

Oracle® Fusion Middleware

Installing and Configuring Oracle WebCenter Portal

12c (12.2.1.2)

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Documentation for installers and system administrators that describes how to install, configure, and deinstall Oracle WebCenter Portal.

Oracle Fusion Middleware Installing and Configuring Oracle WebCenter Portal, 12c (12.2.1.2)

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Contents

Preface	vii
Audience	vii
Documentation Accessibility	vii
Related Documents.....	vii
Conventions.....	viii
1 About the Oracle WebCenter Portal Installation	
1.1 About Oracle WebCenter Portal.....	1-1
1.2 Using the Standard Installation Topology as a Starting Point.....	1-2
1.2.1 About the Oracle WebCenter Portal Standard Installation Topology.....	1-2
1.2.2 About Elements in the Standard Installation Topology Illustration	1-3
1.2.3 Understanding Oracle WebCenter Portal Managed Servers	1-5
1.2.4 Understanding Oracle WebCenter Portal Components	1-5
1.3 Using This Document to Extend an Existing Domain.....	1-6
2 Preparing to Install and Configure Oracle WebCenter Portal	
2.1 Roadmap for Installing and Configuring a Standard Installation Topology	2-1
2.2 Roadmap for Verifying Your System Environment	2-2
2.2.1 Verifying Certification, System, and Interoperability Requirements	2-3
2.2.2 Selecting an Installation User	2-4
2.2.3 Understanding Directories for Installation and Configuration.....	2-7
2.2.4 Understanding JDK Requirements for an Oracle Fusion Middleware Installation .	2-11
2.2.5 Understanding Database Requirements for an Oracle Fusion Middleware Installation	2-11
2.3 About Product Distributions.....	2-12
2.4 Obtaining the Product Distribution	2-12
3 Installing the Oracle WebCenter Portal Software	
3.1 Verifying the Installation Checklist.....	3-1
3.2 Starting the Installation Program	3-3
3.3 Navigating the Installation Screens	3-3
3.4 Verifying the Installation.....	3-5

3.4.1	Reviewing the Installation Log Files	3-5
3.4.2	Checking the Directory Structure	3-6
3.4.3	Viewing the Contents of the Oracle Home	3-6
4	Configuring the Oracle WebCenter Portal Domain	
4.1	Creating the Database Schemas	4-1
4.1.1	Installing and Configuring a Certified Database.....	4-2
4.1.2	Starting the Repository Creation Utility	4-2
4.1.3	Navigating the Repository Creation Utility Screens to Create the Schemas	4-2
4.2	Configuring the Domain.....	4-6
4.2.1	Starting the Configuration Wizard	4-7
4.2.2	Navigating the Configuration Wizard Screens to Create and Configure the Domain	4-7
4.3	Starting the Servers.....	4-19
4.3.1	Starting Node Manager	4-19
4.3.2	Starting the Administration Server	4-20
4.3.3	Starting the Oracle WebCenter Portal Managed Servers	4-21
4.4	Verifying the Configuration.....	4-22
4.5	Setting Up an External LDAP-Based Identity Store	4-22
5	Next Steps After Configuring the Domain	
5.1	Performing Basic Administrative Tasks.....	5-1
5.2	Performing Additional Domain Configuration Tasks	5-2
5.3	Preparing Your Environment for High Availability	5-3
5.4	Using Oracle JDeveloper with Oracle WebCenter Portal	5-4
6	Extending an Existing Domain	
6.1	Extending a Domain to Install Oracle WebCenter Portal Products	6-1
7	Getting Started with Oracle WebCenter Portal Components	
7.1	About Oracle WebCenter Portal Components and Managed Servers.....	7-1
7.2	Working with WebCenter Portal.....	7-2
7.3	Understanding Automatic Service Configuration for WebCenter Portal	7-2
7.4	Working with Oracle WebCenter Portal's Analytics Collector	7-4
7.5	Working with Oracle WebCenter Portal's Discussions Server	7-4
7.5.1	Connecting the Discussion Server with Oracle WebCenter Portal	7-5
7.6	Working with Oracle WebCenter Portal's Pagelet Producer	7-6
7.7	Working with Oracle WebCenter Portal's Portlet Producers.....	7-7
8	Preparing Back-End Components for WebCenter Portal Tools and Services	
8.1	Introduction to Tools and Services.....	8-1
8.2	Back-End Requirements for Calendar Events	8-5
8.3	Back-End Requirements for Documents	8-6

8.3.1	Oracle WebCenter Content Server Requirements	8-6
8.4	Back-End Requirements for Instant Messaging and Presence (IMP).....	8-7
8.5	Back-End Requirements for Mail	8-8
8.6	Back-End Requirements for Search.....	8-8
8.6.1	Installing Oracle SES 11.2.2.2.....	8-8
8.6.2	Configuring Oracle SES 11.2.2.2.....	8-9
8.7	Back-End Requirements for WebCenter Portal Workflows	8-9
8.7.1	Oracle SOA Suite - Installation.....	8-10
8.7.2	Oracle WebCenter Portal SOA Composites - Installation	8-11
8.7.3	Oracle SOA Server - Extending the Domain	8-11
8.7.4	Oracle SOA and WebCenter Portal - WS-Security Configuration	8-12
8.7.5	Oracle WebCenter Portal - Configuring the BPEL Server Connection.....	8-13
9	Next Steps After Configuring the Domain	
9.1	Performing Basic Administrative Tasks.....	9-1
9.2	Performing Additional Domain Configuration Tasks	9-2
9.3	Preparing Your Environment for High Availability	9-3
9.4	Connecting Back-End Components	9-4
9.5	Using Oracle JDeveloper with Oracle WebCenter Portal.....	9-4
10	Deinstalling or Reinstalling Oracle WebCenter Portal	
10.1	About Product Deinstallation	10-2
10.2	Stopping Oracle Fusion Middleware.....	10-2
10.3	Removing Your Database Schemas.....	10-2
10.4	Deinstalling the Software	10-3
10.4.1	Starting the Deinstallation Program	10-3
10.4.2	Selecting the Product to Deinstall	10-3
10.4.3	Navigating the Deinstallation Screens	10-4
10.5	Removing the Oracle Home Directory Manually	10-4
10.6	Removing the Program Shortcuts on Windows Operating Systems	10-5
10.7	Removing the Domain and Application Data	10-5
10.8	Reinstalling the Software.....	10-5

Preface

This document describes how to install and configure Oracle WebCenter Portal.

[Audience](#)

[Documentation Accessibility](#)

[Related Documents](#)

[Conventions](#)

Audience

This guide is intended for system administrators or application developers who are installing and configuring Oracle WebCenter Portal. It is assumed that readers are familiar with web technologies and have a general understanding of Windows and UNIX platforms.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Related Documents

Refer to the Oracle Fusion Middleware Library for additional information.

- For Oracle WebCenter Portal information, see Oracle WebCenter Portal Documentation.
- For installation information, see Fusion Middleware Installation Documentation.
- For upgrade information, see Fusion Middleware Upgrade Documentation.
- For administration-related information, see Fusion Middleware Administration Documentation.

- For release-related information, see Fusion Middleware Release Notes.

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.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

About the Oracle WebCenter Portal Installation

The standard installation for Oracle WebCenter Portal described in this guide creates the standard topology, which represents a sample starting topology for this product.

[About Oracle WebCenter Portal](#)

Companies use Oracle WebCenter Portal to build enterprise-scale intranet and extranet portals that provide a foundation for the next-generation user experience (UX) with Oracle Fusion Middleware and Oracle Fusion Applications.

[Using the Standard Installation Topology as a Starting Point](#)

The standard installation topology is a flexible topology that you can use as a starting point in production environments.

[Using This Document to Extend an Existing Domain](#)

The procedures in this guide describe how to create a new domain. The assumption is that no other Oracle Fusion Middleware products are installed on your system.

1.1 About Oracle WebCenter Portal

Companies use Oracle WebCenter Portal to build enterprise-scale intranet and extranet portals that provide a foundation for the next-generation user experience (UX) with Oracle Fusion Middleware and Oracle Fusion Applications.

Portals built with Oracle WebCenter Portal commonly support thousands of users who create, update, and access content and data from multiple back-end sources. Oracle WebCenter Portal provides an open and extensible solution that allows users to interact directly with tools and services like instant messaging, documents, content management, discussion forums, wikis, blogs, and tagging directly from within the context of a portal. Oracle WebCenter Portal delivers intuitive user experiences by leveraging the best UX capabilities from a significant portfolio of leading portal products and related technologies. From the user's perspective, the integration is seamless.

Oracle WebCenter Portal provides an out-of-the-box enterprise-ready customizable application, with a configurable work environment that enables individuals and groups to work and collaborate more effectively to develop and use portals. Business users can easily assemble new portals or composite applications using Portal Composer and a page editor that includes a library of prebuilt reusable components. They can enhance user experience by wiring components together on the page, configuring content personalization, enabling the use of integrated social tools, and creating data visualizations. Developers can also use JDeveloper to build custom assets that can be used in portals built with Oracle WebCenter Portal.

1.2 Using the Standard Installation Topology as a Starting Point

The standard installation topology is a flexible topology that you can use as a starting point in production environments.

The information in this guide helps you to create a standard installation topology for Oracle WebCenter Portal. If appropriate and required, you can later extend the standard installation topology to create a secure and highly available production environment (see [Next Steps After Configuring the Domain](#)).

The standard installation topology represents a sample topology for this product. It is not the only topology this product supports. For more information, see *About the Standard Installation Topology* in *Oracle Fusion Middleware Planning an Installation of Oracle Fusion Middleware*.

[About the Oracle WebCenter Portal Standard Installation Topology](#)

This topology represents a standard WebLogic Server domain that contains an Administration Server and one or more clusters containing one or more Managed Servers.

[About Elements in the Standard Installation Topology Illustration](#)

The standard installation topology typically includes common elements.

[Understanding Oracle WebCenter Portal Managed Servers](#)

After Oracle WebCenter Portal is installed, you need to create or extend and configure a WebLogic Server domain.

[Understanding Oracle WebCenter Portal Components](#)

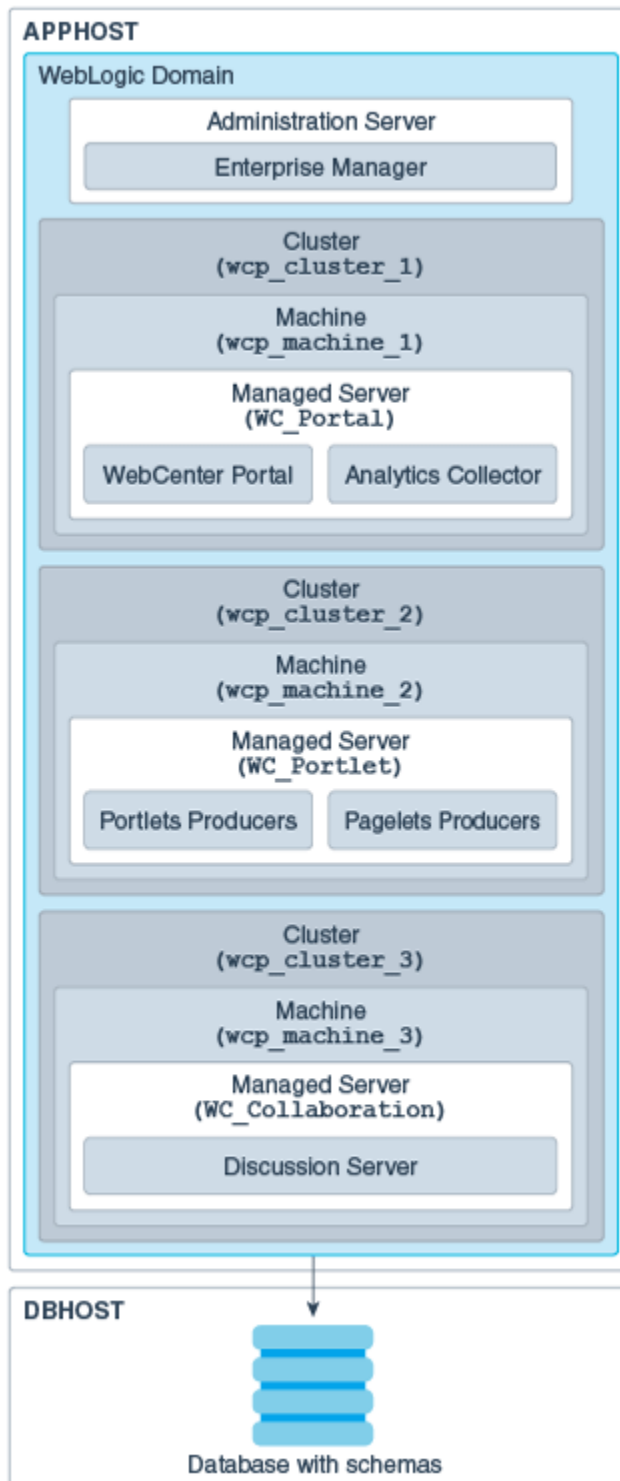
By default, all Oracle WebCenter Portal components are installed onto your system. Depending on the functionality required in your portals, you can choose the components that need to be configured in your domain.

1.2.1 About the Oracle WebCenter Portal Standard Installation Topology

This topology represents a standard WebLogic Server domain that contains an Administration Server and one or more clusters containing one or more Managed Servers.

The following figure shows the standard installation topology for Oracle WebCenter Portal.

See [Table 1-1](#) for information on elements of this topology.



For configuration instructions, see [Configuring the Oracle WebCenter Portal Domain](#).

1.2.2 About Elements in the Standard Installation Topology Illustration

The standard installation topology typically includes common elements.

The following table describes all elements of the topology illustration:

Table 1-1 Description of Elements in Standard Installation Topologies

Element	Description and Links to Related Documentation
APPHOST	A standard term used in Oracle documentation to refer to the machine that hosts the application tier.
DBHOST	A standard term used in Oracle documentation to refer to the machine that hosts the database.
WebLogic Domain	A logically related group of Java components (in this case, the Administration Server, Managed Servers, and other related software components). For more information, see <i>What Is an Oracle WebLogic Server Domain?</i> in <i>Oracle Fusion Middleware Understanding Oracle Fusion Middleware</i> .
Administration Server	Central control entity of a WebLogic domain. It maintains configuration objects for that domain and distributes configuration changes to Managed Servers. For more information, see <i>What Is the Administration Server?</i> in <i>Oracle Fusion Middleware Understanding Oracle Fusion Middleware</i> .
Enterprise Manager	The Oracle Enterprise Manager Fusion Middleware Control is a primary tool used to manage a domain. For more information, see <i>Oracle Enterprise Manager Fusion Middleware Control</i> in <i>Oracle Fusion Middleware Understanding Oracle Fusion Middleware</i> .
Cluster	A collection of multiple WebLogic Server instances running simultaneously and working together. For more information, see <i>Overview of Managed Servers and Managed Server Clusters</i> in <i>Oracle Fusion Middleware Understanding Oracle Fusion Middleware</i> .
Machine	A logical representation of the computer that hosts one or more WebLogic Server instances (servers). Machines are also the logical glue between the Managed Servers and the Node Manager. In order to start or stop the Managed Servers using the Node Manager, associate the Managed Servers with a machine.
Managed Server	A host for your applications, application components, web services, and their associated resources. For more information, see <i>Overview of Managed Servers and Managed Server Clusters</i> in <i>Oracle Fusion Middleware Understanding Oracle Fusion Middleware</i> .
Infrastructure	A collection of services that include the following: <ul style="list-style-type: none"> <li data-bbox="781 1598 1365 1766">• Metadata repository (MDS) Contains metadata for Oracle Fusion Middleware components, such as the Oracle Application Developer Framework. For more information, see <i>What Is the Metadata Repository?</i> in <i>Oracle Fusion Middleware Understanding Oracle Fusion Middleware</i>. <li data-bbox="781 1776 1365 1822">• Oracle Application Developer Framework (Oracle ADF) <li data-bbox="781 1833 1365 1858">• Oracle Web Services Manager (OWSM)

1.2.3 Understanding Oracle WebCenter Portal Managed Servers

After Oracle WebCenter Portal is installed, you need to create or extend and configure a WebLogic Server domain.

The basic domain infrastructure consists of one Administration Server and various optional Managed Servers. When you configure a domain for Oracle WebCenter Portal, the WebLogic Administration Server gets created if it is a new domain. Depending on the Oracle WebCenter 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 1-2 Servers Created During Oracle WebCenter Portal Domain Configuration

WebLogic Server Instance	Components/Applications Hosted	Description
AdminServer	none	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_Portal	WebCenter Portal Analytics Collector	This managed server gets created if you choose to install WebCenter Portal, the out-of-the-box portal application, while creating or extending your Oracle WebCenter Portal domain.
WC_Portlet	Portlets Producers Pagelet Producer	This managed server gets created if you choose to install Oracle WebCenter Portal's Pagelet Producer or Oracle WebCenter Portal's Portlet Producers while creating or extending your domain.
WC_Collaboration	Discussion Server	This managed server gets created if you choose to install Oracle WebCenter Portal's Discussion Server while creating or extending your domain.

