12.2, refer to the Oracle SES Online Documentation Library 11g Release 1 (11.1.2.2) available here on OTN:

<http://www.oracle.com/technetwork/search/oses/documentation/ses-096384.html>

5.6.2 Oracle SES - Configuration

For information about configuring Oracle SES for WebCenter Portal, see the "Managing Oracle SES Search in WebCenter Portal" chapter in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*. To get an overview of tasks required to get Oracle SES working for Framework applications and the Spaces application, see the flowcharts given in "Configuration Roadmaps for Oracle SES in WebCenter Portal" section of the guide.

5.7 Back-End Requirements for the Worklist Service

Installation

The Worklist service relies on the Business Process Execution Language (BPEL) server, which is a component of Oracle SOA Suite. To make the Worklist service available in WebCenter Portal, you must install Oracle SOA Suite. For information, see *Oracle Fusion Middleware Installation Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

Configuration

To enable integration of the Worklist service within WebCenter Portal applications, you must register a connection to the BPEL server. For Spaces, a connection named `WebCenterSpaces-Worklist` is automatically configured on application startup if the conditions described in Section 4.2, "Working with Oracle WebCenter Portal: Spaces" are met.

For information about configuring the Worklist service, refer to the "Managing the Worklist Service" chapter in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*. The flowcharts in the chapter provide a pictorial overview of the prerequisites and tasks required to get the Worklist service working in the Spaces application and Framework applications.

Note: For WebCenter Portal users to be able store and retrieve tasks from a BPEL server, it is essential that their user names exist in the identity stores used by WebCenter Portal and Oracle SOA. You can achieve this by creating identical user names in both the identity stores or by using a common LDAP-based identity store for Single Sign-On (SSO) authentication. SSO authentication enable users to log in once and seamlessly navigate between WebCenter Portal applications and BPEL applications without having to log in to each application separately. For information about setting up an external, shared LDAP-based server, see Section 3.4, "Setting Up an External LDAP-Based Identity Store."

5.8 Back-End Requirements for WebCenter Portal: Spaces Workflows

The Spaces application provides several prebuilt workflows that handle space membership notifications, space subscription requests, and so on. Spaces workflows rely on the BPEL server, which is a component of Oracle SOA Suite.

Table 5–2 describes the tasks that you must perform to enable the Spaces workflow functionality in WebCenter Portal: Spaces.

Table 5–2 Tasks for Enabling Spaces Workflows

Task	Mandatory/Optional?	Documentation
1. Install Oracle SOA Suite	Mandatory	For information, see Section 5.8.1, "Oracle SOA Suite - Installation"
2. Extend the SOA server domain with the <code>oracle.wc_composite_template_11.1.1.jar</code> template	Mandatory	For information, see Section 5.8.2, "Oracle SOA Server - Extending the Domain"

Table 5–2 (Cont.) Tasks for Enabling Spaces Workflows

Task	Mandatory/Optional?	Documentation
3. Configure WS-Security to secure Web Service calls between Oracle SOA and WebCenter Portal	Mandatory	For information, see Section 5.8.3, "Oracle SOA and Spaces - WS-Security Configuration"
4. Register a connection with the BPEL server	Mandatory, if not automatically configured	For information, see Section 5.8.4, "Oracle WebCenter Portal - Configuring the BPEL Server Connection"

Note: For WebCenter Portal users to be able store and retrieve tasks from a BPEL server, it is essential that their user names exist in the identity stores used by WebCenter Portal and Oracle SOA. You can achieve this by creating identical user names in both the identity stores or by using a shared LDAP-based identity store for Single Sign-On (SSO) authentication. For information about setting up an external shared LDAP-based server, see Section 3.4, "Setting Up an External LDAP-Based Identity Store."

5.8.1 Oracle SOA Suite - Installation

To support workflows, Spaces relies on the BPEL server, which is included with Oracle SOA Suite. For information about installing Oracle SOA Suite, see *Oracle Fusion Middleware Installation Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

5.8.2 Oracle SOA Server - Extending the Domain

Spaces workflows are deployed to an Oracle SOA server. To prepare a SOA server for workflows, you must extend the domain in which Oracle SOA is installed, by using the template `oracle.wc_composite_template_11.1.1.jar`. The template is located at the following path in your Oracle SOA installation:

```
ORACLE_SOA_HOME/common/templates/applications/oracle.wc_composite_template_11.1.1.jar
```

The `oracle.wc_composite_template_11.1.1.jar` template deploys `WebCenterWorklistDetailApp.ear` (which manages the WebCenter Portal membership mechanism) and `sca_CommunityWorkflows.jar` (which displays invitations and messages in BPEL).

For information about how to extend a domain, follow the instructions in the section "Extending WebLogic Domains" in the *Oracle Fusion Middleware Creating Domains Using the Configuration Wizard* guide.

5.8.3 Oracle SOA and Spaces - WS-Security Configuration

Spaces Web services, deployed to WebCenter Portal, facilitate communication between Oracle WebCenter Portal: Spaces and the SOA server. You must secure these Web service calls. To do this, set up WS-Security on the SOA server and Spaces.

To ensure the Web Service connection between the Oracle SOA server and the Spaces application is secure:

1. Check the alias in the keystore file on the Oracle SOA server.

For example, use the following command to list the content of the keystore file on the Oracle SOA server:

```
keytool -list -v -keystore bpel.jks -storepass <password>
```

There should be an entry with:

```
Alias name: webcenter_spaces_ws
```

2. Verify that the credential stores for both Spaces and Oracle SOA server are configured correctly.

See "Updating the Credential Store" in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

3. Check that keystores exist at both ends of the connection, for example:

- webcenter.jks (copied to Spaces server end)

- bpel.jks (copied to Oracle SOA server end)

See "Creating the SOA Domain Keystore" in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

4. Configure role members for the `BPMWorkflowAdmin` application role in Oracle SOA server (`soa-infra`).

When associating the domain with an identity store that does not contain the user `weblogic`, you must assign some other valid user to the application role `BPMWorkflowAdmin`. Use WLST commands to do this from the SOA Oracle home, for example, to assign a user named "monty" that exists in LDAP:

```
cd $SOA_ORACLE_HOME/common/bin/
wlst.sh
```

```
connect('<admin username>', '<admin password>', 'mysoahost.us.oracle.com:7001')
revokeAppRole(appStripe="soa-infra", appRoleName="BPMWorkflowAdmin",
principalClass="oracle.security.jps.service.policystore.ApplicationRole",
principalName="SOAdmin")
grantAppRole(appStripe="soa-infra", appRoleName="BPMWorkflowAdmin",
principalClass="weblogic.security.principal.WLSUserImpl",
principalName="monty")
```

See "Security Commands" in the *Oracle Fusion Middleware WebLogic Scripting Tool Command Reference*.

For more information, see the "Configuring WS-Security" chapter in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

5.8.4 Oracle WebCenter Portal - Configuring the BPEL Server Connection

When you start the Spaces application, a BPEL server connection named `WebCenterSpaces-Worklist` is automatically configured, if it does not already exist. However, automatic configuration takes place only if the conditions specified in Section 4.2, "Working with Oracle WebCenter Portal: Spaces" are fulfilled.

The `WebCenterSpaces-Worklist` BPEL connection is configured to be shared by the Worklist service and Spaces workflows. This enables users to see the assigned membership-related workflow items and notification subscriptions in their worklist component.

If a BPEL connection is not configured automatically, you must create it manually. As a best practice, for Spaces workflows, you must use the same BPEL connection that has been set as the active connection for the Worklist service.

To configure a BPEL server connection for Spaces workflows:

1. Register a BPEL server connection with the SOA server instance on which Spaces workflows are deployed. For information, see the "Registering Worklist Connections" section in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.
2. Ensure that this BPEL connection is set as the active connection for the Worklist service. For information, see the "Activating a Worklist Connection" section in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

It is recommended that the Worklist service and Spaces workflows use the same BPEL connection.

3. Set the BPEL connection for Spaces workflows. For information, see the "Specifying the BPEL Server Hosting Spaces Workflows" section in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

Deinstalling Oracle WebCenter Portal

This section describes how to remove Oracle WebCenter Portal and related products from your system.

You should always use the instructions provided in this chapter for removing the software. If you try to remove the software manually, you may experience problems when you try to reinstall the software again at a later time. Following the procedures in this section will ensure that the software is properly removed.

The following topics are covered:

- Section 6.1, "Deinstalling Oracle WebCenter Portal"
- Section 6.2, "Reinstalling Oracle WebCenter Portal"

6.1 Deinstalling Oracle WebCenter Portal

The deinstaller will attempt to remove the Oracle home from which it was started. Before you choose to remove your Oracle home, make sure that it is not in use by an existing domain, and also make sure you stop all running processes that use this Oracle home.

This procedure will not remove any WebLogic domains that you have created - it only removes the software in the Oracle home.

Properly removing Oracle WebCenter Portal from your system involves the following tasks:

- Stopping Oracle Fusion Middleware
- Removing Oracle WebCenter Portal Schemas
- Removing Oracle Universal Content Management
- Removing Oracle WebCenter Portal
- Removing Oracle WebLogic Server
- Removing Oracle JDeveloper
- Removing the Program Groups (Windows Only)
- Rebooting Your System (Windows Only)

6.1.1 Stopping Oracle Fusion Middleware

Before deinstalling Oracle Fusion Middleware software components, you should stop all servers and processes.

For instructions, refer to "Starting and Stopping Oracle Fusion Middleware" in *Oracle Fusion Middleware Administrator's Guide*.

To stop Node Manager, see the instructions in "Stopping Node Manager" in *Oracle Fusion Middleware Node Manager Administrator's Guide for Oracle WebLogic Server*.

6.1.2 Removing Oracle WebCenter Portal Schemas

Run the Repository Creation Utility (RCU) to drop the WebCenter schemas from your database.

For instructions, refer to "Dropping Schemas" in *Oracle Fusion Middleware Repository Creation Utility User's Guide*.

6.1.3 Removing Oracle Universal Content Management

If you installed Oracle UCM separately from the Oracle WebCenter Portal installation, you must first remove this software separately from the Oracle WebCenter Portal software before you remove Oracle WebCenter Portal.

To remove Oracle UCM 11g from your system, refer to "Deinstalling Oracle WebCenter Content" in *Oracle Fusion Middleware Installation Guide for Oracle Enterprise Content Management Suite*.

To remove earlier versions of Oracle UCM, refer to *Content Server Installation Guide for Microsoft Windows* and *Content Server Installation Guide for UNIX* at the following URL:

http://download.oracle.com/docs/cd/E10316_01/owc.htm

After you remove Oracle UCM, you can then proceed with the deinstallation of Oracle WebCenter Portal.

6.1.4 Removing Oracle WebCenter Portal

Deinstalling Oracle WebCenter Portal involves removing the WebCenter Oracle home and the Oracle Common home directories.

The deinstaller will attempt to remove the Oracle home from which it was started. This procedure will not remove any WebLogic domains that you have created - it only removes the software in the Oracle home.

Before you choose to remove any Oracle home, make sure that it is not in use by an existing domain, and also make sure you stop all running processes that use this Oracle home. After you remove the software, you will no longer be able to use your WebLogic domain.

6.1.4.1 Removing the WebCenter Oracle Home

To start the deinstaller, navigate to the *WebCenter_ORACLE_HOME/oui/bin* (on UNIX operating systems) or *WebCenter_ORACLE_HOME\oui\bin* (on Windows operating systems) directory and start the deinstaller.

On UNIX operating systems:

```
./runInstaller.sh -deinstall -jreLoc JRE_LOCATION
```

On Windows operating systems:

```
setup.exe -deinstall -jreLoc JRE_LOCATION
```

Note: Specify the absolute path to your *JRE_LOCATION*; relative paths are not supported.

Follow the instructions in Table 6–1 to deinstall Oracle WebCenter.

If you need additional help with any of the deinstallation screens, refer to Appendix B, "Oracle WebCenter Portal Deinstallation Screens" or click **Help** to access the online help.