[About the Oracle WebCenter Portal Standard Installation Topology](#) shows a graphical representation of these servers and components.

1.2.4 Understanding Oracle WebCenter Portal Components

By default, all Oracle WebCenter Portal components are installed onto your system. Depending on the functionality required in your portals, you can choose the components that need to be configured in your domain.

Oracle WebCenter Portal includes the following components:

- **Portal Composer**

Oracle WebCenter Portal's Portal Composer offers a single, integrated, web-based environment for assembling portals or composite applications using a library of prebuilt reusable components. Business users can wire components together on the page, configure content personalization, enable the use of integrated social tools, and create data visualizations. It provides a browser-based platform for creating enterprise portals, multiple sites, and communities. Portal Composer is also generally referred to as *WebCenter Portal*.

- **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.

- **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, and WSRP Parameter Form Portlet.

- **Discussions Server**

Oracle WebCenter Portal's Discussions Server supports integration of discussion forums and announcements into portals.

- **Analytics Collector**

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

1.3 Using This Document to Extend an Existing Domain

The procedures in this guide describe how to create a new domain. The assumption is that no other Oracle Fusion Middleware products are installed on your system.

If you have installed and configured other Oracle Fusion Middleware products on your system (for example, Fusion Middleware Infrastructure, with a domain that is up and running), use the same instructions to extend your existing domain. If you choose to extend an existing domain, read [Installing Multiple Products in the Same Domain](#) for detailed information.

Preparing to Install and Configure Oracle WebCenter Portal

To prepare for your Oracle WebCenter Portal installation, verify that your system meets the basic requirements, then obtain the correct installation software.

[Roadmap for Installing and Configuring a Standard Installation Topology](#)

This roadmap provides all the steps required to install and configure a standard Oracle WebCenter Portal installation topology.

[Roadmap for Verifying Your System Environment](#)

Before you begin the installation and configuration process, you must verify your system environment.

[About Product Distributions](#)

You create the initial Oracle WebCenter Portal domain using the Oracle Fusion Middleware Infrastructure distribution, which contains both Oracle WebLogic Server software and Oracle Java Required Files (JRF) software.

[Obtaining the Product Distribution](#)

You can obtain the Oracle Fusion Middleware Infrastructure and Oracle WebCenter Portal distribution on the Oracle Technology Network (OTN).

2.1 Roadmap for Installing and Configuring a Standard Installation Topology

This roadmap provides all the steps required to install and configure a standard Oracle WebCenter Portal installation topology.

Table 2-1 Standard Installation Roadmap

Task	Description	Documentation
Verify your system environment.	Before beginning the installation, verify that the minimum system and network requirements are met.	See Roadmap for Verifying Your System Environment .
Check for any mandatory patches that will be required before or after the installation.	Review the Oracle Fusion Middleware Infrastructure release notes to see if there are any mandatory patches required for the software products you are installing.	See Install and Configure in <i>Oracle Fusion Middleware Release Notes for Oracle Fusion Middleware Infrastructure</i> .

Table 2-1 (Cont.) Standard Installation Roadmap

Task	Description	Documentation
Obtain the appropriate distributions.	Obtain the Oracle Fusion Middleware Infrastructure and the Oracle WebCenter Portal installation files.	See About Product Distributions .
Determine your installation directories.	Verify that the installer can access or create the required installer directories. Also, verify that the directories exist on systems that meet the minimum requirements.	See <i>What Are the Key Oracle Fusion Middleware Directories?</i> in <i>Oracle Fusion Middleware Understanding Oracle Fusion Middleware</i> .
Install prerequisite software.	Install Oracle Fusion Middleware Infrastructure to create the Oracle home directory for Oracle WebCenter Portal.	See <i>Installing the Infrastructure Software</i> in <i>Oracle Fusion Middleware Installing and Configuring the Oracle Fusion Middleware Infrastructure</i> . There is no need to configure a domain for Infrastructure; the purpose of this task is to install <code>oracle_common</code> into the Oracle home.
Install the software.	Run the Oracle Universal Installer to install Oracle WebCenter Portal. Installing the software transfers the software to your system and creates the Oracle home directory.	See Installing the Oracle WebCenter Portal Software .
Select a database profile and review any required custom variables.	Before you install required schemas in the database, review the information about any custom variables you will need to set for the Oracle WebCenter Portal schemas.	See Understanding Database Requirements for an Oracle Fusion Middleware Installation .
Create the schemas.	Run the Repository Creation Utility to create the schemas required for configuration.	See Creating the Database Schemas .
Create a WebLogic domain.	Use the Configuration Wizard/Assistant to create and configure the WebLogic domain.	See Configuring the Domain for creating the standard topology for Oracle WebCenter Portal.
Administer and prepare your domain for high availability.	Discover additional tools and resources to administer your domain and configure your domain to be highly available.	See Next Steps After Configuring the Domain .

2.2 Roadmap for Verifying Your System Environment

Before you begin the installation and configuration process, you must verify your system environment.

The following table identifies important tasks and checks to perform to ensure that your environment is properly prepared for installing and configuring Oracle WebCenter Portal.

Table 2-2 Roadmap for Verifying Your System Environment

Task	Description	Documentation
Verify certification and system requirements.	Verify that your operating system is certified and properly configured for installation and configuration.	See Verifying Certification, System, and Interoperability Requirements .
Identify a proper installation user.	Verify that the installation user has the proper permissions to install and configure the software.	See Selecting an Installation User .
Select the installation and configuration directories on your system.	Verify that you can create the necessary directories for installation and configuration, according to the recommended directory structure.	See Understanding Directories for Installation and Configuration .
Install a certified JDK.	The installation program for the distribution requires a certified JDK present on your system.	See Understanding JDK Requirements for an Oracle Fusion Middleware Installation .
Install and configure a database for mid-tier schemas.	To configure your WebLogic domain, you must have access to a certified database that is properly configured for schemas required by Oracle WebCenter Portal.	See Understanding Database Requirements for an Oracle Fusion Middleware Installation .

[Verifying Certification, System, and Interoperability Requirements](#)

Oracle recommends that you use the certification matrix and system requirements documents with each other to verify that your environment meets the requirements for installation.

[Selecting an Installation User](#)

The user who performs installation and configuration on your system requires sufficient permissions and privileges.

[Understanding Directories for Installation and Configuration](#)

During the installation and domain configuration process, you must plan on providing the locations for these directories: Oracle Home, Domain Home, and the Application Home.

[Understanding JDK Requirements for an Oracle Fusion Middleware Installation](#)

Most Fusion Middleware products are in .jar file format. These distributions do *not* include a JDK. To run a .jar distribution installer, you must have a certified JDK already installed on your system.

[Understanding Database Requirements for an Oracle Fusion Middleware Installation](#)

Many Oracle Fusion Middleware products require database schemas prior to configuration. If you do not already have a database where you can install these schemas, you must install and configure a certified database.

2.2.1 Verifying Certification, System, and Interoperability Requirements

Oracle recommends that you use the certification matrix and system requirements documents with each other to verify that your environment meets the requirements for installation.

1. Verifying your environment meets certification requirements

Make sure that you are installing your product on a supported hardware and software configuration. For more information, see the certification document for your release on the *Oracle Fusion Middleware Supported System Configurations* page.

Oracle has tested and verified the performance of your product on all certified systems and environments. Whenever new certifications occur, they are added to the proper certification document right away. New certifications can be released at any time. Therefore, the certification documents are kept outside the documentation libraries and are available on Oracle Technology Network.

2. Using the system requirements document to verify certification

Oracle recommends that you use the *Oracle Fusion Middleware System Requirements and Specifications* document to verify that the certification requirements are met. For example, if the certification document indicates that your product is certified for installation on 64-Bit Oracle Linux 6.5, use this document to verify that your system meets the required minimum specifications. These include disk space, available memory, specific platform packages and patches, and other operating system-specific items. System requirements can change in the future. Therefore, the system requirement documents are kept outside of the documentation libraries and are available on Oracle Technology Network.

3. Verifying interoperability among multiple products

See Oracle Fusion Middleware 12c Interoperability and Compatibility in *Oracle Fusion Middleware Understanding Interoperability and Compatibility* to learn how to install and run multiple Fusion Middleware products from the same release or mixed releases with each other.

2.2.2 Selecting an Installation User

The user who performs installation and configuration on your system requires sufficient permissions and privileges.

[Understanding User Permissions](#)

The user who installs a Fusion Middleware product owns the files and has certain permissions on the files.

[Understanding Non-Default User Permissions on UNIX Operating Systems](#)

Changing the default permissions setting reduces the security of the installation and possibly your system. Oracle does not recommend changing default permission settings.

[Verifying the Installation User has Administrator Privileges on Windows Operating Systems](#)

To update the Windows Registry, you must have Administrator privileges.

2.2.2.1 Understanding User Permissions

The user who installs a Fusion Middleware product owns the files and has certain permissions on the files.

- Read and write permissions on all non-executable files (for example, `.jar`, `.properties`, or `.xml`). All other users in the same group as the file owner have read permissions only.

- Read, write, and execute permissions on all executable files (for example, .exe, .sh, or .cmd). All other users in the same group as the file owner have read and execute permissions only.

This means that someone other than the person who installs the software can use the installed binaries in the Oracle home to configure a domain or set of Fusion Middleware products.

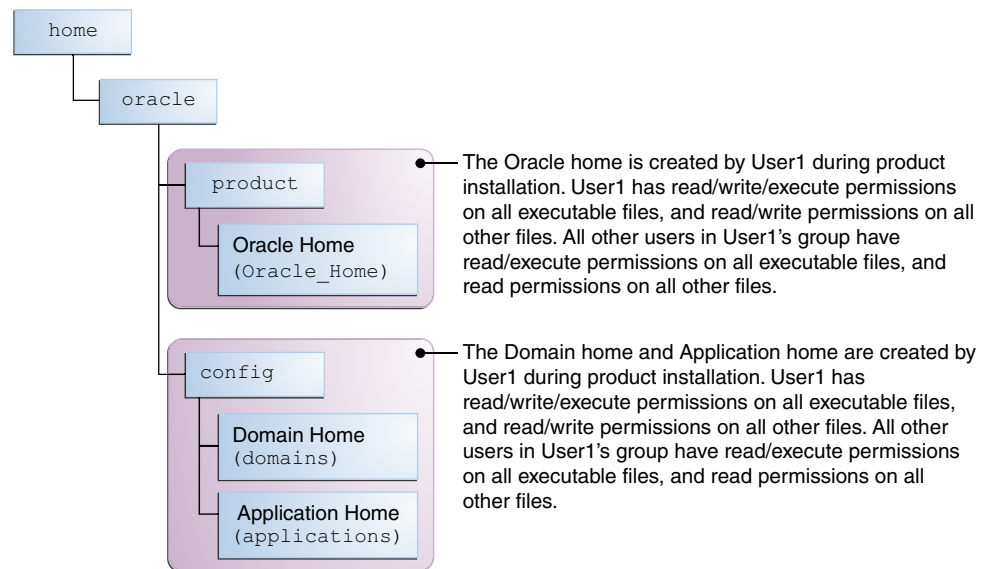
During configuration, the files generated by the configuration process are owned by the user who ran the Configuration Wizard, with the same permissions as described above for the installation user. However, security-sensitive files are not created with group permissions. Only the user that created the domain has read and write permissions and can administer the domain.

Consider the following examples:

- **Example 1: A Single User Installs the Software and Configures the Domain**

This example shows the permissions if the same user installs the software and configures the domain.

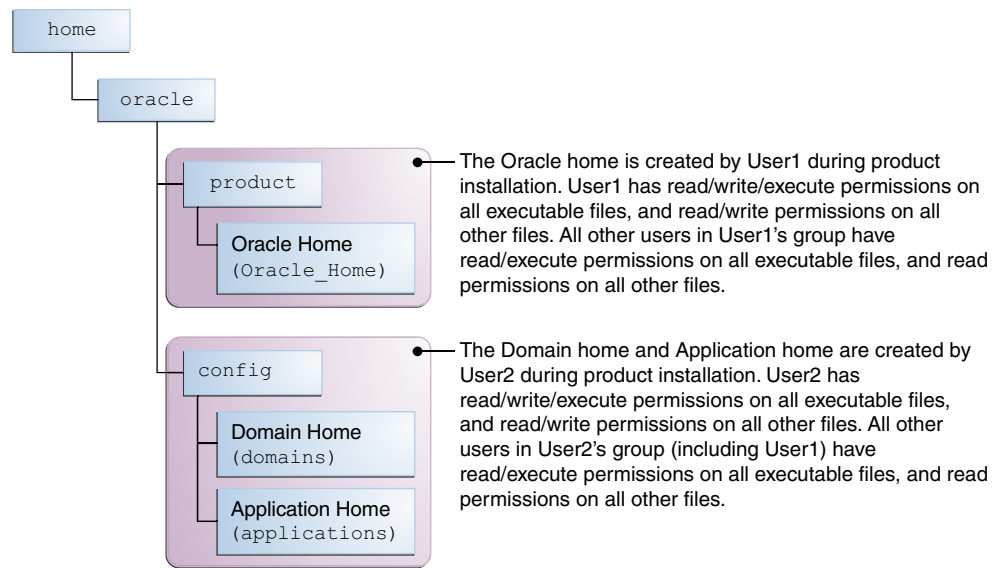
To ensure the proper permissions and privileges for all files, Oracle recommends that the same owner perform both tasks: install the Oracle Fusion Middleware product and configure the WebLogic Server domain using the Configuration Wizard.



If the user who creates the domain is different than the user who installed the software, then both users must have the same privileges, as shown in the next example.

- **Example 2: The Oracle Home and Domain are Created by Different Users**

This example shows the permissions where one user creates the Oracle home and another user configures the domain.



Note: Certain domain files do not have group permissions. For example, `cwallet.sso`.

Consider the following items before running the installer:

- On UNIX operating systems, Oracle recommends that you set `umask` to `027` on your system before you install the software. This ensures that file permissions are set properly during installation. Use the following command:

```
umask 027
```


You must enter this command in the same terminal window from which you plan to run the product installer.
- On UNIX operating systems, do not run the installation program as the `root` user. If you run the installer as a root user, the startup validation may fail and you cannot continue the installation.
- When you manage a product installation (for example, applying patches or starting managed Servers), use the same user ID that you used to install the product.
- On Windows operating systems, you must have Administrative privileges to install the product. See [Verifying the Installation User has Administrator Privileges on Windows Operating Systems](#) for more information.

2.2.2.2 Understanding Non-Default User Permissions on UNIX Operating Systems

Changing the default permissions setting reduces the security of the installation and possibly your system. Oracle does not recommend changing default permission settings.

If other users require access to particular files or executable, consider using the UNIX `sudo` command (or other similar command) in lieu of changing file permissions.

Refer to your UNIX operating system Administrator's Guide or contact your operating system vendor if you need further assistance.

2.2.2.3 Verifying the Installation User has Administrator Privileges on Windows Operating Systems

To update the Windows Registry, you must have Administrator privileges.

By default, members with the Administrator privilege sign in to the system with regular privileges, but can request elevated permissions to perform administrative tasks.

To perform a task with elevated privileges:

1. Find the Command Prompt item, either from the Start menu or the Windows icon in the lower-left hand corner.
2. Right-click Command Prompt and select **Run as administrator**.

This opens a new command prompt window, and all actions performed in this window will be done with administrator privileges.

Note: If you have User Access Control enabled on your system, you may see an additional window asking you to confirm this action. Confirm and continue with this procedure.

3. Perform the desired task.

For example, to start the product installer:

For a jar file, enter:

```
java -jar distribution_name.jar
```

For an executable (.exe, .bin, or .sh file), enter:

```
distribution_name.exe
```

2.2.3 Understanding Directories for Installation and Configuration

During the installation and domain configuration process, you must plan on providing the locations for these directories: Oracle Home, Domain Home, and the Application Home.

The following sections provide information to help you decide where you want to create these directories:

[Understanding the Recommended Directory Structure](#)

Oracle recommends specific locations for the Oracle Home, Domain Home, and Application Home.

[About the Oracle Home Directory](#)

When you install any Oracle Fusion Middleware product, you must use an Oracle home directory.

[About the Domain Home Directory](#)

The Domain home is the directory where domains that you configure are created.

[About the Application Home Directory](#)

The Application home is the directory where applications for domains you configure are created.

Installing Multiple Products in the Same Domain

There are two methods for installing and configuring multiple products in one domain.

Preparing for Shared Storage

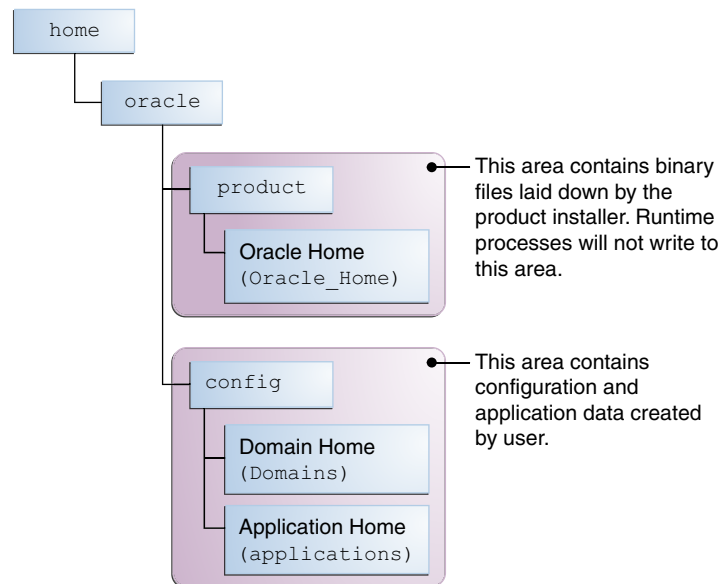
Oracle Fusion Middleware enables you to configure multiple Oracle WebLogic Server domains from a single Oracle home. This allows you to install the Oracle home in a single location on a shared volume and reuse the Oracle home for multiple host installations.