Table 6–1 Flow of the Oracle WebCenter Portal Deinstallation Screens

Screen	Description and Action Required
Welcome	The installer displays this screen when you are about to deinstall one or more Oracle Fusion Middleware software components.
Deinstall Oracle Home	<p>Verify the Oracle home you are about to deinstall.</p> <p>Click Deinstall to continue.</p> <p>On the Warning screen, select whether or not you want the deinstaller to remove the Oracle home directory in addition to removing the software.</p> <p>Click Yes to have the deinstaller remove the software and Oracle home, No to remove only the software, or Cancel to return to the previous screen.</p> <p>If you select No, go to 6.1.4.3 , "Manually Removing Your Oracle Home Directories" for instructions on how to manually remove your Oracle home directory.</p>
Deinstallation Progress	This screen shows the progress and status of the deinstallation.
Deinstallation Complete	<p>This screen summarizes the deinstallation that was just completed.</p> <p>Click Finish to dismiss the screen.</p>

6.1.4.2 Removing the Oracle Common Home

This section describes how to remove the `oracle_common` directory. This directory contains its own deinstaller in `oui/bin` (on UNIX operating systems) or `oui\bin` (on Windows operating systems), just like any other Oracle home directory.

To start the deinstaller, navigate to the `MW_HOME/oracle_common/oui/bin` (on UNIX operating systems) or `MW_HOME\oracle_common\oui\bin` (on Windows operating systems) directory and start the deinstaller.

On UNIX operating systems:

```
./runInstaller -deinstall -jreLoc JRE_LOCATION
```

On Windows operating systems:

```
setup.exe -deinstall -jreLoc JRE_LOCATION
```

Note: Specify the absolute path to your *JRE_LOCATION*; relative paths are not supported.

After the deinstaller is started, follow the instructions in Table 6–1 to remove the Oracle Common home.

6.1.4.3 Manually Removing Your Oracle Home Directories

If you selected **No** on the warning screen during deinstallation, you must manually remove your Oracle home directories and all sub-directories. For example, if your WebCenter Oracle home directory was `/home/Oracle/Middleware/Oracle_WC1` on a UNIX operating system:

```
> cd /home/Oracle/Middleware
> rm -rf Oracle_WC1
```

On a Windows operating system, if your WebCenter Oracle home directory was `C:\Oracle\Middleware\Oracle_WC1`, use a file manager window and navigate to the `C:\Oracle\Middleware` directory, then right-click on the `Oracle_WC1` folder and select **Delete**.

The same procedure can be used to manually remove the Oracle Common home (`oracle_common`) directory.

6.1.5 Removing Oracle WebLogic Server

Instructions for removing Oracle WebLogic Server are provided in "Uninstalling the Software" in *Oracle Fusion Middleware Installation Guide for Oracle WebLogic Server*.

After the software is removed, you must manually remove the Middleware home directory and all sub-directories. For example, if your Middleware home directory was `/home/Oracle/Middleware` on a UNIX operating system:

```
> cd /home/Oracle
> rm -rf Middleware
```

On a Windows operating system, if your Middleware home directory was `C:\Oracle\Middleware`, use a file manager window and navigate to the `C:\Oracle` directory, then right-click on the `Middleware` folder and select **Delete**.

6.1.6 Removing Oracle JDeveloper

If you have installed Oracle JDeveloper on your system, refer to "Uninstalling Oracle JDeveloper" in *Oracle Fusion Middleware Installation Guide for Oracle JDeveloper* for instructions on how to remove this software from your system.

6.1.7 Removing the Program Groups (Windows Only)

On Windows systems, you must also manually remove the program groups from the `Start Menu\Programs` folder. As an example (the folder names and program group names on your system may be different), you might remove the following from `C:\Documents and Settings\All Users\Start Menu\Programs`:

- Oracle Fusion Middleware 11.1.1.6.0
- Oracle WebCenter 11g - Home1
- Oracle WebLogic

6.1.8 Rebooting Your System (Windows Only)

On Windows operating systems, you should reboot your computer after you have finished removing all your programs to ensure proper cleanup.

6.2 Reinstalling Oracle WebCenter Portal

The installer does not allow reinstallation of Oracle WebCenter in a directory that already contains an Oracle product. To reinstall Oracle WebCenter in the same directory as before, you must follow the instructions in this chapter to uninstall the software, then follow the instructions in Chapter 2, "Installing Oracle WebCenter Portal" to reinstall the software.

If you need to reinstall Oracle WebCenter Portal because of a partial installation or configuration, see important information in "Recovering From a Partial or Interrupted Installation or Configuration" in *Oracle Fusion Middleware Installation Planning Guide*.

Oracle WebCenter Portal Installation Screens

This appendix contains screenshots and descriptions for all of the Oracle WebCenter Portal installation screens:

- Specify Inventory Directory
- Inventory Location Confirmation
- Welcome
- Install Software Updates
- Prerequisite Checks
- Specify Installation Location
- Application Server
- Installation Summary
- Installation Progress
- Installation Complete

Installation screens and instructions for WebCenter Portal back-end components can be found in Chapter 5, "Preparing Back-End Components for WebCenter Portal Services".

A.1 Specify Inventory Directory

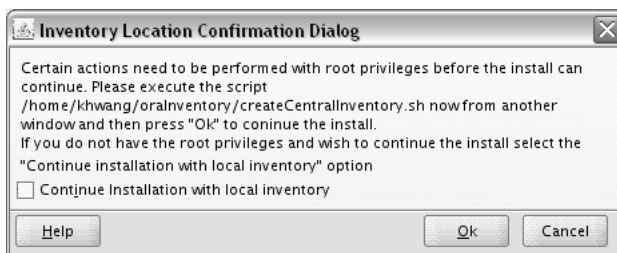


This screen appears for UNIX systems only; if this is your first Oracle installation on this host, you must specify the location of the inventory directory. This inventory directory is used by the installer to keep track of all Oracle products installed on the computer.

The default inventory location is *User_Home/orainventory*.

In the **Operating System Group name** field, select the group whose members you want to grant access to the inventory directory; all members of this group will be able to install products on this machine.

A.2 Inventory Location Confirmation



This screen appears for UNIX systems only; you are asked to run the *inventory_directory/createCentralInventory.sh* script as root.

If you do not have root access on this machine but wish to continue with the installation, select **Continue installation with local inventory**.