2.2.3.1 Understanding the Recommended Directory Structure

Oracle recommends specific locations for the Oracle Home, Domain Home, and Application Home.

Oracle recommends a directory structure similar to the one shown in [Figure 2-1](#).

Figure 2-1 Recommended Oracle Fusion Middleware Directory Structure



A base location (Oracle base) should be established on your system (for example, `/home/oracle`) and from there, two separate branches should be created. The `product` directory should contain the product binary files and all of the Oracle home directories. The `config` directory should contain your domain and application data.

Oracle recommends that you do not keep your configuration data anywhere underneath the Oracle home; if you upgrade your product to another major release, you will be required to create a new Oracle home for binaries. You must also make sure that your configuration data exist in a location to which the binaries in the Oracle home have access.

The `/home/oracle/product` (for the Oracle home) and `/home/oracle/config` (for the application and configuration data) directories are used in examples throughout the documentation; be sure to replace these directories with the actual directories on your system.

2.2.3.2 About the Oracle Home Directory

When you install any Oracle Fusion Middleware product, you must use an Oracle home directory.

This directory is a repository for common files that are used by multiple Fusion Middleware products installed on the same machine. These files are essential to ensuring that Fusion Middleware operates correctly on your system. They facilitate checking of cross-product dependencies during installation. For this reason, you can consider the Oracle home directory a *central support directory* for all Oracle Fusion Middleware products installed on your system.

Fusion Middleware documentation refers to the Oracle home directory as `ORACLE_HOME`.

Oracle Home Considerations

Keep the following in mind when creating the Oracle home directory and installing Fusion Middleware products:

- Do not include spaces in the name of your Oracle home directory; the installer gives you an error message if your Oracle home directory path contains spaces.
- You can install only one instance of each Oracle Fusion Middleware product in a single Oracle home directory. If you need to maintain separate versions of a product on the same machine, each version must be in its own Oracle home directory.

Although you can have several different products in a single Oracle home, only one version of each product can be in the Oracle home.

Multiple Home Directories

Although in most situations, a single Oracle home directory is sufficient, it is possible to create more than one Oracle home directory. For example, you need to maintain multiple Oracle home directories in the following situations:

- You prefer to maintain separate development and production environments, with a separate product stack for each. With two directories, you can update your development environment without modifying the production environment until you are ready to do so.
- You want to maintain two different versions of a Fusion Middleware product at the same time. For example, you may want to install a new version of a product while keeping your existing version intact. In this case, you must install each product version in its own Oracle home directory.
- You need to install multiple products that are not compatible with each other. See Oracle Fusion Middleware 12c (12.2.1.2) Interoperability and Compatibility in *Oracle Fusion Middleware Understanding Interoperability and Compatibility* for more information.

Note: If you create more than one Oracle home directory, you must provide non-overlapping port ranges during the configuration phase for each product.

2.2.3.3 About the Domain Home Directory

The Domain home is the directory where domains that you configure are created.

The default Domain home location is `ORACLE_HOME/user_projects/domains/domain_name`. However, Oracle strongly recommends that you do not use this default location. Put your Domain home *outside* of the Oracle home directory, for example, in `/home/oracle/config/domains`. The `config` directory should contain domain and application data. Oracle recommends a separate domain directory

so that new installs, patches, and other operations update the `ORACLE_HOME` only, *not* the domain configuration.

See [Understanding the Recommended Directory Structure](#) for more about the recommended directory structure and locating your Domain home.

Fusion Middleware documentation refers to the Domain home directory as `DOMAIN_HOME` and includes all folders up to and including the domain name. For example, if you name your domain `exampledomain` and locate your domain data in the `/home/oracle/config/domains` directory, the documentation would use `DOMAIN_HOME` to refer to `/home/oracle/config/domains/exampledomain`.

2.2.3.4 About the Application Home Directory

The Application home is the directory where applications for domains you configure are created.

The default Application home location is `ORACLE_HOME/user_projects/applications/domain_name`. However, Oracle strongly recommends locating your Application home *outside* of the Oracle home directory; if you upgrade your product to another major release, you must create a new Oracle home for binaries.

See [Understanding the Recommended Directory Structure](#) for more about the recommended directory structure and locating your Application home.

Fusion Middleware documentation refers to the Application home directory as `APPLICATION_HOME` and includes all folders up to and including the domain name. For example, if you name your domain `exampledomain` and you locate your application data in the `/home/oracle/config/applications` directory, the documentation uses `APPLICATION_HOME` to refer to `/home/oracle/config/applications/exampledomain`.

2.2.3.5 Installing Multiple Products in the Same Domain

There are two methods for installing and configuring multiple products in one domain.

- **Method 1.**

Install and configure Product A, including creating the schemas and starting all servers in the domain to verify a successful domain configuration.

This is the method used in all installation guides in the Fusion Middleware library. You can repeat this process for as many products as necessary. It allows you to validate one product at a time and add more products incrementally.

To install Product B, you stop the Administration Server to prevent any updates to the domain while you are adding the new product. Then, follow instructions in the installation guide for Product B, including creating the necessary schemas. Finally, extend the Product A domain to include Product B before starting all of the servers again.

- **Method 2.**

Install all of the necessary products, then create the schemas for all of the products. After creating the schemas, configure the domain using all of the necessary product templates, then start all the servers.

This method of creating a multi-product domain may be slightly faster; however, the installation guides in the Fusion Middleware library do not provide specific instructions for this method of domain creation. You will need to refer to the supporting documentation as appropriate.

2.2.3.6 Preparing for Shared Storage

Oracle Fusion Middleware enables you to configure multiple Oracle WebLogic Server domains from a single Oracle home. This allows you to install the Oracle home in a single location on a shared volume and reuse the Oracle home for multiple host installations.

If you plan to use shared storage in your environment, see *Using Shared Storage in Oracle Fusion Middleware High Availability Guide* for more information.

2.2.4 Understanding JDK Requirements for an Oracle Fusion Middleware Installation

Most Fusion Middleware products are in `.jar` file format. These distributions do *not* include a JDK. To run a `.jar` distribution installer, you must have a certified JDK already installed on your system.

Make sure that the JDK is installed *outside* of the Oracle home. If you install the JDK under the Oracle home, you will encounter problems when you try to perform tasks in the future. Oracle Universal Installer validates that the Oracle home directory is empty; the install will not progress until you specify an empty directory. Oracle recommends that you locate your JDK installation in the `/home/oracle/products/jdk` directory.

Some products (such as Oracle HTTP Server and Oracle JDeveloper) are available as **platform-specific distributions**. Platform-specific distributions have a `.bin` (for UNIX operating systems) or `.exe` (for Windows operating systems) installer; in these cases, a platform-specific JDK is in the distribution and you do not need to install a JDK separately. However, you may need to upgrade this JDK to a more recent version, depending on the JDK versions that are certified.

Always verify the required JDK version by reviewing the certification information on the *Oracle Fusion Middleware Supported System Configurations* page.

To download the required JDK, navigate to the following URL and download the Java SE JDK:

<http://www.oracle.com/technetwork/java/javase/downloads/index.html>

2.2.5 Understanding Database Requirements for an Oracle Fusion Middleware Installation

Many Oracle Fusion Middleware products require database schemas prior to configuration. If you do not already have a database where you can install these schemas, you must install and configure a certified database.

To find a certified database for your operating system, see the certification document for your release on the *Oracle Fusion Middleware Supported System Configurations* page.

To make sure your database is properly configured for schema creation, see "Repository Creation Utility Requirements" in the *Oracle Fusion Middleware System Requirements and Specifications* document.

After your database is properly configured, you use the Repository Creation Utility (RCU) to create product schemas in your database. This tool is available in the Oracle home for your Oracle Fusion Middleware product. For more information about the RCU, see *Understanding Repository Creation Utility in Oracle Fusion Middleware Creating Schemas with the Repository Creation Utility*.

2.3 About Product Distributions

You create the initial Oracle WebCenter Portal domain using the Oracle Fusion Middleware Infrastructure distribution, which contains both Oracle WebLogic Server software and Oracle Java Required Files (JRF) software.

Oracle JRF software consists of:

- Oracle Web Services Manager
- Oracle Application Development Framework (Oracle ADF)
- Oracle Enterprise Manager Fusion Middleware Control
- Repository Creation Utility (RCU)
- Other libraries and technologies required to support Oracle Fusion Middleware products

Installing Oracle Fusion Middleware Infrastructure is a prerequisite to installing Oracle WebCenter Portal.

2.4 Obtaining the Product Distribution

You can obtain the Oracle Fusion Middleware Infrastructure and Oracle WebCenter Portal distribution on the Oracle Technology Network (OTN).

To prepare to install Oracle Fusion Middleware Infrastructure and Oracle WebCenter Portal:

1. Enter `java -version` on the command line to verify that a certified JDK is installed on your system. For 12c (12.2.1.2), the certified JDK is 1.8.0_101 and later.
For more information, see [Understanding JDK Requirements for an Oracle Fusion Middleware Installation](#).
2. Locate and download the Oracle Fusion Middleware Infrastructure and Oracle WebCenter Portal software.

See Obtaining Product Distributions in *Oracle Fusion Middleware Planning an Installation of Oracle Fusion Middleware*.

Installing the Oracle WebCenter Portal Software

Follow the steps in this section to install the Oracle WebCenter Portal software.

Before beginning the installation, ensure that you have verified the prerequisites and completed all steps covered in [Preparing to Install and Configure Oracle WebCenter Portal](#).

Verifying the Installation Checklist

The installation process requires specific information.

Starting the Installation Program

Before running the installation program, you must verify the JDK and prerequisite software is installed.

Navigating the Installation Screens

The installer shows a series of screens where you verify or enter information.

Verifying the Installation

After you complete the installation, verify it was successful by completing a series of tasks.

3.1 Verifying the Installation Checklist

The installation process requires specific information.

[Table 3-1](#) lists important items that you must know before, or decide during, Oracle WebCenter Portal installation.

Table 3-1 Installation Checklist

Information	Example Value	Description
JAVA_HOME	/home/Oracle/Java/ jdk1.8.0_101	Environment variable that points to the Java JDK home directory.
Database host	examplehost.exampledom ain	Name and domain of the host where the database is running.
Database port	1521	Port number that the database listens on. The default Oracle database listen port is 1521.

Table 3-1 (Cont.) Installation Checklist

Information	Example Value	Description
Database service name	orcl	Oracle databases require a unique service name. The default service name is orcl.
DBA username	SYS	Name of user with database administration privileges. The default DBA user on Oracle databases is SYS.
DBA password	myDBApw957	Password of the user with database administration privileges.
<i>ORACLE_HOME</i>	/home/Oracle/product/ ORACLE_HOME	Directory in which you will install your software. This directory will include Oracle Fusion Middleware Infrastructure and Oracle WebCenter Portal, as needed.
WebLogic Server hostname	examplehost.exampledomain.com	Host name for Oracle WebLogic Server and Oracle WebCenter Portal consoles.
Console port	7001	Port for Oracle WebLogic Server and Oracle WebCenter Portal consoles.
<i>DOMAIN_HOME</i>	/home/Oracle/config/ domains/wcp_domain	Location in which your domain data is stored.
<i>APPLICATION_HOME</i>	/home/Oracle/config/ applications/ wcp_domain	Location in which your application data is stored.
Administrator user name for your WebLogic domain	weblogic	Name of the user with Oracle WebLogic Server administration privileges. The default administrator user is weblogic.
Administrator user password	myADMpw902	Password of the user with Oracle WebLogic Server administration privileges.
RCU	<i>ORACLE_HOME</i> / oracle_common/bin	Path to the Repository Creation Utility (RCU).
RCU schema prefix	wcp	Prefix for names of database schemas used by Oracle WebCenter Portal.

Table 3-1 (Cont.) Installation Checklist

Information	Example Value	Description
RCU schema password	myRCUpw674	Password for the database schemas used by Oracle WebCenter Portal.
Configuration utility	ORACLE_HOME/ oracle_common/ common/bin	Path to the Configuration Wizard for domain creation and configuration.

3.2 Starting the Installation Program

Before running the installation program, you must verify the JDK and prerequisite software is installed.

To start the installation program:

1. Sign in to the host system.
2. If you have not already done so, verify that a certified JDK is installed on your system: enter `java -version` on the command line. For 12c (12.2.1.2), the certified JDK is 1.8.0_101 and later.

For more information, see [Understanding JDK Requirements for an Oracle Fusion Middleware Installation](#).

3. Verify that you have installed all prerequisite software, such as Oracle Fusion Middleware Infrastructure.
4. Go to the directory where you downloaded the installation program.
5. Start the installation program by running the `java` executable from the JDK directory. For example:

- (UNIX) `/home/Oracle/Java/jdk1.8.0_101/bin/java -jar fmw_12.2.1.2.0_wcportal_generic.jar`
- (Windows) `C:\home\Oracle\Java\jdk1.8.0_101\bin\java -jar fmw_12.2.1.2.0_wcportal_generic.jar`

Note:

You can also start the installer in silent mode using a saved response file instead of launching the installer screens. For more about silent or command line installation, see [Using the Oracle Universal Installer in Silent Mode in Oracle Fusion Middleware Installing Software with the Oracle Universal Installer](#).

When the installation program appears, you are ready to begin the installation.

3.3 Navigating the Installation Screens

The installer shows a series of screens where you verify or enter information.

[Table 3-2](#) lists the order in which installer screens appear. If you need additional help with an installation screen, click **Help** in the installer.

Table 3-2 Oracle WebCenter Portal Install Screens

Screen	Description
Installation Inventory Setup	<p>On UNIX operating systems, this screen opens if this is the first time you are installing any Oracle product on this host. Specify the location where you want to create your central inventory. Make sure that the operating system group name selected on this screen has write permissions to the central inventory location.</p> <p>For more about the central inventory, see Understanding the Oracle Central Inventory in <i>Oracle Fusion Middleware Installing Software with the Oracle Universal Installer</i>.</p> <p>This screen does not appear on Windows operating systems.</p>
Welcome	This screen introduces you to the product installer.
Auto Updates	Use this screen to search for the latest software updates, including important security updates, via your My Oracle Support account.
Installation Location	<p>Use this screen to specify your Oracle home directory location. This Oracle home should already contain Oracle Fusion Middleware Infrastructure.</p> <p>You can click View to verify and ensure that you are installing Oracle WebCenter Portal in the correct Oracle home.</p> <p>For more about Oracle Fusion Middleware directory structure, see Understanding Directories for Installation and Configuration.</p>
Installation Type	<p>Use this screen to select the installation type and then products or feature sets you want to install. Select the WebCenter Portal install type to install the WebCenter product. Select the WebCenter Portal SOA Composites install type to install WebCenter Portal SOA composites into an existing SOA product home. A WebCenter Portal server can then be configured to use that SOA product home to enable the Workflow features.</p>
Prerequisite Checks	<p>This screen verifies that your system meets the minimum necessary requirements.</p> <p>To view the list of tasks that gets verified, select View Successful Tasks. To view log details, select View Log.</p> <p>If there are warning or error messages, see one of the documents in Roadmap for Verifying Your System Environment.</p>

Table 3-2 (Cont.) Oracle WebCenter Portal Install Screens

Screen	Description
Installation Summary	<p>Use this screen to verify installation options you selected. If you want to save these options to a response file, click Save Response File and enter the response file location and name. You can use response files later if you perform a silent installation.</p> <p>All feature sets that are installed after installation is complete are listed here.</p> <p>For more about silent or command line installation, see Using the Oracle Universal Installer in Silent Mode in <i>Oracle Fusion Middleware Installing Software with the Oracle Universal Installer</i>. Click Install to begin the installation.</p>
Installation Progress	<p>This screen shows the installation progress.</p> <p>When the progress bar reaches 100% complete, click Finish to dismiss the installer, or click Next to see a summary.</p>
Installation Complete	<p>Review the summary information on this screen, then click Finish to dismiss the installer.</p>

3.4 Verifying the Installation

After you complete the installation, verify it was successful by completing a series of tasks.

Reviewing the Installation Log Files

Review the contents of the installation log files to make sure that the installer did not encounter any problems.

Checking the Directory Structure

The contents of your installation vary based on the options you selected during the installation.

Viewing the Contents of the Oracle Home

You can view the contents of the Oracle home using the `viewInventory` script.

3.4.1 Reviewing the Installation Log Files

Review the contents of the installation log files to make sure that the installer did not encounter any problems.

By default, the installer writes logs files to the `Oracle_Inventory_Location/logs` (on UNIX operating systems) or `Oracle_Inventory_Location\logs` (on Windows operating systems) directory.

For a description of the log files and where to find them, see Installation Log Files in *Oracle Fusion Middleware Installing Software with the Oracle Universal Installer*.

3.4.2 Checking the Directory Structure

The contents of your installation vary based on the options you selected during the installation.

For more information about the directory structure after installation, see *What Are the Key Oracle Fusion Middleware Directories?* in *Oracle Fusion Middleware Understanding Oracle Fusion Middleware*.

3.4.3 Viewing the Contents of the Oracle Home

You can view the contents of the Oracle home using the `viewInventory` script.

For more information, see *Viewing the Contents of an Oracle Home* in *Oracle Fusion Middleware Installing Software with the Oracle Universal Installer*.

Configuring the Oracle WebCenter Portal Domain

After you have installed Oracle WebCenter Portal, you can configure the domain, which you can also extend for high availability.

The configuration steps presented here assume that you have completed the installation steps covered in:

- [Preparing to Install and Configure Oracle WebCenter Portal](#)
- [Installing the Oracle WebCenter Portal Software](#)

Refer to the following sections to create the database schemas, configure a WebLogic domain, and verify the configuration:

[Creating the Database Schemas](#)

Before you can configure an Oracle WebCenter Portal domain, you must install required schemas on a certified database for use with this release of Oracle Fusion Middleware.

[Configuring the Domain](#)

Use the Configuration Wizard to create and configure a domain.

[Starting the Servers](#)

After configuration is complete, start Node Manager, then the WebLogic Administration Server and Managed Servers.

[Verifying the Configuration](#)

After completing all configuration steps, you can perform additional steps to verify that your domain is properly configured.

[Setting Up an External LDAP-Based Identity Store](#)

Oracle WebCenter Content Server and Oracle WebCenter Portal's Discussion Server rely on external LDAP-based identity stores. Therefore, if your portals need to include documents, discussions, or announcements, you must install and configure an external LDAP-based identity store.

4.1 Creating the Database Schemas

Before you can configure an Oracle WebCenter Portal domain, you must install required schemas on a certified database for use with this release of Oracle Fusion Middleware.

[Installing and Configuring a Certified Database](#)

Before creating the database schemas, you must install and configure a certified database, and verify that the database is up and running.

[Starting the Repository Creation Utility](#)

Start the Repository Creation Utility (RCU) after verifying that a certified JDK is installed on your system.

[Navigating the Repository Creation Utility Screens to Create the Schemas](#)

Enter required information in the RCU screens to create the database schemas.

4.1.1 Installing and Configuring a Certified Database

Before creating the database schemas, you must install and configure a certified database, and verify that the database is up and running.

For more information, see [Understanding Database Requirements for an Oracle Fusion Middleware Installation](#).

4.1.2 Starting the Repository Creation Utility

Start the Repository Creation Utility (RCU) after verifying that a certified JDK is installed on your system.

To start the RCU:

1. Verify that a certified JDK already exists on your system by running `java -version` from the command line. For 12c (12.2.1.2), the certified JDK is 1.8.0_101 and later.

For more information, see [Understanding JDK Requirements for an Oracle Fusion Middleware Installation](#).

2. Ensure that the `JAVA_HOME` environment variable is set to the location of the certified JDK. For example:

- (UNIX) `setenv JAVA_HOME /home/Oracle/Java/jdk1.8.0_101`
- (Windows) `set JAVA_HOME=C:\home\Oracle\Java\jdk1.8.0_101`

3. Go to the `/oracle_common/bin` directory :

- (UNIX) `ORACLE_HOME/oracle_common/bin`
- (Windows) `ORACLE_HOME\oracle_common\bin`

4. Enter the following command:

- (UNIX) `./rcu`
- (Windows) `rcu.bat`

4.1.3 Navigating the Repository Creation Utility Screens to Create the Schemas

Enter required information in the RCU screens to create the database schemas.

[Introducing the RCU](#)

The Welcome screen is the first screen that appears when you start the RCU.

[Selecting a Method of Schema Creation](#)

Use the Create Repository screen to select a method to create and load component schemas into the database.

Providing Database Connection Details

On the Database Connection Details screen, provide the database connection details for the RCU to connect to your database.

Specifying a Custom Prefix and Selecting Schemas

Specify a custom prefix and database schema to automatically select the Common Infrastructure Services and dependent schemas.

Specifying Schema Passwords

On the Schema Passwords screen, specify how you want to set the schema passwords on your database, then enter and confirm your passwords.

Specifying Custom Variables

Specify the custom variables for the Oracle WebCenter Portal schema.

Completing Schema Creation

Navigate through the remaining RCU screens to complete schema creation.

4.1.3.1 Introducing the RCU

The Welcome screen is the first screen that appears when you start the RCU.

Click **Next**.

4.1.3.2 Selecting a Method of Schema Creation

Use the Create Repository screen to select a method to create and load component schemas into the database.

On the Create Repository screen:

- If you have the necessary permission and privileges to perform DBA activities on your database, select **System Load and Product Load**. This procedure assumes that you have SYSDBA privileges.
- If you do *not* have the necessary permission or privileges to perform DBA activities in the database, you must select **Prepare Scripts for System Load** on this screen. This option generates a SQL script that you can give to your database administrator. See About System Load and Product Load in *Oracle Fusion Middleware Creating Schemas with the Repository Creation Utility*.
- If the DBA has already run the SQL script for System Load, select **Perform Product Load**.

4.1.3.3 Providing Database Connection Details

On the Database Connection Details screen, provide the database connection details for the RCU to connect to your database.

Note:

If you are unsure of the service name for your database, you can obtain it from the `SERVICE_NAMES` parameter in the initialization parameter file of the database. If the initialization parameter file does not contain the `SERVICE_NAMES` parameter, then the service name is the same as the global database name, which is specified in the `DB_NAME` and `DB_DOMAIN` parameters.

For example:

```
Database Type: Oracle Database
Name: examplehost.exampledomain.com
Port: 1521
Service Name: Orcl.exampledomain.com
User Name: sys
Password: *****
Role: SYSDBA
```

Click **Next** to proceed, then click **OK** in the dialog window that confirms a successful database connections.

4.1.3.4 Specifying a Custom Prefix and Selecting Schemas

Specify a custom prefix and database schema to automatically select the Common Infrastructure Services and dependent schemas.

Oracle WebCenter Portal relies on the MDS, STB, OPSS, IAU, IAU_APPEND, and IAU_VIEWER schemas. Depending on the Oracle WebCenter Portal components used, your Oracle WebCenter Portal installation may also require the following schemas: WEBCENTER, DISCUSSIONS, ACTIVITIES, and PORTLET.

- **MDS:** WebCenter Portal uses the Oracle Metadata Services (MDS) repository to store its configuration data; it accesses the MDS repository as a JDBC data source within the Oracle WebLogic framework.
- **STB:** This provides Common Infrastructure Services to Fusion Middleware products. This schema must exist for the [Datasource Connection Defaults screen](#) during domain configuration.
- **OPSS, IAU, IAU_APPEND, and IAU_VIEWER:** These schemas are used to provide Platform Security Services.
- **WEBCENTER:** There must be a distinct WEBCENTER schema for WebCenter Portal.
- **DISCUSSIONS:** Two Oracle WebCenter Portal instances, 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 instance 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 WebCenter Portal Custom WLST Commands in *Oracle Fusion Middleware WLST Command Reference for WebLogic Server*.
- **ACTIVITIES:** Analytics can be used only by a single application within a domain, and there can only be one instance of this schema in any domain.
- **PORTLET:** Many Portlet Producer applications can be deployed to a single Custom Services Producer managed server. Portlet Producer applications can share a single PORTLET schema.

1. Select **Create new prefix**.
2. Specify a custom prefix.

The custom prefix is used to logically group these schemas together for use in this domain only; you must create a unique set of schemas for each domain as schema sharing across domains is not supported.

Tip:

You must make a note of the custom prefix you choose to enter here; you will need this later on during the domain creation process. For more information about custom prefixes, see *Understanding Custom Prefixes in Oracle Fusion Middleware Creating Schemas with the Repository Creation Utility*.

For more information about how to organize your schemas in a multi-domain environment, see *Planning Your Schema Creation in Oracle Fusion Middleware Creating Schemas with the Repository Creation Utility*.

3. Select the **WebCenter Portal** component. This action automatically selects the following schemas as dependencies:

- Portal and Services
- Portlet Producers
- Analytics
- Discussions
- Metadata Services
- Oracle Platform Security Services
- Audit Services
- Audit Services Append
- Audit Services Viewer

The schema Common Infrastructure Services is also automatically created; this schema is grayed out; you cannot select or deselect it. This schema enables you to retrieve information from the RCU during domain configuration. For more information, see *Understanding the Service Table Schema in Oracle Fusion Middleware Creating Schemas with the Repository Creation Utility*.

Note: If you are installing WebCenter Content alongside WebCenter Portal, you should also select the WebCenter Content schema.

4. Click **Next** to proceed, then click **OK** to confirm that prerequisite checking for schema creation was successful

4.1.3.5 Specifying Schema Passwords

On the Schema Passwords screen, specify how you want to set the schema passwords on your database, then enter and confirm your passwords.

Tip:

You must make a note of the passwords you set on this screen; you will need them later on during the domain creation process.

4.1.3.6 Specifying Custom Variables

Specify the custom variables for the Oracle WebCenter Portal schema.

Oracle WebCenter Portal has one custom variable, `Analytics`. Changing the **Value** from the default of `N` to `Y` allows Oracle database partitioning to be used for this schema.

Note: To enable partitioning for Analytics data, the database must have partitioning enabled.

For an enterprise deployment, Oracle recommends partitioning of the Analytics data. This partitions the analytics data by month. In a partitioned environment, the recommended method for purging data is simply to drop the month-based partitions that are no longer required.

Enter value for the following custom variables.

Component	Custom Variable	Value
Analytics	Install Analytics with Partitioning (Y/N)	N

See Also:

- Partitioning Oracle WebCenter Portal's Analytics Data in *Oracle Fusion Middleware Administering Oracle Fusion Middleware*
 - Custom Variables in *Oracle Fusion Middleware Creating Schemas with the Repository Creation Utility*
-

4.1.3.7 Completing Schema Creation

Navigate through the remaining RCU screens to complete schema creation.

On the Map Tablespaces screen, the Encrypt Tablespace check box appears *only* if you enabled TDE (Transparent Data Encryption) in the database (Oracle or Oracle EBR) when you start the RCU. Select the **Encrypt Tablespace** check box if you want to encrypt all new tablespaces that the RCU will create.

When you reach the Completion Summary screen, click **Close** to dismiss the RCU.

4.2 Configuring the Domain

Use the Configuration Wizard to create and configure a domain.

For information on other methods to create domains, see Additional Tools for Creating, Extending, and Managing WebLogic Domains in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

Starting the Configuration Wizard

Start the Configuration Wizard to begin configuring a domain.

[Navigating the Configuration Wizard Screens to Create and Configure the Domain](#)

Enter required information in the Configuration Wizard screens to create and configure the domain for the topology.

4.2.1 Starting the Configuration Wizard

Start the Configuration Wizard to begin configuring a domain.

To start the Configuration Wizard:

1. Go to the `/oracle_common/common/bin` directory:

(UNIX) `ORACLE_HOME/oracle_common/common/bin`

(Windows) `ORACLE_HOME\oracle_common\common\bin`

where `ORACLE_HOME` is your 12c (12.2.1.2) Oracle home.

2. Enter the following command:

(UNIX) `./config.sh`

(Windows) `config.cmd`

4.2.2 Navigating the Configuration Wizard Screens to Create and Configure the Domain

Enter required information in the Configuration Wizard screens to create and configure the domain for the topology.

Note:

You can use this procedure to extend an existing domain. If your needs do not match the instructions in the procedure, be sure to make your selections accordingly, or see the supporting documentation for more details.

[Selecting the Domain Type and Domain Home Location](#)

Use the Configuration Type screen to select a Domain home directory location, optimally outside the Oracle home directory.

[Selecting the Configuration Templates for Oracle WebCenter Portal](#)

Use the Templates screen to select the templates you require.

[Selecting the Application Home Location](#)

Use the Application Location screen to select the location to store applications associated with your domain, also known as the *Application home* directory.

[Configuring the Administrator Account](#)

Use the Administrator Account screen to specify the user name and password for the default WebLogic Administrator account for the domain.

[Specifying the Domain Mode and JDK](#)

Use the Domain Mode and JDK screen to specify the domain mode and Java Development Kit (JDK).

[Specifying the Database Configuration Type](#)

Use the Database Configuration type screen to specify details about the database and database schema.

[Specifying JDBC Component Schema Information](#)

Use the JDBC Component Schema screen to verify or specify details about the database schemas.

[Testing the JDBC Connections](#)

Use the JDBC Component Schema Test screen to test the data source connections.

[Selecting Advanced Configuration](#)

Use the Advanced Configuration screen to complete the domain configuration.

[Configuring the Administration Server Listen Address](#)

Use the Administration Server screen to select the IP address of the host.

[Configuring Node Manager](#)

Use the Node Manager screen to select the type of Node Manager you want to configure, along with the Node Manager credentials.

[Configuring Managed Servers for Oracle WebCenter Portal](#)

Use the Managed Servers screen to configure Managed Servers.

[Configuring a Cluster for Oracle WebCenter Portal](#)

Use the Clusters screen to create a new cluster.

[Defining Server Templates](#)

If you are creating dynamic clusters for a high availability setup, use the Server Templates screen to define one or more server templates for domain.

[Configuring Dynamic Servers](#)

If you are creating dynamic clusters for a high availability setup, use the Dynamic Servers screen to configure the dynamic servers.

[Assigning Oracle WebCenter Portal Managed Servers to the Cluster](#)

Use the Assign Servers to Clusters screen to assign managed servers to the new cluster

[Configuring Coherence Clusters](#)

Use the Coherence Clusters screen to configure the Coherence cluster.

[Creating a New Oracle WebCenter Portal Machine](#)

Use the Machines screen to create new machines in the domain. A machine is required so that Node Manager can start and stop servers.

[Assigning Servers to Oracle WebCenter Portal Machines](#)

Use the Assign Servers to Machines screen to assign the Administration Server and Managed Servers to the new machine you just created.

[Virtual Targets](#)

If you have a WebLogic Server Multitenant (MT) environment, you use the Virtual Targets screen to add or delete virtual targets. For this installation (not a WebLogic Server MT environment), you do not enter any values; just select **Next**.

Partitions

The Partitions screen is used to configure partitions for virtual targets in WebLogic Server Multitenant (MT) environments. Select **Next** without selecting any options.

Reviewing Your Configuration Specifications and Configuring the Domain

The Configuration Summary screen shows detailed configuration information for the domain you are about to create.

Writing Down Your Domain Home and Administration Server URL

The End of Configuration screen shows information about the domain you just configured.

4.2.2.1 Selecting the Domain Type and Domain Home Location

Use the Configuration Type screen to select a Domain home directory location, optimally outside the Oracle home directory.

Oracle recommends that you locate your Domain home in accordance with the directory structure in *What Are the Key Oracle Fusion Middleware Directories?* in *Oracle Fusion Middleware Understanding Oracle Fusion Middleware*, where the Domain home is located outside the Oracle home directory. This directory structure helps avoid issues when you need to upgrade or reinstall software.

To specify the Domain type and Domain home directory:

1. On the Configuration Type screen, select **Create a new domain**.
2. In the Domain Location field, specify your Domain home directory.

Tip:

For more information about this screen, see Configuration Type in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

4.2.2.2 Selecting the Configuration Templates for Oracle WebCenter Portal

Use the Templates screen to select the templates you require.

On the Templates screen, make sure **Create Domain Using Product Templates** is selected, then select the following template:

- Oracle WebCenter Portal - 12.2.1.2.0 [wcportal]

Selecting this template automatically selects the following as dependencies:

- Oracle Enterprise Manager
- Oracle WSM Policy Manager
- Oracle JRF
- WebLogic Coherence Cluster Extension

You can also select any of the Oracle WebCenter Portal products listed in the following table. You do not need to select all of these templates, and you can always run the configuration wizard again to add products to your domain later.

Table 4-1 Oracle WebCenter Portal Products Available for Configuration

Product	Dependencies
Oracle WebCenter Pagelet Producer	Oracle WSM Policy Manager Oracle JRF WebLogic Coherence Cluster Extension
Oracle WebCenter Portlet Producers	Oracle WSM Policy Manager Oracle JRF WebLogic Coherence Cluster Extension
Oracle WebCenter Discussion Server	Oracle WSM Policy Manager Oracle JRF WebLogic Coherence Cluster Extension
Oracle WebCenter Analytics Collector	Oracle JRF WebLogic Coherence Cluster Extension

Note:

If you plan to install WebCenter Content alongside WebCenter Portal, see *Selecting the Configuration Templates for Oracle WebCenter Content* in *Oracle Fusion Middleware Installing and Configuring Oracle WebCenter Content* for the domain extension templates you should choose to install WebCenter Content as well.