A.3 Welcome



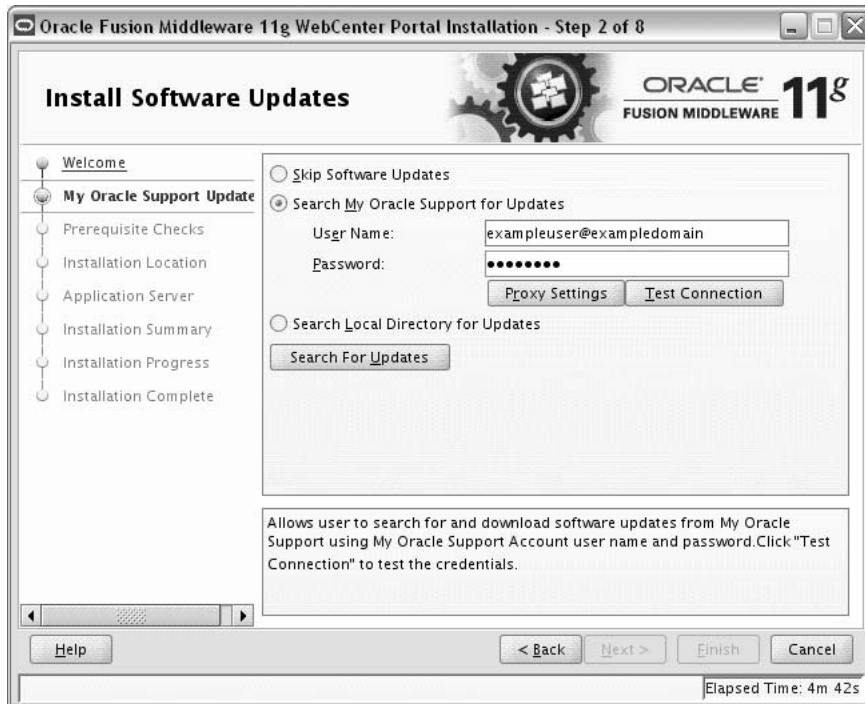
This page introduces you to the Oracle Fusion Middleware installer and provides two important pieces of information:

- A navigation pane on the left that summarizes the tasks the installer will help you complete. Each item in the navigation pane represents a specific installer screen that will prompt you for information required to install the software.
- Information about any prerequisites you might need to perform before continuing with the installation.

Review the information on this screen carefully to be sure you have performed all the necessary prerequisites.

If you are not sure about any of the prerequisite tasks, refer to the *Oracle Fusion Middleware Installation Planning Guide*, as well as the installation guide for the specific Oracle Fusion Middleware software you are about to install.

A.4 Install Software Updates

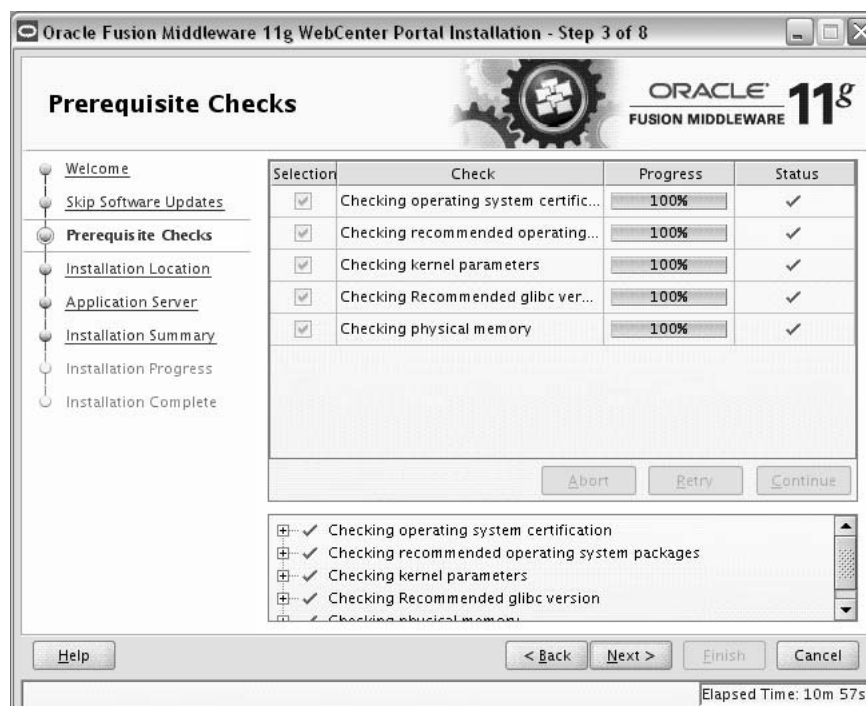


Use this screen to quickly and easily search for the latest software updates, including important security updates, via your My Oracle Support account.

The following table describes the fields on this screen.

Element	Description
Skip Software Updates	Select this option to skip this screen. The installer will not check for updates that might be applicable to the current product installation.
Search My Oracle Support for Updates	<p>If you have a My Oracle Support account, then select this option to have the installer automatically search My Oracle Support for software updates that apply to the software products are about to install.</p> <p>Enter your My Oracle Support account name and password, and then click Search for Updates.</p> <p>The installer automatically downloads applicable software updates from My Oracle Support.</p> <p>Before you search for update, you can test your login credentials and the connection to My Oracle Support by clicking Test Connection. Click Proxy Settings to configure a proxy server if one is required.</p>
Search Local Directory for Updates	<p>Select this option if you already downloaded the latest software updates and you want the installer to search a local directory for updates applicable to the products you are about to install.</p> <p>When you select this option, the installer displays an additional field and Browse button that you can use to identify the local directory where your updates are located.</p>

A.5 Prerequisite Checks



This screen analyzes the host computer to ensure that specific operating system prerequisites have been met.

If any of the prerequisite checks fail, then a short error message appears in the bottom portion of the screen. Fix the error and click **Retry** to try again. If you want to ignore the error or warning messages and continue with the installation, click **Continue**.

Click **Abort** to stop prerequisite checking for all components.

More About System Requirements and Prerequisites

Note that before performing any installation you should read the system requirements and certification documentation to ensure that your environment meets the minimum installation requirements for the products you are installing. Both of these documents are available on Oracle Technology Network (OTN).