Tip:

For more information about this screen, see *Templates* in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

4.2.2.3 Selecting the Application Home Location

Use the Application Location screen to select the location to store applications associated with your domain, also known as the *Application home* directory.

Oracle recommends that you locate your Application home in accordance with the directory structure in *What Are the Key Oracle Fusion Middleware Directories?* in *Oracle Fusion Middleware Understanding Oracle Fusion Middleware*, where the Application home is located outside the Oracle home directory. This directory structure helps avoid issues when you need to upgrade or re-install your software.

Tip:

For more about the Application home directory, see [About the Application Home Directory](#).

For more information about this screen, see *Application Location* in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

4.2.2.4 Configuring the Administrator Account

Use the Administrator Account screen to specify the user name and password for the default WebLogic Administrator account for the domain.

Oracle recommends that you make a note of the user name and password that you enter on this screen; you need these credentials later to boot and connect to the domain's Administration Server.

4.2.2.5 Specifying the Domain Mode and JDK

Use the Domain Mode and JDK screen to specify the domain mode and Java Development Kit (JDK).

On the Domain Mode and JDK screen:

- Select **Production** in the **Domain Mode** field.
- Select the **Oracle HotSpot JDK** in the **JDK** field.

Tip:

For more information about this screen, see *Domain Mode and JDK in Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

4.2.2.6 Specifying the Database Configuration Type

Use the Database Configuration type screen to specify details about the database and database schema.

On the Database Configuration type screen, select **RCU Data**. This option instructs the Configuration Wizard to connect to the database and Service Table (STB) schema to automatically retrieve schema information for schemas needed to configure the domain.

Note:

If you select **Manual Configuration** on this screen, you must manually fill in parameters for your schema on the next screen.

After selecting **RCU Data**, fill in the following fields:

Field	Description
DBMS/Service	Enter the database DBMS name, or service name if you selected a service type driver. Example: <code>orcl.exampledomain.com</code>
Host Name	Enter the name of the server hosting the database. Example: <code>examplehost.exampledomain.com</code>
Port	Enter the port number on which the database listens. Example: 1521

Field	Description
Schema Owner	Enter the username and password for connecting to the database's Service Table schema. This is the schema username and password entered for the Service Table component on the Schema Passwords screen in the RCU (see Specifying Schema Passwords). The default username is <i>prefix_STB</i> , where <i>prefix</i> is the custom prefix that you defined in the RCU.
Schema Password	

Click **Get RCU Configuration** when you finish specifying the database connection information. The following output in the Connection Result Log indicates that the operation succeeded:

```
Connecting to the database server...OK
Retrieving schema data from database server...OK
Binding local schema components with retrieved data...OK
```

Successfully Done.

Tip:

For more information about the schema installed when the RCU is run, see *About the Service Table Schema* in *Oracle Fusion Middleware Creating Schemas with the Repository Creation Utility*.

For more information about this screen, see *Database Configuration Type* in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

4.2.2.7 Specifying JDBC Component Schema Information

Use the JDBC Component Schema screen to verify or specify details about the database schemas.

Verify that the values populated on the JDBC Component Schema screen are correct for all schemas. If you selected **RCU Data** on the previous screen, the schema table should already be populated appropriately.

Tip:

For high availability environments, see the following sections in *Oracle Fusion Middleware High Availability Guide* for additional information on configuring data sources for Oracle RAC databases:

- [Configuring Active GridLink Data Sources with Oracle RAC](#)
- [Configuring Multi Data Sources](#)

For more information about this screen, see *JDBC Component Schema* in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

4.2.2.8 Testing the JDBC Connections

Use the JDBC Component Schema Test screen to test the data source connections.

A green check mark in the Status column indicates a successful test. If you encounter any issues, see the error message in the Connection Result Log section of the screen, fix the problem, then try to test the connection again.

By default, the schema password for each schema component is the password you specified while creating your schemas. If you want different passwords for different schema components, manually edit them in the previous screen (JDBC Component Schema) by entering the password you want in the **Schema Password** column, against each row. After specifying the passwords, select the check box corresponding to the schemas that you changed the password in and test the connection again.

Tip:

For more information about this screen, see JDBC Component Schema Test in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

4.2.2.9 Selecting Advanced Configuration

Use the Advanced Configuration screen to complete the domain configuration.

On the Advanced Configuration screen, select:

- Administration Server
Required to properly configure the listen address of the Administration Server.
- Node Manager
Required to configure Node Manager.
- Topology
Required to configure the Oracle WebCenter Portal Managed Server.

Optionally, select other available options as required for your desired installation environment. The steps in this guide describe a standard installation topology, but you may choose to follow a different path. If your installation requirements extend to additional options outside the scope of this guide, you may be presented with additional screens to configure those options. For information about all Configuration Wizard screens, see Configuration Wizard Screens in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

4.2.2.10 Configuring the Administration Server Listen Address

Use the Administration Server screen to select the IP address of the host.

Select the drop-down list next to **Listen Address** and select the IP address of the host where the Administration Server will reside, or use the system name or DNS name that maps to a single IP address. Do *not* use All Local Addresses.

Do *not* specify any server groups for the Administration Server.

4.2.2.11 Configuring Node Manager

Use the Node Manager screen to select the type of Node Manager you want to configure, along with the Node Manager credentials.

Select **Per Domain Default Location** as the Node Manager type, then specify Node Manager credentials.

Tip:

For more information about this screen, see Node Manager in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

For more about Node Manager types, see Node Manager Overview in *Oracle Fusion Middleware Administering Node Manager for Oracle WebLogic Server*.

4.2.2.12 Configuring Managed Servers for Oracle WebCenter Portal

Use the Managed Servers screen to configure Managed Servers.

On the Managed Servers screen, new Managed Servers named WC_Collaboration, WC_Portlet, and WC_Portal are automatically created by default.

These Managed Server names will be referenced throughout this document; if you choose different names be sure to replace them as needed.

To configure Managed Servers for Oracle WebCenter Portal:

1. In the Listen Address drop-down list, select the IP address of the host on which the Managed Server will reside or use the system name or DNS name that maps to a single IP address. Do not use All Local Addresses.
2. The following Server Groups have already been selected for each server:
 - For WC_Collaboration, WebCenter Portal Discussions Managed Server has been selected.
 - For WC_Portlet, WebCenter Portal Pagelet Producer Managed Server and WebCenter Portal Portlet Producer Managed Server have been selected.
 - For WC_Portal, WebCenter Portal Analytics Managed Server and WebCenter Portal Managed Server have been selected.

Server groups target Fusion Middleware applications and services to one or more servers by mapping defined application service groups to each defined server group. A given application service group may be mapped to multiple server groups if needed. Any application services that are mapped to a given server group are automatically targeted to all servers that are assigned to that group. For more information, see Application Service Groups, Server Groups, and Application Service Mappings in *Oracle Fusion Middleware Domain Template Reference*.

3. If you are installing other products, you may see more Managed Servers. If needed, click **Add** to create and name a new Managed Server. See [Understanding Oracle WebCenter Portal Managed Servers](#) for information on how the Managed Servers and Oracle WebCenter Portal component correlate.
4. Click **Next**.

Configuring multiple Managed Servers is one of the steps needed to configure the standard topology for high availability. For more information about the high availability standard topology, see Understanding the Fusion Middleware Standard HA Topology in *Oracle Fusion Middleware High Availability Guide*.

For more information about the next steps to prepare for high availability after your domain is configured, see [Preparing Your Environment for High Availability](#).

Tip:

For more information about this screen, see *Managed Servers in Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

4.2.2.13 Configuring a Cluster for Oracle WebCenter Portal

Use the Clusters screen to create a new cluster.

On the Clusters screen:

1. Click **Add**.
2. Specify `wcp_cluster_1` in the Cluster Name field.
3. Leave the Cluster Address field blank.
4. Repeat these steps to create two more clusters: `wcp_cluster_2` and `wcp_cluster_3`.

By default, server instances in a cluster communicate with one another using unicast. If you want to change your cluster communications to use multicast, see *Considerations for Choosing Unicast or Multicast in Oracle Fusion Middleware Administering Clusters for Oracle WebLogic Server*.

You can also create clusters using Fusion Middleware Control. In this case, you can configure cluster communication (unicast or multicast) when you create the new cluster. For more information, see *Create and configure clusters in Oracle Fusion Middleware Oracle WebLogic Server Administration Console Online Help*.

Tip:

For more information about this screen, see *Clusters in Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

4.2.2.14 Defining Server Templates

If you are creating dynamic clusters for a high availability setup, use the Server Templates screen to define one or more server templates for domain.

To continue configuring the domain, click **Next**.

For steps to create a dynamic cluster for a high availability setup, see *Using Dynamic Clusters in Oracle Fusion Middleware High Availability Guide*.

4.2.2.15 Configuring Dynamic Servers

If you are creating dynamic clusters for a high availability setup, use the Dynamic Servers screen to configure the dynamic servers.

If you are *not* configuring a dynamic cluster, click **Next** to continue configuring the domain.

Note: When you create dynamic clusters, keep in mind that after you assign the **Machine Name Match Expression**, you do not need to create machines for your dynamic cluster.

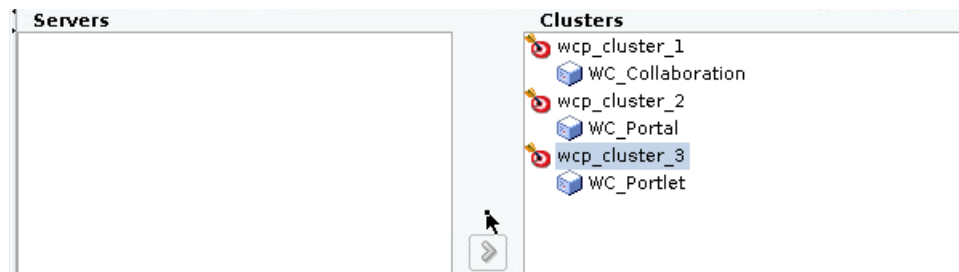
For steps to create a dynamic cluster for a high availability setup, see *Using Dynamic Clusters in Oracle Fusion Middleware High Availability Guide*.

4.2.2.16 Assigning Oracle WebCenter Portal Managed Servers to the Cluster

Use the Assign Servers to Clusters screen to assign managed servers to the new cluster

On the Assign Servers to Clusters screen:

1. In the Clusters pane, select the cluster to which you want to assign the servers; in this case, `wcp_cluster_1`.
2. In the Servers pane, assign `WC_Collaboration` to `wcp_cluster_1` by doing one of the following:
 - Click once on `WC_Collaboration` to select it, then click on the right arrow to move it beneath the selected cluster (`wcp_cluster_1`) in the Clusters pane.
 - Double-click on `WC_Collaboration` to move it beneath the selected cluster (`wcp_cluster_1`) in the clusters pane.
3. Repeat to assign `WC_Portal` to `wcp_cluster_2` and `WC_Portlet` to `wcp_cluster_3`



Tip:

For more information about options on this screen, see Assign Servers to Clusters in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

4.2.2.17 Configuring Coherence Clusters

Use the Coherence Clusters screen to configure the Coherence cluster.

Leave the default port number as the Coherence cluster listen port. After configuration, the Coherence cluster is automatically added to the domain.

Note:

Setting the unicast listen port to 0 creates an offset for the Managed Server port numbers. The offset is 5000, meaning the maximum allowed value that you can assign to a Managed Server port number is 60535, instead of 65535.

See [Table 5-2](#) for more information and next steps for configuring Coherence.

Note:

For Coherence licensing information, see *Oracle Coherence Products in Licensing Information*.

4.2.2.18 Creating a New Oracle WebCenter Portal Machine

Use the Machines screen to create new machines in the domain. A machine is required so that Node Manager can start and stop servers.

Tip:

If you plan to create a high availability environment and know the list of machines your target topology requires, you can follow the instructions in this section to create all the machines at this time. For more information, see *Optional Scale Out Procedure* in *Oracle Fusion Middleware High Availability Guide*.

To create a new Oracle WebCenter Portal machine so that Node Manager can start and stop servers:

1. Select the Machine tab (for Windows) or the UNIX Machine tab (for UNIX), then click **Add** to create a new machine.
2. In the Name field, specify a machine name, such as `wcp_machine_1`.
3. In the Node Manager Listen Address field, select the IP address of the machine in which the Managed Servers are being configured.

You must select a specific interface and not `localhost`. This allows Coherence cluster addresses to be dynamically calculated.

4. Verify the port in the Node Manager Listen Port field.
5. Repeat these steps to add more machines, if required.

Note:

If you are extending an existing domain, you can assign servers to any existing machine. It is not necessary to create a new machine unless your situation requires it.

Tip:

For more information about this screen, see *Machines* in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

4.2.2.19 Assigning Servers to Oracle WebCenter Portal Machines

Use the Assign Servers to Machines screen to assign the Administration Server and Managed Servers to the new machine you just created.

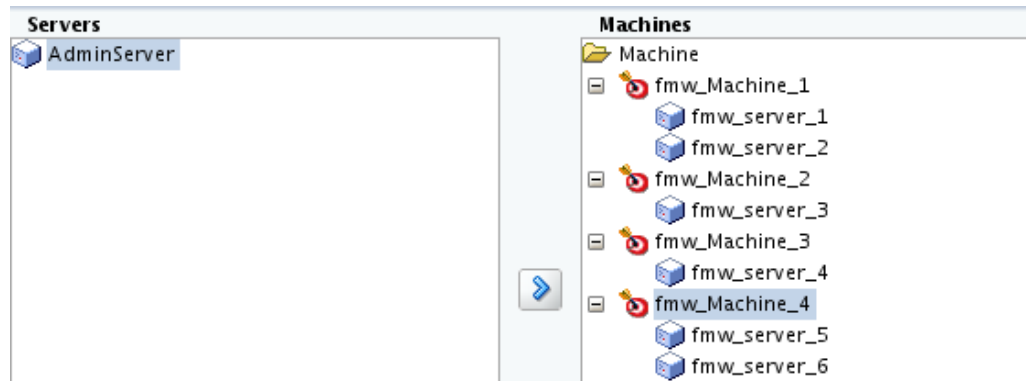
On the Assign Servers to Machines screen:

1. In the Machines pane, select the machine to which you want to assign the servers; in this case, `wcp_machine_1`.
2. In the Servers pane, assign `AdminServer` to `wcp_machine_1` by doing one of the following:
 - Click once on `AdminServer` to select it, then click the right arrow to move it beneath the selected machine (`wcp_machine_1`) in the Machines pane.

- Double-click on AdminServer to move it beneath the selected machine (wcp_machine_1) in the Machines pane.
3. Repeat these steps to assign all Managed Servers to their respective machines.

The following figure shows a generic example of the Machines pane after Managed Servers are assigned to machines.

Figure 4-1 Assign Managed Servers to Machines



Tip:

For more information about this screen, see Assign Servers to Machines in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

4.2.2.20 Virtual Targets

If you have a WebLogic Server Multitenant (MT) environment, you use the Virtual Targets screen to add or delete virtual targets. For this installation (not a WebLogic Server MT environment), you do not enter any values; just select **Next**.

Tip: For more information about this screen, see Virtual Targets in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

4.2.2.21 Partitions

The Partitions screen is used to configure partitions for virtual targets in WebLogic Server Multitenant (MT) environments. Select **Next** without selecting any options.

Tip: For more information about this screen, see Partitions in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

4.2.2.22 Reviewing Your Configuration Specifications and Configuring the Domain

The Configuration Summary screen shows detailed configuration information for the domain you are about to create.

Review each item on the screen and verify that the information is correct. To make any changes, go back to a screen by clicking the **Back** button or selecting the screen in the navigation pane. Domain creation does not start until you click **Create**.

Tip:

For more information about this screen, see Configuration Summary in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

4.2.2.23 Writing Down Your Domain Home and Administration Server URL

The End of Configuration screen shows information about the domain you just configured.

Make a note of the following items because you need them later:

- Domain Location
- Administration Server URL

You need the domain location to access scripts that start Node Manager and Administration Server, and you need the URL to access the Administration Server.

Click **Finish** to dismiss the Configuration Wizard.

4.3 Starting the Servers

After configuration is complete, start Node Manager, then the WebLogic Administration Server and Managed Servers.

Note:

For more information on additional tools you can use to manage your domain, see Overview of Oracle Fusion Middleware Administration Tools in *Oracle Fusion Middleware Administering Oracle Fusion Middleware*.

[Starting Node Manager](#)

[Starting the Administration Server](#)

[Starting the Oracle WebCenter Portal Managed Servers](#)

4.3.1 Starting Node Manager

To start the per-domain Node Manager:

1. Go to the `DOMAIN_HOME/bin` directory.
2. Enter the following command:
 - (UNIX) Using `nohup` and `nm.out` as an example output file:

```
nohup ./startNodeManager.sh > LOG_DIR/nm.out&
```

where `LOG_DIR` is the location of directory in which you want to store the log files.

- (Windows) `startNodeManager.cmd`

Note:

On Windows operating systems, Oracle recommends that you configure Node Manager to run as a startup service. This allows Node Manager to start up automatically each time the system is restarted.

See *Running Node Manager as a Startup Service in Oracle Fusion Middleware Administering Node Manager for Oracle WebLogic Server*.