The system requirements document covers information such as hardware and software requirements, minimum disk space and memory requirements, and required system libraries, packages, or patches:

<http://www.oracle.com/technetwork/middleware/ias/downloads/fusion-requirements-100147.html>

The certification document covers supported installation types, platforms, operating systems, databases, JDKs, and third-party products:

<http://www.oracle.com/technetwork/middleware/ias/downloads/fusion-certification-100350.html>

Note: If you are installing the 32-bit version of the product, the system on which you are installing must also be a supported 32-bit system. Installing a 32-bit version of the product on a 64-bit system is not supported.

A.6 Specify Installation Location



Use this screen to identify where you want to install your Oracle WebCenter Portal software.

The following table describes the fields that appear on this page.

Field	Description
Oracle Middleware Home	Specify the absolute path to your existing Oracle Middleware home directory, which was created when you installed Oracle WebLogic Server. If you do not know the full path to your Middleware home, click Browse to locate the directory on your system.
Oracle Home Directory	The Oracle home directory is where your products will be installed. All software binaries will reside in this directory, and no runtime process can write to this directory. Specify the directory inside the Oracle Middleware home where you want to install your products, but note the following: <ul style="list-style-type: none"> ■ If you specify a new directory, it will be created inside the Middleware home. ■ If you specify a directory that already exists (for example, you are reinstalling due of an incomplete previous installation), then it must be inside the Middleware home.

Note: You cannot specify `oracle_common` as the Oracle home directory.

If you are performing an installation on a Windows operating system, be sure that your directory paths are valid and do not contain double backslashes (\\).

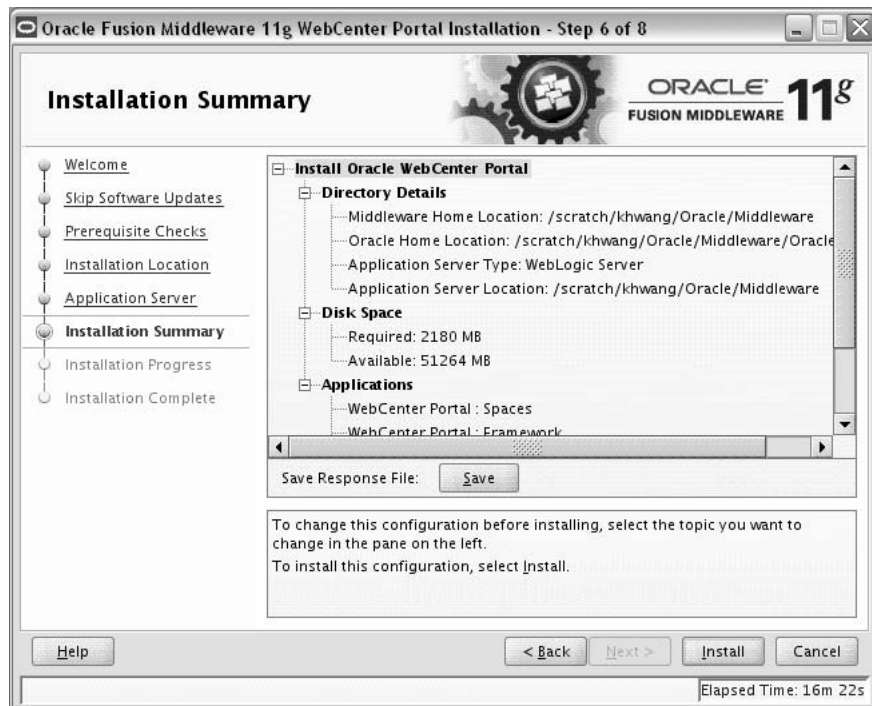
A.7 Application Server



Select the application server you want to use for this installation.

- If the installer detects a Middleware home with Oracle WebLogic Server installed, then this is the application server that will be used. All other fields in this screen will be inactive.
- If the installer detects a Middleware home without an Oracle WebLogic Server installed, you must select one of the application server options and then provide its location in the Application Server Location field.
- If the installer does not detect a Middleware home directory, the "WebLogic Server" option will be inactive. You must select "WebSphere" and then provide the location of your IBM WebSphere in the Application Server Location field.

A.8 Installation Summary



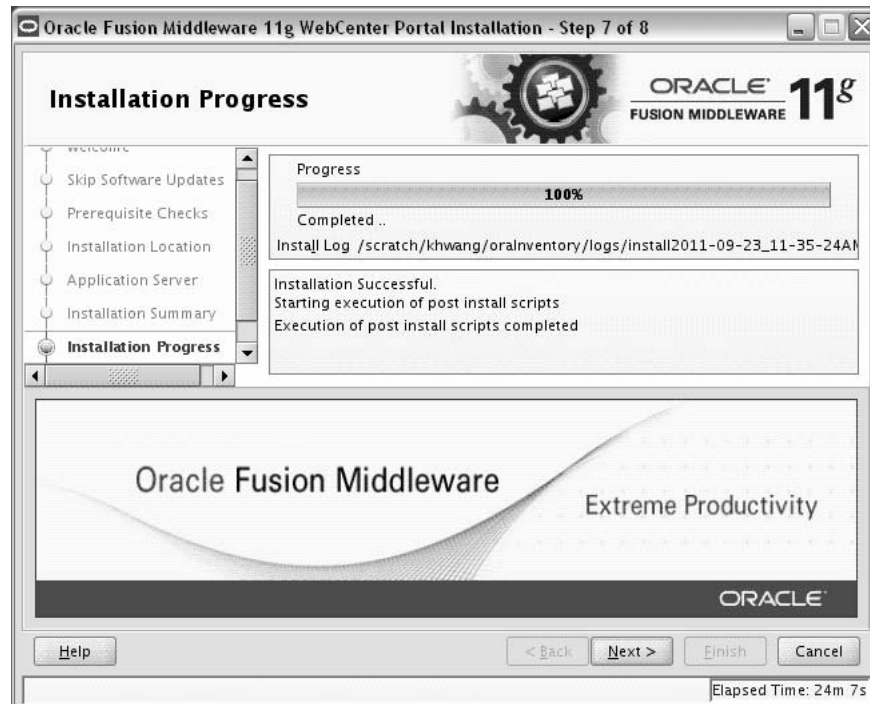
This screen summarizes the selections you have made during this installation session. It includes the following information:

- The location of your installation
- How much disk space will be used for the installation
- The applications you have selected for installation

Review information on this screen carefully, and take one of the following actions:

- If you want to make any changes to the configuration before starting the installation, use the navigation pane to select the Installer screen you want to return to and edit.
- If you are satisfied with the information, click **Install** to begin the installation procedure.
- If you want to save this configuration to a text file (called a response file), click **Save**. The resulting response file can be used later if you choose to perform the same installation from the command line. See Appendix C, "Silent Installation and Deinstallation" for more information.

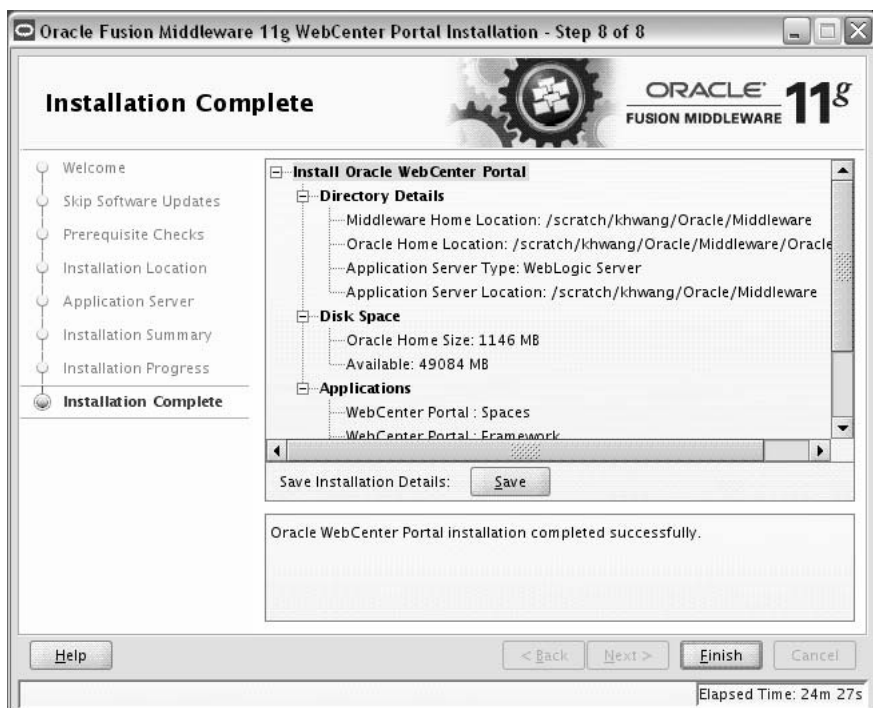
A.9 Installation Progress



This screen shows you the progress of the installation.

If you want to quit before the installation is completed, click **Cancel**. Doing so will result in a partial installation; the portion of the software that was installed on your system before you click **Cancel** will remain on your system, and you will have to remove it manually.

A.10 Installation Complete



This screen summarizes the installation that was just completed.

If you want to save this summary information to a text file for future reference, click **Save**.

Click **Finish** to dismiss the screen and end your installation session.

Oracle WebCenter Portal Deinstallation Screens

This appendix contains screenshots and descriptions for all of the Oracle WebCenter Portal deinstallation screens:

- Welcome
- Deinstall Oracle Home
- Deinstallation Progress
- Deinstallation Complete

B.1 Welcome



The installer displays this screen when you are about to deinstall one or more Oracle Fusion Middleware software components.

When you use the installer to deinstall your Oracle Fusion Middleware software, the installer removes the software files in the selected Oracle home from disk, updates the

Oracle inventory, and performs other operating-specific tasks to remove the components.

Like the Welcome screen that appears when you are about to install a product, the deinstallation Welcome screen contains a navigation pane on the left that summarizes the tasks the installer will help you complete.

Each item in the navigation pane represents a specific installer screen that will prompt you for information required to install the software.

B.2 Deinstall Oracle Home



Use this screen to verify that you have selected the Oracle home that you want to deinstall.

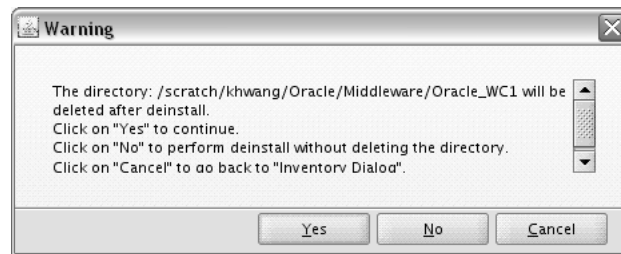
When you click **Deinstall**, then the installer will begin the process of deinstalling the Oracle home shown on this screen.

Note: Before you click **Deinstall**, ensure that all processes associated with the selected Oracle home have been stopped. For complete information about deinstalling your Oracle Fusion Middleware software, refer to the deinstallation information in the Installation guide for your software suite.

If you want to save this configuration to a text file (called a response file), click **Save**. The resulting response file can be used later if you choose to perform the same deinstallation procedure from the command line. See Appendix C, "Silent Installation and Deinstallation" for more information.

Verify that this is the correct directory, then click **Deinstall** to continue.

The following warning screen will appear:



Click **Yes** to remove the software and the Oracle home directory from which the deinstaller was started.

Click **No** to remove the software but do not remove the Oracle home directory.

Click **Cancel** to return to the previous screen.