4.3.2 Starting the Administration Server

To start the Administration Server:

1. Go to the `DOMAIN_HOME/bin` directory.
2. Enter the following command:

- (UNIX)
`./startWebLogic.sh`
- (Windows)
`startWebLogic.cmd`

If you selected **Production Mode** on the Domain Mode and JDK screen when you created the domain, you see a prompt for the Administrator user login credentials as provided on the Administrator Account screen.

Tip:

For more information about starting the Administration Server, see *Starting and Stopping Administration Server in Oracle Fusion Middleware Administering Oracle Fusion Middleware*.

In production mode, a boot identity file can be created to bypass the need to provide a user name and password when starting the Administration Server. For more information, see *Creating a Boot Identity File for an Administration Server in Oracle Fusion Middleware Administering Server Startup and Shutdown for Oracle WebLogic Server*.

You can verify that the Administration Server is up and running by accessing the Administration Server Console. The URL is provided on the End of Configuration screen (`http://administration_server_host:administration_server_port/console`). The default Administration Server port number is 7001.

Note:

Make sure that the database hosting your product schemas is up and running and accessible by the Administration Server.

For more information about how to use the Administration Console, see *Getting Started Using Oracle WebLogic Server Administration Console in Oracle Fusion Middleware Administering Oracle Fusion Middleware*.

4.3.3 Starting the Oracle WebCenter Portal Managed Servers

To start the Managed Servers:

1. Log in to Oracle Fusion Middleware Control:

`http://administration_server_host:administration_server_port/em`

The Administration Server host and port number were in the URL on the Configuration Success screen ([Writing Down Your Domain Home and Administration Server URL](#)). The default Administration Server port number is 7001.

The name of the domain that you are accessing is listed above the login prompt. Verify that you are logging into the domain you just configured for WebCenter Portal.

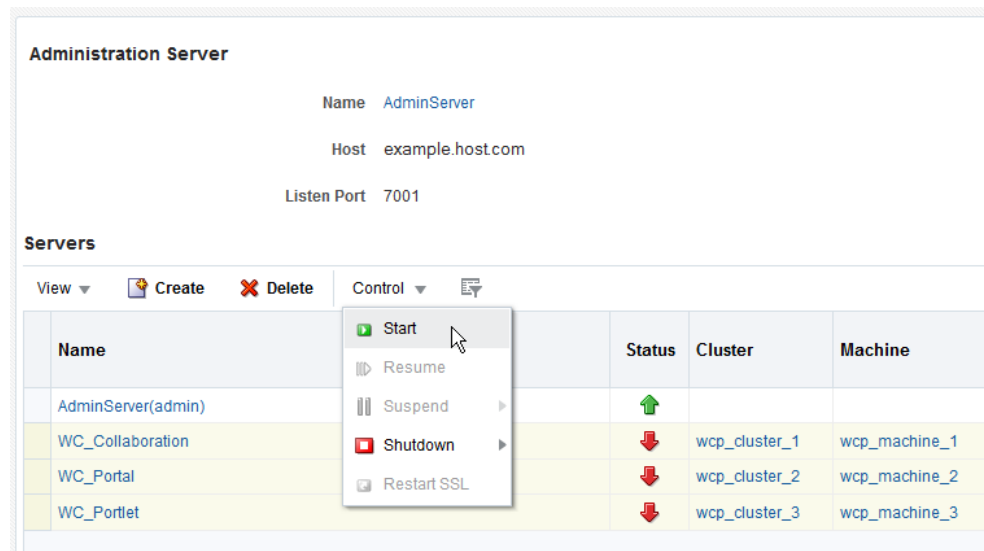
The login credentials were provided on the Administrator Account screen ([Configuring the Administrator Account](#)).

2. The managed servers you configured are listed on the landing page. The first time you log into Enterprise Manager, all servers except the **AdminServer** are in the **Shutdown** stage.

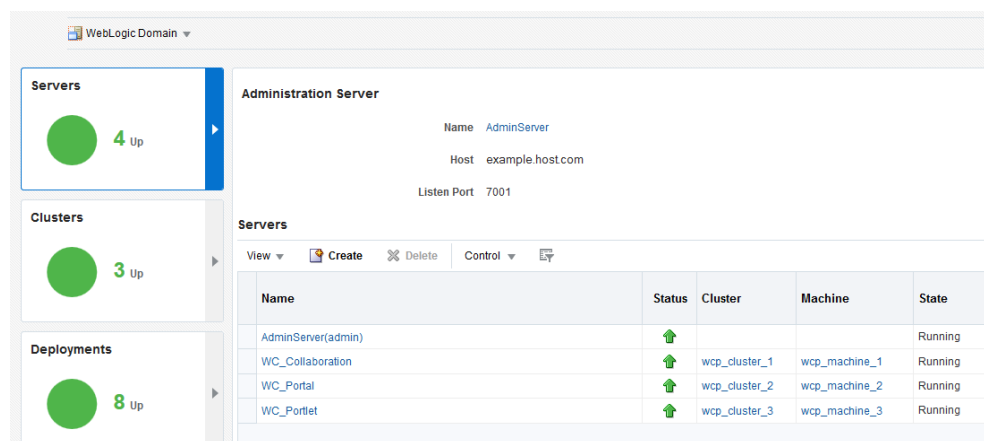
The screenshot displays the Oracle Fusion Middleware Control interface. On the left, there are three summary cards: 'Servers' (3 Down, 1 Up), 'Clusters' (3 Down), and 'Deployments' (8 Down, 1 Up). The main area shows the 'Administration Server' details (Name: AdminServer, Host: example.host.com, Listen Port: 7001) and a table of managed servers.

Name	Status	Cluster	Machine	State
AdminServer(admin)	↑			Running
WC_Collaboration	↓	wcp_cluster_1	wcp_machine_1	Shutdown
WC_Portal	↓	wcp_cluster_2	wcp_machine_2	Shutdown
WC_Portlet	↓	wcp_cluster_3	wcp_machine_3	Shutdown

3. Select WC_Collaboration, WC_Portal, and WC_Portlet.
 - a. Left-click to select a managed server.
 - b. Hold down the **SHIFT** key to select more than one managed server.
4. Select **Control** from the ribbon menu above the list of managed servers. Then select **Start** from the drop-down menu.



5. After they start up successfully, each managed server is listed as Running.



4.4 Verifying the Configuration

After completing all configuration steps, you can perform additional steps to verify that your domain is properly configured.

To verify that the domain is configured properly, see [Performing Additional Domain Configuration Tasks](#).

4.5 Setting Up an External LDAP-Based Identity Store

Oracle WebCenter Content Server and Oracle WebCenter Portal's Discussion Server rely on external LDAP-based identity stores. Therefore, if your portals need to include documents, discussions, or announcements, you must install and configure an external LDAP-based identity store.

When Oracle WebCenter Portal is installed, by default it is configured to use Oracle WebLogic Server's embedded LDAP identity store for storing user accounts and groups, and a database-based policy store and credential store for storing policy grants and credentials. 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, you must reassociate the policy store and the credential store with an external

LDAP-based identity store or the default database. Do not use a file-based LDAP for high availability or production environments.

1. Install an external LDAP-based identity store, such as Oracle Internet Directory.
2. Configure Oracle WebCenter Portal to use the external LDAP-based identity store, rather than the default embedded LDAP.

For information, see *Reassociating the Identity Store with an External LDAP Server* in *Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

Note: While creating a 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 WebCenter Portal as described in *Granting the WebCenter Portal Administrator Role* in *Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

3. Reassociate Oracle WebCenter Portal's policy store and credential store with an external LDAP server or database.

Note: Oracle strongly recommends using a database to store security policies.

For information, see *Configuring the Policy and Credential Store* in *Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

If you configure an external LDAP-based identity store, then WebCenter Portal and all the back-end components configured for any Oracle WebCenter Portal tools and services must use the same external LDAP-based identity store. [Table 4-2](#) 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 Oracle WebCenter Portal tools and services, see [Preparing Back-End Components for WebCenter Portal Tools and Services](#).

Table 4-2 Configuring Back-End Components for a Shared External LDAP-Based Identity Store

Back-End Component	Built-In 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.
Content Server	Database	Configure Content Server to use the same external LDAP-based identity store as Oracle WebCenter Portal. For information, see <i>Reassociating the Identity Store with an External LDAP Server</i> in <i>Oracle Fusion Middleware Administering Oracle WebCenter Portal</i> .

Table 4-2 (Cont.) Configuring Back-End Components for a Shared External LDAP-Based Identity Store

Back-End Component	Built-In Support	Additional Configuration Requirement
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 the following sections depending on your Oracle SES version:</p> <ul style="list-style-type: none"> • Security in Oracle Secure Enterprise Search in <i>Oracle Secure Enterprise Search Administrator's Guide</i> in the Secure Enterprise Search Online Documentation Library 11g Release 1 (11.1.2.2). • Security in Oracle Secure Enterprise Search in <i>Oracle Secure Enterprise Search Administrator's Guide</i> in the Secure Enterprise Search Online Documentation Library 11g Release 1 (11.1.2.2). <p>If you have Oracle SES 11.2.2.2 installed, refer to the "Security in Oracle Secure Enterprise Search" section in <i>Oracle Secure Enterprise Search Administrator's Guide</i> in Secure Enterprise Search Online Documentation Library 11g Release 2 (11.2.2.2) on OTN at: http://www.oracle.com/technetwork/search/oses/documentation/index.html</p>

Table 4-2 (Cont.) Configuring Back-End Components for a Shared External LDAP-Based Identity Store

Back-End Component	Built-In Support	Additional Configuration Requirement
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 Portal. For information about:</p> <ul style="list-style-type: none"> • Configuring LDAP authentication providers, see <i>Configuring Authentication Providers in Oracle Fusion Middleware Administering Security for Oracle WebLogic Server</i>. • Listing Oracle Internet Directory as the first authentication provider, see <i>Listing Oracle Internet Directory as the First Authentication Provider in Oracle Fusion Middleware Administering Oracle SOA Suite and Oracle Business Process Management Suite</i>.

Oracle WebCenter Portal can use `libOVD` to allow multiple identity stores to be used with portals. Sites with multiple identity stores can use `libOVD` to aggregate their user profile information. For information, see *Aggregating Multiple Identity Store LDAP Servers Using libOVD in Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

Next Steps After Configuring the Domain

After configuring a product domain, there are additional tasks that you may want to perform.

Performing Basic Administrative Tasks

After you configure your new domain, there are administration tasks that Oracle recommends you perform on the domain.

Performing Additional Domain Configuration Tasks

Review additional configuration tasks you will likely want to perform on a new domain.

Preparing Your Environment for High Availability

Scaling out for high availability requires additional steps.

Using Oracle JDeveloper with Oracle WebCenter Portal

You can use Oracle JDeveloper to edit, deploy, and test Oracle WebCenter Portal assets and components.

5.1 Performing Basic Administrative Tasks

After you configure your new domain, there are administration tasks that Oracle recommends you perform on the domain.

The following table lists common administration tasks to perform on your new domain.

Table 5-1 Basic Administration Tasks for a New Domain

Task	Description	More Information
Getting familiar with Fusion Middleware administration tools	Get familiar with various tools that you can use to manage your environment.	See Overview of Oracle Fusion Middleware Administration Tools in <i>Oracle Fusion Middleware Administering Oracle Fusion Middleware</i> .
Starting and stopping products and servers	Learn how to start and stop Oracle Fusion Middleware, including the Administration Server, Managed Servers, and components.	See Starting and Stopping Oracle Fusion Middleware in <i>Oracle Fusion Middleware Administering Oracle Fusion Middleware</i> .
Configuring Secure Sockets Layer (SSL)	Learn how to set up secure communications between Oracle Fusion Middleware components using SSL.	See Configuring SSL in Oracle Fusion Middleware in <i>Oracle Fusion Middleware Administering Oracle Fusion Middleware</i> .

Table 5-1 (Cont.) Basic Administration Tasks for a New Domain

Task	Description	More Information
Monitoring Oracle Fusion Middleware	Learn how to keep track of the status of Oracle Fusion Middleware components.	See Monitoring Oracle Fusion Middleware in <i>Oracle Fusion Middleware Administering Oracle Fusion Middleware</i> .
Understanding Backup and Recovery Procedures	Learn recommended backup and recovery procedures for Oracle Fusion Middleware.	See Introducing Backup and Recovery in <i>Oracle Fusion Middleware Administering Oracle Fusion Middleware</i> .

5.2 Performing Additional Domain Configuration Tasks

Review additional configuration tasks you will likely want to perform on a new domain.

Table 5-2 Additional Domain Configuration Tasks

Task	Description	More Information
Deploying Applications	Learn how to deploy your applications to Oracle Fusion Middleware.	See Deploying Applications in <i>Oracle Fusion Middleware Administering Oracle Fusion Middleware</i> .
Adding a Web Tier front-end to your domain	Oracle Web Tier hosts Web pages (static and dynamic), provides security and high performance along with built-in clustering, load balancing, and failover features. In particular, the Web Tier contains Oracle HTTP Server.	To install and configure Oracle HTTP Server in the WebLogic Server domain, see Configuring Oracle HTTP Server in a WebLogic Server Domain in <i>Oracle Fusion Middleware Installing and Configuring Oracle HTTP Server</i> . See also Installing Multiple Products in the Same Domain for important information.

Table 5-2 (Cont.) Additional Domain Configuration Tasks

Task	Description	More Information
Tuning and configuring Coherence for your topology	The standard installation topology includes a Coherence cluster that contains storage-enabled Managed Coherence Servers. This configuration is a good starting point for using Coherence, but depending upon your specific requirements, consider tuning and reconfiguring Coherence to improve performance in a production environment.	<p>For more about Coherence clusters, see <i>Configuring and Managing Coherence Clusters in Oracle Fusion Middleware Administering Clusters for Oracle WebLogic Server</i>.</p> <p>For information on tuning Coherence, see <i>Performance Tuning in Oracle Fusion Middleware Administering Oracle Coherence</i>.</p> <p>For information on storing HTTP session data in Coherence, see <i>Using Coherence*Web with WebLogic Server in Oracle Fusion Middleware Administering HTTP Session Management with Oracle Coherence*Web</i>.</p> <p>For more about creating and deploying Coherence applications, see <i>Getting Started in Oracle Fusion Middleware Developing Oracle Coherence Applications for Oracle WebLogic Server</i>.</p>

5.3 Preparing Your Environment for High Availability

Scaling out for high availability requires additional steps.

[Table 9-3](#) provides a list of tasks to perform if you want to scale out your standard installation environment for high availability.

Table 5-3 Tasks Required to Prepare Your Environment for High Availability

Task	Description	More Information
Scaling out to multiple host computers	To enable high availability, it is important to provide failover capabilities to another host computer. That way, if one computer goes down, your environment can continue to serve the consumers of your deployed applications.	See <i>Scaling Out a Topology (Machine Scale Out) in the Oracle Fusion Middleware High Availability Guide</i> .
Configuring high availability for your Web Tier components.	If you have added a Web tier front-end, then you must configure the Web Tier for high availability, as well as the WebLogic Server software.	See <i>Configuring High Availability for Web Tier Components in Oracle Fusion Middleware High Availability Guide</i> .
Setting up a front-end load balancer	A load balancer can be used to distribute requests across servers more evenly.	See <i>Server Load Balancing in a High Availability Environment and Configuring Load Balancer Virtual Server Names and Ports in Oracle Fusion Middleware High Availability Guide</i> .

Table 5-3 (Cont.) Tasks Required to Prepare Your Environment for High Availability

Task	Description	More Information
Configuring Node Manager	Node Manager enables you to start, shut down, and restart the Administration Server and Managed Server instances from a remote location. This document assumes you have configured a per-domain Node Manager. Review the Node Manager documentation for information on advanced Node Manager configuration options and features.	See Advanced Node Manager Configuration in <i>Oracle Fusion Middleware Administering Node Manager for Oracle WebLogic Server</i> .

5.4 Using Oracle JDeveloper with Oracle WebCenter Portal

You can use Oracle JDeveloper to edit, deploy, and test Oracle WebCenter Portal assets and components.

About Oracle JDeveloper

Oracle JDeveloper is a free integrated development environment (IDE) for building Web service-oriented 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.

For advanced requirements, developers can use JDeveloper to further develop and deploy portal assets and shared libraries (containing custom portal components).

To install Oracle JDeveloper, refer to *Oracle Fusion Middleware Installing Oracle JDeveloper*.

Special Instructions When Installing Oracle JDeveloper for Deploying Assets to WebCenter Portal

Typically, you install Oracle JDeveloper on your development machine and connect to a remote Oracle WebCenter Portal domain to deploy and test portal assets and components. You can also create, edit, and extend assets (such as skins or page templates) in JDeveloper, then deploy them to WebCenter Portal. Developers can deploy portal assets or extensions to WebCenter Portal directly from JDeveloper if they have the required permissions. Developers can use JDeveloper to build custom ADF library components for portals, such as managed beans, task flows, and data controls, and deploy them as shared library extensions to the portal server.