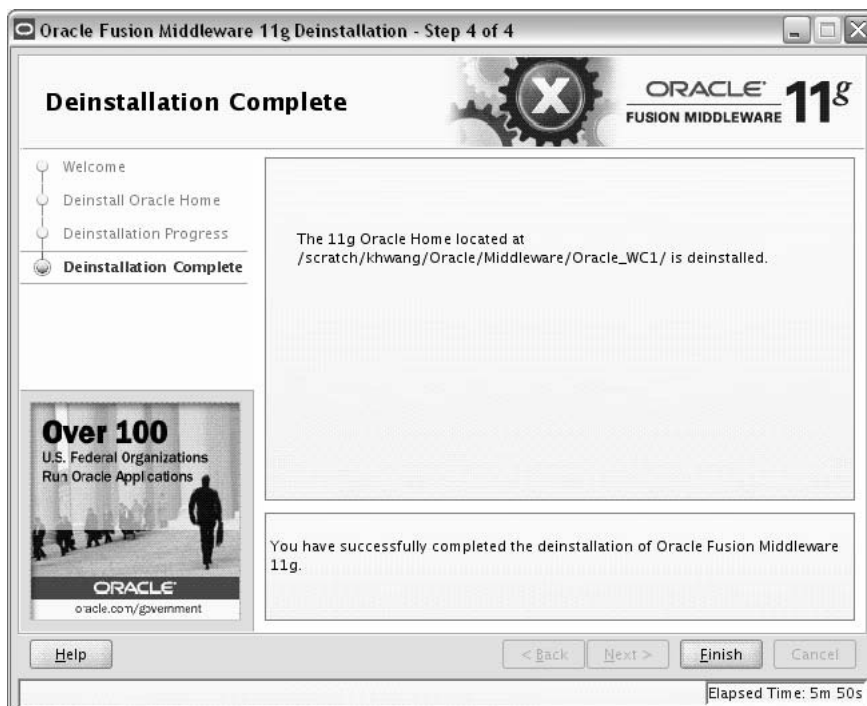
B.3 Deinstallation Progress



Use this screen to monitor the progress of the deinstallation process.

Click **Cancel** to stop the deinstallation process.

B.4 Deinstallation Complete



This screen summarizes the deinstallation that was just completed. When this screen appears, it indicates that the deinstallation is complete and the selected components have been cleared from the Oracle Inventory.

Click **Finish** to exit the installer.

Silent Installation and Deinstallation

This appendix describes how to install and deinstall Oracle WebCenter Portal from the command line in silent mode. This appendix contains the following topics:

- Section C.1, "Understanding Silent Installation and Deinstallation"
- Section C.2, "Using the Oracle WebCenter Portal Response File Templates"

C.1 Understanding Silent Installation and Deinstallation

You can use the Oracle Universal Installer's silent installation mode to bypass the graphical user interface and supply the necessary information in a response file. This method is most useful when installing the same product multiple times on multiple hosts. By using a response file, you can automate the installation of a product for which you know the installation parameters.

For information about silent installation and deinstallation, refer to "Silent Installation and Deinstallation" in *Oracle Fusion Middleware Installation Planning Guide*.

C.2 Using the Oracle WebCenter Portal Response File Templates

Before doing a silent installation, you must provide information specific to your installation in a response file. A response file is a specification file containing information you normally fetch through the Oracle Universal Installer user interface during an interactive installation session. Each answer is stored as a value for a variable identified in the response file. For example, values for Oracle home or installation type can be set automatically within the response file. Response files are text files that you can create or edit in any text editor.

The installer will fail if you attempt an installation using a response file that is not configured correctly. Oracle recommends creating your response file by first running the install GUI, then clicking **Save** on the Installation Summary screen. You will be prompted for a name and location where you want to create this response file. After it is created, you can use it exactly as-is to replicate the installation on other systems, or modify it as needed.

Response file templates for Oracle WebCenter Portal are provided in the `Disk1/stage/Response` (on UNIX operating systems) or `Disk1\stage\Response` (on Windows operating systems) directory where you unpacked the archive file (Section 2.2.1, "Obtaining the Software"):

- For more information about the response file templates that be used for silent installation, see Section C.2.1, "Using the Oracle WebCenter Portal Silent Installation Response Files".

- For more information about the response file template that be used for silent deinstallation, see Section C.2.2, "Using the Oracle WebCenter Portal Silent Deinstallation Response File".

C.2.1 Using the Oracle WebCenter Portal Silent Installation Response Files

Table C–1 lists the installation response file templates provided for Oracle WebCenter Portal:

Table C–1 Installation Response File Templates for Oracle WebCenter Portal

Template	Description
<code>sampleResponse_wls.rsp</code>	Use this response file template to install Oracle SOA Suite using Oracle WebLogic Server as your application server. The equivalent using the GUI would be to run the installer and select WebLogic Server on the Application Server screen. For more information, see Section C.2.1.1, "Using the <code>sampleResponse_wls.rsp</code> response File Template".
<code>sampleResponse_was.rsp</code>	Use this response file template to install Oracle SOA Suite using IBM WebSphere as your application server. The equivalent using the GUI would be to run the installer and select WebSphere on the Application Server screen. For more information, see Section C.2.1.2, "Using the <code>sampleResponse_was.rsp</code> response File Template".

C.2.1.1 Using the `sampleResponse_wls.rsp` response File Template

Table C–2 describes the parameters found in the `sampleResponse_wls.rsp` response file template. The parameters are listed in the order in which they appear in the response file; note that they do not necessarily follow the order of the installation screens as seen in graphical mode.

Table C–2 Parameters in the `sampleResponse_wls.rsp` File

Corresponding Install Screen	Parameter	Description
Install Software Updates	<code>SPECIFY_DOWNLOAD_LOCATION</code>	Set <code>SPECIFY_DOWNLOAD_LOCATION=true</code> if you want to specify the location where software updates can be downloaded.
	<code>SOFTWARE_UPDATES_DOWNLOAD_LOCATION</code>	Then, specify the directory on your local system that contains the updates using the <code>SOFTWARE_UPDATES_DOWNLOAD_LOCATION</code> parameter.
	<code>SKIP_SOFTWARE_UPDATES</code>	Set <code>SKIP_SOFTWARE_UPDATES=true</code> if you do not want the installer to check for software updates.
Specify Installation Location	<code>ORACLE_HOME</code>	Specify the full path to your Oracle home directory.
	<code>MIDDLEWARE_HOME</code>	Specify the full path to your Middleware home directory.
Application Server	<code>APPSERVER_TYPE</code>	Set <code>APPSERVER_TYPE=WLS</code> since you are using Oracle WebLogic Server as the application server.

C.2.1.2 Using the `sampleResponse_was.rsp` response File Template

Table C–3 describes the parameters found in the `sampleResponse_was.rsp` response file template. The parameters are listed in the order in which they appear in

the response file; note that they do not necessarily follow the order of the installation screens as seen in graphical mode.

Table C-3 Parameters in the sampleResponse_was.rsp File

Corresponding Install Screen	Parameter	Description
Install Software Updates	SPECIFY_DOWNLOAD_LOCATION	Set SPECIFY_DOWNLOAD_LOCATION=true if you want to specify the location where software updates can be downloaded.
	SOFTWARE_UPDATES_DOWNLOAD_LOCATION	Then, specify the directory on your local system that contains the updates using the SOFTWARE_UPDATES_DOWNLOAD_LOCATION parameter.
	SKIP_SOFTWARE_UPDATES	Set SKIP_SOFTWARE_UPDATES=true if you do not want the installer to check for software updates.
Specify Installation Location	ORACLE_HOME	Specify the full path to your Oracle home directory.
	MIDDLEWARE_HOME	Specify the full path to your Middleware home directory.
Application Server	APPSERVER_TYPE	Set APPSERVER_TYPE=WAS since you are using the IBM WebSphere application server.
	APPSERVER_LOCATION	Specify the location of your IBM WebSphere application server.

C.2.2 Using the Oracle WebCenter Portal Silent Deinstallation Response File

The only response file template provided for deinstallation is called `deinstall_oh.rsp`. This file contains only a single parameter: `DEINSTALL_IN_ASINSTANCE_MODE=false`. This causes the deinstaller to not look for any Oracle instances to remove; instead, the deinstaller will remove the Oracle home from where it is started.

Troubleshooting

This appendix describes solutions to common problems that you might encounter when installing Oracle WebCenter Portal. It contains the following sections:

- Section D.1, "General Troubleshooting Tips"
- Section D.2, "Installation and Configuration Log Files"
- Section D.3, "Keeping Track of Your JRE Location"
- Section D.4, "Need More Help?"

D.1 General Troubleshooting Tips

If you encounter an error during installation:

- Read the *Oracle Fusion Middleware Release Notes for Linux x86* or *Oracle Application Server Release Notes and New Features* (depending on your platform) for the latest updates. The most current version of the release notes is available on the Oracle Fusion Middleware Documentation page on Oracle Technology Network:

<http://www.oracle.com/technetwork/middleware/fusion-middleware/documentation/index.html>

Select the link for the documentation library corresponding to your release. The Release Notes are available in the library.

- Verify that your computer meets the requirements specified in the System Requirements and Specifications document:
<http://www.oracle.com/technetwork/middleware/ias/downloads/fusion-requirements-100147.html>
- If you entered incorrect information on one of the installation screens, return to that screen by clicking **Back** until you see the screen.
- If an error occurred while the installer is copying or linking files:
 1. Note the error and review the installation log files.
 2. Remove the failed installation by following the steps in Chapter 6, "Deinstalling Oracle WebCenter Portal".
 3. Correct the issue that caused the error.
 4. Restart the installation.

D.2 Installation and Configuration Log Files

This section contains solutions to common problems that you might encounter when installing Oracle Fusion Middleware. The following topics are covered:

- Section D.2.1, "Installation Log Files"
- Section D.2.2, "Configuration Log Files"

D.2.1 Installation Log Files

The installer writes logs files to the *Oracle_Inventory_Location/log* (on UNIX operating systems) or *Oracle_Inventory_Location/logs* (on Windows operating systems) directory. On UNIX operating systems, if you do not know the location of your Oracle Inventory directory, you can find it in the *oraInst.loc* file in the following directories (default locations):

- Linux: */etc/oraInst.loc*
- HP-UX and Solaris: */var/opt/oracle/oraInst.loc*

On Windows operating systems, the default location for the inventory directory is *C:\Program Files\Oracle\Inventory\logs*.

The following install log files are written to the log directory:

- *installdate-time-stamp.log*
This is the main log file.
- *installdate-time-stamp.out*
This log file contains the output and error streams during the installation.
- *installActionsdate-time-stamp.log*
This file is used by the installer GUI to keep track of internal information.
- *installProfiledate-time-stamp.log*
This log file contains the overall statistics like time taken to complete the installation, as well as configuration, memory and CPU details.
- *oraInstalldate-time-stamp.log*
This log file contains the output stream of the copy session.

If you start the installer with the *-printtime* parameter, the *timeTakedate-time-stamp.log* and *timedate-time-stamp.log* files are created in the same directory:

- *timeTakedate-time-stamp.log*
This file contains information for the amount of time taken to move between screens (applicable for GUI installations only).
- *timedate-time-stamp.log*
This file contains time information for the copy session.

If you start the installer with the *-printmemory* parameter, the *memorydate-time-stamp.log* file is created. This file contains memory usage information for the copy session.

D.2.2 Configuration Log Files

To create a log file of your configuration session, start the Configuration Wizard with the `-log=log_filename` option, as shown below:

On UNIX operating systems:

```
cd WebCenter_ORACLE_HOME/common/bin
./config.sh -log=log_filename
```

On Windows operating systems:

```
cd WebCenter_ORACLE_HOME\common\bin
config.cmd -log=log_filename
```

If you specify an absolute path with your `log_filename` then your log file will be created there. If you only specify a file name with no path, then the log files are created in the `WebCenter_ORACLE_HOME/common/bin` (on UNIX operating systems) or `WebCenter_ORACLE_HOME\common\bin` (on Windows operating systems) directory.

D.3 Keeping Track of Your JRE Location

The JRE location used by the installer is stored in the `WebCenter_ORACLE_HOME/oui/oraparam.ini` (on UNIX operating systems) or `WebCenter_ORACLE_HOME\oui\oraparam.ini` (on Windows operating systems) file. This file is used by OPatch and Oracle Universal Installer (OUI) to determine the location of your preferred JRE.

It is possible to change the location of your JRE (for example, the JRE directory is moved out of the Middleware Home). If this happens, you will get an error message when trying to run OPatch or OUI since the JRE location can no longer be found. If this happens, you can do one of the following:

- Edit the `WebCenter_ORACLE_HOME/oui/oraparam.ini` (on UNIX operating systems) or `WebCenter_ORACLE_HOME\oui\oraparam.ini` (on Windows operating systems) file to point to the new JRE location.
- Use the `-jreLoc` command line option to point to the new JRE location. See Section 2.2.2, "Starting the Installer" for more information.

D.4 Need More Help?

If this appendix does not solve the problem you encountered, contact My Oracle Support (formerly OracleMetaLink: <http://metalink.oracle.com>), or open a service request.

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