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

To deploy portal assets and components using JDeveloper, you must install the Oracle WebCenter Portal extensions for JDeveloper. This extension bundle is a JDeveloper add-in that provides the complete set of Oracle WebCenter Portal capabilities and features. 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 Oracle WebCenter Portal extensions, see *Installing the WebCenter Portal Extensions for JDeveloper* in *Oracle Fusion Middleware Developing WebCenter Portal Assets and Custom Components with Oracle JDeveloper*.

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 Installing Oracle JDeveloper*.

Extending an Existing Domain

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

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

Before you extend a domain, refer to Oracle Fusion Middleware 12c (12.2.1.2) *Interoperability and Compatibility* in *Oracle Fusion Middleware Understanding Interoperability and Compatibility* 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.

The following section describes a scenario in which you may want to extend your existing Oracle WebCenter Portal domain, and the steps required:

[Extending a Domain to Install Oracle WebCenter Portal Products](#)

6.1 Extending a Domain to Install Oracle WebCenter Portal Products

To extend your existing Oracle WebCenter Portal domain to install additional Oracle WebCenter Portal products:

1. Shut down your domain.

For more information, see Starting and Stopping Oracle Fusion Middleware in *Oracle Fusion Middleware Administering Oracle Fusion Middleware*.

2. 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. Run the Configuration Wizard to extend the domain.

See [Starting the Configuration Wizard](#) for more information.

- a. Select **Extend my domain automatically** to support the following added products on the **Select Extension Source** screen.
- b. Select the product(s) you want to add to the domain.

For information about extending an existing domain, see Updating WebLogic Domains in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

Getting Started with Oracle WebCenter Portal Components

This chapter describes how to configure your Oracle WebCenter Portal components to get them up and running and ready for use.

[About Oracle WebCenter Portal Components and Managed Servers](#)

When you install Oracle WebCenter Portal, the components that you choose to install are deployed to various default managed servers.

[Working with WebCenter Portal](#)

Oracle WebCenter Portal provides an out-of-the-box enterprise-ready customizable application called Portal Composer, also generally referred to as *WebCenter Portal*, with a configurable work environment that enables individuals and groups to work and collaborate more effectively.

[Understanding Automatic Service Configuration for WebCenter Portal](#)

WebCenter Portal supports automatic service configuration for certain tools and services.

[Working with Oracle WebCenter Portal's Analytics Collector](#)

Oracle WebCenter Portal's Analytics Collector supports the Analytics feature that enables users to display usage and performance metrics for portals. This topic describes how to begin working with Analytics Collector.

[Working with Oracle WebCenter Portal's Discussions Server](#)

Oracle WebCenter Portal's Discussions Server provides the ability to integrate discussion forums and announcements into a portal.

[Working with Oracle WebCenter Portal's Pagelet Producer](#)

Oracle WebCenter Portal's Pagelet Producer provides a collection of useful tools and features that facilitate dynamic pagelet development. This topic describes how to access and begin working with Oracle WebCenter Portal's Pagelet Producer.

[Working with Oracle WebCenter Portal's Portlet Producers](#)

Oracle WebCenter Portal's Portlet Producers provides several preconfigured portlet producers that you can access and register.

7.1 About Oracle WebCenter Portal Components and Managed Servers

When you install Oracle WebCenter Portal, the components that you choose to install are deployed to various default managed servers.

The following table lists the managed server and the port number on which Oracle WebCenter Portal components are deployed.

Table 7-1 Oracle WebCenter Portal Components and Managed Servers

Component	Managed Server	Port
WebCenter Portal (Portal Composer)	WC_Portal	8888
Discussions Server	WC_Collaboration	8890
Portlet Producers	WC_Portlet	8889
Pagelet Producer	WC_Portlet	8889
Analytics Collector	WC_Portal	8888

7.2 Working with WebCenter Portal

Oracle WebCenter Portal provides an out-of-the-box enterprise-ready customizable application called Portal Composer, also generally referred to as *WebCenter Portal*, with a configurable work environment that enables individuals and groups to work and collaborate more effectively.

To access WebCenter Portal:

1. Start the WC_Portal managed server.
2. Access WebCenter Portal using the following URL format: `http://host:port/webcenter`

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

3. Log on to WebCenter Portal as an administrator.

Note: If you specified any user other than `weblogic` as the domain administrator while creating your Oracle WebCenter Portal domain, you must manually grant the administrator role to that nondefault user for WebCenter Portal. For information, see Granting the WebCenter Portal Administrator Role in *Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

For information about getting started with WebCenter Portal, see Getting WebCenter Portal Up and Running in *Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

7.3 Understanding Automatic Service Configuration for WebCenter Portal

WebCenter Portal supports automatic service configuration for certain tools and services.

Every time you start WebCenter Portal, it automatically tries to create connections for certain various tools and services, unless connections already exist. This section describes what services are automatically configured, how to verify that the automatic configuration succeeded, and how to deactivate automatic configuration if needed.

The following table lists the tools and services for which automatic service configuration is implemented.

Table 7-2 Connections Automatically Configured for WebCenter Portal

Component/Tool/Service	Default Connection Name
Discussions and Announcements	WebCenterPortal-Discussions
Documents	WebCenterPortal-ucm
Pagelet producer	WebCenterPortal-PageletProducer
Preconfigured portlet producers	wc-OmniPortlet wc-WebClipping wc-WSRPTools
Worklists and WebCenter Portal workflows	WebCenterPortal-Worklist

For the listed WebCenter Portal connections to be automatically configured, the following general conditions must be met:

- WebCenter Portal 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 WebLogic Domains Using the Configuration Wizard*.
- The target component must not be deployed to a cluster.
- You must start the managed servers associated with the specified tool or service first. Then start the `WC_Portal` 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.

Verifying Automatic Connection Configuration for Tools and Services

To verify that tools and services connections are automatically configured for WebCenter Portal 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 for the farm, and click Login.
3. Navigate as follows in Enterprise Manager Console:
`farm_wc_domain > WebCenter > Portal > Server > WebCenter Portal`
The WebCenter Portal home page displays the **WebCenter Portal** menu.
4. From the **WebCenter Portal** menu, select **Settings**, and then **Service Configuration**.

5. Select the different tools and services and verify that the tools and services that support Automatic Service Configuration are configured.

Disabling Automatic Service Configuration for WebCenter Portal

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).
- You can append it at the end of the script when starting up the `WC_Portal` managed server. For example: `DOMAIN_HOME/bin/startManagedWebLogic.sh WC_Portal -Dwebcenter.spaces.disableAutoConfigure=true`

7.4 Working with Oracle WebCenter Portal's Analytics Collector

Oracle WebCenter Portal's Analytics Collector supports the Analytics feature that enables users to display usage and performance metrics for portals. This topic describes how to begin working with Analytics Collector.

The Analytics feature requires the Analytics schema (`ACTIVITIES`) to be installed. By default, Analytics Collector is installed on the `WC_Portal` managed server on port 8888.

Out-of-the-box, the Analytics Collector is configured to receive events using installation defaults. However, WebCenter Portal is not configured to *send events* to the Analytics Collector. If you want to collect usage and performance metrics for WebCenter Portal, 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_Portal` managed server.
2. Register an Analytics Collector for your applications. For information, see *Managing Analytics in Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

7.5 Working with Oracle WebCenter Portal's Discussions Server

Oracle WebCenter Portal's Discussions Server provides the ability to integrate discussion forums and announcements into a portal.

The Discussions Server is deployed to the `WC_Collaboration` managed server. You can choose to install the Discussions Server while installing Oracle WebCenter Portal for the first time, or to install it later by extending an existing Oracle WebCenter Portal domain.

To access Oracle WebCenter Portal's Discussions Server:

1. Start the managed server `WC_Collaboration`. You cannot directly start or stop the Discussions Server from Oracle WebLogic Server Administrator Console, but starting or stopping the managed server `WC_Collaboration` affects the Discussions Server.

For information on starting or stopping a managed server, see *Starting and Stopping Oracle Fusion Middleware* in *Oracle Fusion Middleware Administering Oracle Fusion Middleware*.

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 Discussions Server is installed. By default, it is installed on port 8890.
3. Log in with administrator privileges.

The default domain administrator created for WebCenter Portal is also the administrator for the Discussions 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 discussion server. For information, see *Granting Administrator Role on the Discussions Server* in *Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

Connecting the Discussion Server with Oracle WebCenter Portal

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

1. Attach the Web service security policy configuration.

For information, see *Attaching Security Policies for WebCenter Portal and Discussions Web Service Endpoints* in *Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

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

`WS-Security` establishes a trust relationship between WebCenter Portal and WebCenter Portal's Discussions Server so that WebCenter Portal can pass the user identity information to the discussions server without knowing the user's credentials.. For information, see *Discussions Server - Security Considerations* in *Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

3. Register a connection to WebCenter Portal's Discussions Server.

For information, see *Registering Discussions Servers* in *Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

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

- WebCenter Portal and Oracle WebCenter Portal's Discussions 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 Discussions Server is not deployed to a cluster.
 - A user granted the `Administrator` role exists.
-
-

7.6 Working with Oracle WebCenter Portal's Pagelet Producer

Oracle WebCenter Portal's Pagelet Producer provides a collection of useful tools and features that facilitate dynamic pagelet development. This topic describes how to access and begin working with Oracle WebCenter Portal's Pagelet Producer.

Note: Oracle WebCenter Portal's Pagelet Producer replaces the functionality of Web Clipping portlets available in earlier releases of WebCenter Portal.

Pagelet Producer is deployed to the `WC_Portlet` managed server.

To access the Pagelet Producer console, use the following URL: `http://host:port/pagelets/admin`

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/`

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 Oracle 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 WebCenter Portal.

For information, see Managing the Pagelet Producer in *Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

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

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

- WebCenter Portal 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.
-

7.7 Working with Oracle WebCenter Portal's Portlet Producers

Oracle WebCenter Portal's Portlet Producers provides several preconfigured portlet producers that you can access and register.

When you install Portlet Producers, the `WC_Portlets` managed server is created, and the following applications are deployed to the server:

- `wsrp-tools` - Supports WSRP Tools
- `portalTools` - Supports OmniPortlet

Note: In 12c, Pagelet Producer replaces the functionality of Web Clipping portlets available in earlier releases of WebCenter Portal through `portalTools`.

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

- `http://host:port/portalTools` for OmniPortlet
- `http://host:port/wsrp-tools/` for WSRP Tools

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

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

1. Start the `WC_Portlet` managed server.

For information, see Starting and Stopping Oracle Fusion Middleware in *Oracle Fusion Middleware Administering Oracle Fusion Middleware*.

2. Register the required preconfigured portlet producers.

For information about portlet registration, see Managing Portlet Producers in *Oracle Fusion Middleware Administering Oracle WebCenter Portal*. If you want to

secure your portlet producers, refer to *Configuring Security for Portlet Producers* in *Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

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

- WebCenter Portal and 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.
 - Portlet Producers is not deployed to a cluster.
-
-

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

Preparing Back-End Components for WebCenter Portal Tools and Services

Portal developers can integrate Oracle WebCenter Portal tools and services into a portal. Certain tools and services rely on back-end components; for example, the mail tool relies on a mail server like Microsoft Exchange Server.

[Introduction to Tools and Services](#)

Oracle WebCenter Portal provides a set of tools and services that expose social networking and personal productivity features. To provide for tools and service integration into portals, you must install and configure the required back-end components.

[Back-End Requirements for Calendar Events](#)

The Events tool provides portal calendars for users to schedule meetings, appointments, and any other type of team, project, or group occasion. Events also enables users to access their personal Microsoft Exchange calendar to schedule events that are not related to a particular portal.

[Back-End Requirements for Documents](#)

Oracle WebCenter Portal supports content management and storage capabilities, including file upload, file and folder creation and management, file check out, and versioning.

[Back-End Requirements for Instant Messaging and Presence \(IMP\)](#)

Instant messaging and presence (IMP) relies on a back-end communication server.

[Back-End Requirements for Mail](#)

To enable users to access mail within Oracle WebCenter Portal, you must install a mail server, such as Microsoft Exchange Server 2007, 2010, or 2013, that supports IMAP4 and SMTP protocols.

[Back-End Requirements for Search](#)

Oracle WebCenter Portal provides the Oracle Secure Enterprise Search (SES) adapter for searching a portal.

[Back-End Requirements for WebCenter Portal Workflows](#)

8.1 Introduction to Tools and Services

Oracle WebCenter Portal provides a set of tools and services that expose social networking and personal productivity features. To provide for tools and service integration into portals, you must install and configure the required back-end components.

All tools and services rely on a database for their functionality. To integrate any tool or service into a portal built with WebCenter Portal, you must ensure that a supported database is available with the MDS schema.

For information about:

- Supported databases, see http://www.oracle.com/technology/software/products/ias/files/fusion_certification.html.
- Installing a database and creating schemas, see [Creating the Database Schemas](#).

In addition to a database, certain tools and services rely on back-end components. To enable portal developers or users to integrate such tools and services into portals, 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.

The following table describes Oracle WebCenter Portal tools and services and lists the back-end component, if any, required for them.

Table 8-1 Back-End Requirements for Tools and Services

Tool/Service	Description	Back-End Component Required in Addition to a Supported Database with MDS Schema	Connection Configuration
Activity Stream	Provides a streaming view of the activities of user's connections, actions taken in portals, and business activities.	None.	No separate connection required.
Analytics	Displays usage and performance metrics	Oracle WebCenter Portal's Analytics Collector, and a supported database containing the Activities schema	Connection required. See Working with Oracle WebCenter Portal's Analytics Collector .
Announcements	Enables users to post, personalize, and manage announcements.	Oracle WebCenter Portal's Discussion Server, and a supported database containing the Discussions schema	Connection required. Connection automatically configured for WebCenter Portal if conditions are met. For information, see Working with Oracle WebCenter Portal's Discussions Server .

Table 8-1 (Cont.) Back-End Requirements for Tools and Services

Tool/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 Discussions schema	Connection required. Connection automatically configured for WebCenter Portal if conditions are met. For information, see Working with Oracle WebCenter Portal's Discussions 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.	Content Server content repository	Connection required. Connection automatically configured for WebCenter Portal if conditions are met. See Back-End Requirements for Documents .
Events	Provides personal and portal-specific calendars that users can use to schedule meetings, appointments, or any other type of team get-together.	A supported database containing the WEBCENTER schema For personal events, Microsoft Exchange Server 2003 or Microsoft Exchange Server 2007	Connection required for personal calendars, but not for portal calendars. See Back-End Requirements for Calendar Events .
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. See Back-End Requirements for Instant Messaging and Presence (IMP) .

Table 8-1 (Cont.) Back-End Requirements for Tools and Services

Tool/Service	Description	Back-End Component Required in Addition to a Supported Database with MDS Schema	Connection Configuration
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 WEBCENTER schema	No separate connection required.
Lists	Enables users to create, publish, and manage lists.	A supported database containing the WEBCENTER 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. See Back-End Requirements for Mail .
Notes	Provides the ability to "jot down" and retain quick bits of personally relevant information. Note: This feature is available only in WebCenter Portal.	A supported database containing the WEBCENTER 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 WEBCENTER schema	No separate connection required.

Table 8-1 (Cont.) Back-End Requirements for Tools and Services

Tool/Service	Description	Back-End Component Required in Addition to a Supported Database with MDS Schema	Connection Configuration
RSS	Provides the ability to publish content from other WebCenter Portal tools and services and external sources as news feeds in the RSS 2.0 and Atom 1.0 formats.	None	No separate connection required.
Search	Provides the ability to search documents, and pages using Oracle Secure Enterprise Search (SES) adapter.	No separate back-end component required for searching Oracle WebCenter Portal objects. To search external repositories outside of Oracle WebCenter Portal, Oracle SES 11.2.2.2 updated with latest patches is required.	Connection required for Oracle SES. See Back-End Requirements for Search .
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.
Workflows	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	SOA connection required. See Back-End Requirements for WebCenter Portal Workflows .

8.2 Back-End Requirements for Calendar Events

The Events tool provides portal calendars for users to schedule meetings, appointments, and any other type of team, project, or group occasion. Events also

enables users to access their personal Microsoft Exchange calendar to schedule events that are not related to a particular portal.

Personal calendars are available through a Microsoft Exchange Server; therefore, a connection to that server is required. You can register the Microsoft Exchange Server connection through the Fusion Middleware Control Console or using WLST. To view personal events in WebCenter Portal, users must have an account on the Microsoft Exchange Server. For information about Microsoft Exchange Server installation, refer to its product documentation.

You must configure Microsoft Exchange Server and create a connection to the mail server. For information, see *Managing Calendar Events* in *Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

8.3 Back-End Requirements for Documents

Oracle WebCenter Portal supports content management and storage capabilities, including file upload, file and folder creation and management, file check out, and versioning.

To provide content integration in WebCenter Portal, you must configure at least one WebCenter Content Server connection and mark it as the *default* connection (sometimes referred to as the *active* or *primary* connection).

[Oracle WebCenter Content Server Requirements](#)

8.3.1 Oracle WebCenter Content Server Requirements

This section discusses installation, configuration, and integration for Oracle WebCenter Content Server.

Content Server - Installation

Oracle WebCenter Portal supports Oracle WebCenter Content Server 12.2.1 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 portals and applications.

For information about how to install Content Server and Inbound Refinery, see *Oracle Fusion Middleware Installing and Configuring Oracle WebCenter Content*.

(Optional) Use sections to add and organize related content if another section heading is needed.

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 Oracle WebCenter Portal. When they are installed in the same domain, no additional configuration is required to use an external LDAP authentication provider.

Content Server - Configuration

To use Content Server as an external content repository, you must configure it to work with Oracle WebCenter Portal. For information about the mandatory and optional tasks involved in configuring Content Server, see *Managing Connections to Oracle WebCenter Content Server in Oracle Fusion Middleware Administering Oracle WebCenter Portal*. To get an overview of the tasks required to get Content Server working for WebCenter Portal, refer to the flowchart given in *Configuration Roadmap for Oracle WebCenter Content Server of Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

FrameworkFolders Support

Oracle WebCenter Content offers two folder solutions: Folders_g and FrameworkFolders. For new installations of Oracle WebCenter Portal, it is recommended that you enable the FrameworkFolders component on Content Server. For an Oracle WebCenter Portal instance patched from an earlier release that used the Folders_g component, you can continue to use Folders_g or choose to migrate to the FrameworkFolders interface. For information, see *Enabling Mandatory Components in Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

Note:

By default, Oracle WebCenter Content uses Oracle WebLogic Server's 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 Oracle 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 Oracle 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 Oracle WebCenter Portal.

Content Server - Integration

To use Content Server as a content repository, you must create a repository connection. For WebCenter Portal, 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 [Working with WebCenter Portal](#) 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 *Registering the Default Oracle WebCenter Content Server Repository in Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

8.4 Back-End Requirements for Instant Messaging and Presence (IMP)

Instant messaging and presence (IMP) relies on a back-end communication server.

You can configure Microsoft Lync 2010 as the communication server for IMP:

- **Communication Server - Installation**

For information about installing Microsoft Lync 2010, refer to the relevant Microsoft documentation.

- **Communication Server - Configuration and Integration**

For information about configuring Microsoft Lync, see Microsoft Lync — Configuration in *Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

After installing and configuring your communication server, you must set up connections to the communication server to enable integration of IMP with WebCenter Portal. For information about setting up IMP connections, see Registering Instant Messaging and Presence Servers in *Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

Ensure that Oracle 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 Oracle WebCenter Portal and communication server environments.

8.5 Back-End Requirements for Mail

To enable users to access mail within Oracle WebCenter Portal, you must install a mail server, such as Microsoft Exchange Server 2007, 2010, or 2013, that supports IMAP4 and SMTP protocols.

To install a mail server, refer to the documentation of the mail server you wish to use. The users created on the mail server must correspond with the users created in the identity store used by Oracle WebCenter Portal.

To integrate mail in WebCenter Portal, you must configure a connection to your mail server. For information, see Managing Mail in *Oracle Fusion Middleware Administering Oracle WebCenter Portal*

8.6 Back-End Requirements for Search

Oracle WebCenter Portal provides the Oracle Secure Enterprise Search (SES) adapter for searching a portal.

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. This section describes what requirements should be met before search is enabled for users.

[Installing Oracle SES 11.2.2.2](#)

[Configuring Oracle SES 11.2.2.2](#)

8.6.1 Installing Oracle SES 11.2.2.2

In 12c, the only supported Oracle Secure Enterprise Search (SES) is 11.2.2.2.

Complete the following prerequisites before installing and configuring Oracle SES 11.2.2.2:

- Install WebCenter Content Server 12c. See [Oracle WebCenter Content Server Requirements](#) for this corequisite installation.
- Download Oracle SES from <http://www.oracle.com/technetwork/search/oses/downloads/index.html>.

- For information about installing Oracle SES 11.2.2.2, refer to the Oracle SES Online Documentation Library 11g Release 2 (11.2.2.2) available on OTN at <http://www.oracle.com/technetwork/search/oses/documentation/index.html>.

After installing Oracle SES release 11.2.2.2, perform the following steps to prepare Oracle SES to work with Oracle WebCenter Portal:

1. Install the new version of Oracle WebCenter Portal's Document Service Manager on Oracle SES:
 - a. Get `webcenter_doc_pipeline_plugin.zip` from the `WCP_ORACLE_HOME/ses` directory on the Oracle WebCenter Portal instance, where `WCP_ORACLE_HOME` is the Oracle WebCenter Portal home directory. Copy the file to the Oracle SES home directory on the Oracle SES instance.
 - b. Navigate to the Oracle SES home directory.
 - c. Delete the file `./search/lib/plugins/webcenter/search-crawl-ucm.jar`.
 - d. Unzip the `webcenter_doc_pipeline_plugin.zip` file.
This adds the following Oracle WebCenter Portal JAR file to an Oracle SES installation: `SES_ORACLE_HOME/search/lib/plugins/doc/search-crawl-ucm.jar`
 - e. Restart the Oracle SES server. For information, see [Starting and Stopping Oracle SES Instance](#) in *Oracle Secure Enterprise Search Administrator's Guide* in the Secure Enterprise Search Online Documentation Library 11g Release 2 (11.2.2.2) on OTN.
2. Configure Oracle SES facets and sorting attributes for Oracle WebCenter Portal:
 - a. Get `webcenter_portal_ses_admin.zip` from the `WCP_ORACLE_HOME/ses` directory on the Oracle WebCenter Portal instance, and copy it to the Oracle SES home directory.
 - b. Navigate to the Oracle SES home directory.
 - c. Unzip the `webcenter_portal_ses_admin.zip` file and follow the instructions in the `readme.txt` file.

8.6.2 Configuring Oracle SES 11.2.2.2

For information about configuring Oracle SES for Oracle WebCenter Portal, see Managing Oracle Secure Enterprise Search in WebCenter Portal in *Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

8.7 Back-End Requirements for WebCenter Portal Workflows

WebCenter Portal provides several prebuilt workflows that handle portal membership notifications, portal subscription requests, and so on. WebCenter Portal workflows rely on the BPEL server, which is a component of Oracle SOA Suite.

[Table 8-2](#) describes the tasks that you must perform to enable the WebCenter Portal workflow functionality in WebCenter Portal.

Table 8-2 Tasks for Enabling WebCenter Portal Workflows

Task	Mandatory/Optional	Documentation
1. Install Oracle SOA Suite	Mandatory	See Oracle SOA Suite - Installation .
2. Install WebCenter Portal SOA Composites	Mandatory	See Oracle WebCenter Portal SOA Composites - Installation .
3. Extend the SOA server domain	Mandatory	See Oracle SOA Server - Extending the Domain .
3. Configure WS-Security to secure Web service calls between Oracle SOA Suite and WebCenter Portal	Mandatory	See Oracle SOA and WebCenter Portal - WS-Security Configuration .
4. Register a connection with the BPEL server	Mandatory, if not automatically configured	See 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 Suite. 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 [Setting Up an External LDAP-Based Identity Store](#).

[Oracle SOA Suite - Installation](#)

To support workflows, WebCenter Portal relies on the BPEL server, which is included with Oracle SOA Suite.

[Oracle WebCenter Portal SOA Composites - Installation](#)

To use workflows in WebCenter Portal, you must install WebCenter Portal SOA Composites in the SOA Oracle home.

[Oracle SOA Server - Extending the Domain](#)

WebCenter Portal workflows are deployed to an Oracle SOA server.

[Oracle SOA and WebCenter Portal - WS-Security Configuration](#)

WebCenter Portal Web services, deployed to Oracle WebCenter Portal, facilitate communication between WebCenter Portal and the SOA server.

[Oracle WebCenter Portal - Configuring the BPEL Server Connection](#)

The WebCenterPortal-Worklist BPEL connection is configured to be shared by worklists and WebCenter Portal workflows. This enables users to see the assigned membership-related workflow items and notification subscriptions in their worklist component.

8.7.1 Oracle SOA Suite - Installation

To support workflows, WebCenter Portal relies on the BPEL server, which is included with Oracle SOA Suite.

For information about installing Oracle SOA Suite, see About Oracle SOA Suite and Oracle Business Process Management Installation in *Oracle Fusion Middleware Installing and Configuring Oracle SOA Suite and Business Process Management*.

8.7.2 Oracle WebCenter Portal SOA Composites - Installation

To use workflows in WebCenter Portal, you must install WebCenter Portal SOA Composites in the SOA Oracle home.

To install WebCenter Portal SOA Composites:

1. During WebCenter Portal installation (see [Starting the Installation Program](#)), select an **Installation Type** of **WebCenter Portal SOA Composites**.
2. Verify that the `wcportal` folder was created in the SOA Oracle home.

8.7.3 Oracle SOA Server - Extending the Domain

WebCenter Portal 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.jar`.

Prerequisite: WebCenter Portal must be installed in the SOA Oracle home with the installation type **WebCenter Portal SOA Composites**.

To extend the SOA server domain:

1. Run `ORACLE_HOME/oracle_common/common/bin/config.sh`.
2. Select **Update an existing domain**, then select **SOA Domain**.
3. On the Templates screen, select the template in either of the following ways:
 - Select **Update Domain Using Product Templates**, then select Oracle Webcenter Portal Composites - 12.2.1.2.0 [wcportal].
 - Or, select **Update Domain Using Custom Template**, and specify the following path in the **Template location** field: `ORACLE_HOME/wcportal/common/templates/wls/oracle.wc_composite_template.jar`

The `oracle.wc_composite_template.jar` template automatically deploys:

- `WebCenterWorklistDetailApp.ear`, the ADF application that displays invitations and messages.
 - `sca_CommunityWorkflows.jar`, the BPEL composite that manages the WebCenter Portal membership mechanism.
4. Restart the Oracle SOA server.
 5. Verify that `WebCenterWorklistDetailApp.ear` and `sca_CommunityWorkflows.jar` deployed successfully. If one or both did not deploy, you can manually deploy them using Enterprise Manager:
 - `WebCenterWorklistDetailApp.ear` is located at `ORACLE_HOME/wcportal/webcenter/applications` when WebCenter Portal is installed in the SOA Oracle home with the installation type **WebCenter Portal SOA Composites**.

- `sca_CommunityWorkflows.jar` is located at `ORACLE_HOME/wcportal/common/soa-composite/wcp/sca_CommunityWorkflows.jar`.

See Also:

- Configuration Roadmap for WebCenter Portal Workflows in *Oracle Fusion Middleware Administering Oracle WebCenter Portal*
 - Extending WebLogic Domains in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*
-

8.7.4 Oracle SOA and WebCenter Portal - WS-Security Configuration

WebCenter Portal Web services, deployed to Oracle WebCenter Portal, facilitate communication between WebCenter Portal and the SOA server.

To secure these Web service calls, you must set up WS-Security on the SOA server and WebCenter Portal.

To ensure a secure Web service connection between the Oracle SOA server and WebCenter Portal:

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 WebCenter Portal and Oracle SOA server are configured correctly.

For information, see *Updating the Credential Store in Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

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

- `webcenter.jks` (copied to WebCenter Portal server end)
- `bpel.jks` (copied to Oracle SOA server end)

For information, see *Creating the SOA Domain Keystore in Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

4. Configure role members for the `BPMWorkflowAdmin` application role on 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.xmlns.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")
```

For information, see Security Commands in *Oracle Fusion Middleware WLST Command Reference for WebLogic Server*.

For more information, see Configuring Web Services Security in *Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

8.7.5 Oracle WebCenter Portal - Configuring the BPEL Server Connection

The WebCenterPortal-Worklist BPEL connection is configured to be shared by worklists and WebCenter Portal workflows. This enables users to see the assigned membership-related workflow items and notification subscriptions in their worklist component.

When you start WebCenter Portal, a BPEL server connection named `WebCenterPortal-Worklist` is automatically configured, if it does not already exist. However, automatic configuration takes place only if the conditions specified in [Working with WebCenter Portal](#) are fulfilled.

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

To configure a BPEL server connection for WebCenter Portal workflows, see Configuration Roadmap for WebCenter Portal Workflows in *Oracle Fusion Middleware Administering Oracle WebCenter Portal*.

Next Steps After Configuring the Domain

After configuring a product domain, there are additional tasks that you may want to perform.

Performing Basic Administrative Tasks

After you configure your new domain, there are administration tasks that Oracle recommends you perform on the domain.

Performing Additional Domain Configuration Tasks

Review additional configuration tasks you will likely want to perform on a new domain.

Preparing Your Environment for High Availability

Scaling out for high availability requires additional steps.

Connecting Back-End Components

Portal developers can integrate Oracle WebCenter Portal tools and services into a portal. Certain tools and services rely on back-end components; for example, the mail tool relies on a mail server like Microsoft Exchange Server.

Using Oracle JDeveloper with Oracle WebCenter Portal

You can use Oracle JDeveloper to edit, deploy, and test Oracle WebCenter Portal assets and components.

9.1 Performing Basic Administrative Tasks

After you configure your new domain, there are administration tasks that Oracle recommends you perform on the domain.

The following table lists common administration tasks to perform on your new domain.

Table 9-1 Basic Administration Tasks for a New Domain

Task	Description	More Information
Getting familiar with Fusion Middleware administration tools	Get familiar with various tools that you can use to manage your environment.	See Overview of Oracle Fusion Middleware Administration Tools in <i>Oracle Fusion Middleware Administering Oracle Fusion Middleware</i> .
Starting and stopping products and servers	Learn how to start and stop Oracle Fusion Middleware, including the Administration Server, Managed Servers, and components.	See Starting and Stopping Oracle Fusion Middleware in <i>Oracle Fusion Middleware Administering Oracle Fusion Middleware</i> .

Table 9-1 (Cont.) Basic Administration Tasks for a New Domain

Task	Description	More Information
Configuring Secure Sockets Layer (SSL)	Learn how to set up secure communications between Oracle Fusion Middleware components using SSL.	See Configuring SSL in Oracle Fusion Middleware in <i>Oracle Fusion Middleware Administering Oracle Fusion Middleware</i> .
Monitoring Oracle Fusion Middleware	Learn how to keep track of the status of Oracle Fusion Middleware components.	See Monitoring Oracle Fusion Middleware in <i>Oracle Fusion Middleware Administering Oracle Fusion Middleware</i> .
Understanding Backup and Recovery Procedures	Learn recommended backup and recovery procedures for Oracle Fusion Middleware.	See Introducing Backup and Recovery in <i>Oracle Fusion Middleware Administering Oracle Fusion Middleware</i> .

9.2 Performing Additional Domain Configuration Tasks

Review additional configuration tasks you will likely want to perform on a new domain.

Table 9-2 Additional Domain Configuration Tasks

Task	Description	More Information
Deploying Applications	Learn how to deploy your applications to Oracle Fusion Middleware.	See Deploying Applications in <i>Oracle Fusion Middleware Administering Oracle Fusion Middleware</i> .
Adding a Web Tier front-end to your domain	Oracle Web Tier hosts Web pages (static and dynamic), provides security and high performance along with built-in clustering, load balancing, and failover features. In particular, the Web Tier contains Oracle HTTP Server.	To install and configure Oracle HTTP Server in the WebLogic Server domain, see Configuring Oracle HTTP Server in a WebLogic Server Domain in <i>Oracle Fusion Middleware Installing and Configuring Oracle HTTP Server</i> . See also Installing Multiple Products in the Same Domain for important information.

Table 9-2 (Cont.) Additional Domain Configuration Tasks

Task	Description	More Information
Tuning and configuring Coherence for your topology	The standard installation topology includes a Coherence cluster that contains storage-enabled Managed Coherence Servers. This configuration is a good starting point for using Coherence, but depending upon your specific requirements, consider tuning and reconfiguring Coherence to improve performance in a production environment.	<p>For more about Coherence clusters, see <i>Configuring and Managing Coherence Clusters in Oracle Fusion Middleware Administering Clusters for Oracle WebLogic Server</i>.</p> <p>For information on tuning Coherence, see <i>Performance Tuning in Oracle Fusion Middleware Administering Oracle Coherence</i>.</p> <p>For information on storing HTTP session data in Coherence, see <i>Using Coherence*Web with WebLogic Server in Oracle Fusion Middleware Administering HTTP Session Management with Oracle Coherence*Web</i>.</p> <p>For more about creating and deploying Coherence applications, see <i>Getting Started in Oracle Fusion Middleware Developing Oracle Coherence Applications for Oracle WebLogic Server</i>.</p>

9.3 Preparing Your Environment for High Availability

Scaling out for high availability requires additional steps.

[Table 9-3](#) provides a list of tasks to perform if you want to scale out your standard installation environment for high availability.

Table 9-3 Tasks Required to Prepare Your Environment for High Availability

Task	Description	More Information
Scaling out to multiple host computers	To enable high availability, it is important to provide failover capabilities to another host computer. That way, if one computer goes down, your environment can continue to serve the consumers of your deployed applications.	See <i>Scaling Out a Topology (Machine Scale Out) in the Oracle Fusion Middleware High Availability Guide</i> .
Configuring high availability for your Web Tier components.	If you have added a Web tier front-end, then you must configure the Web Tier for high availability, as well as the WebLogic Server software.	See <i>Configuring High Availability for Web Tier Components in Oracle Fusion Middleware High Availability Guide</i> .
Setting up a front-end load balancer	A load balancer can be used to distribute requests across servers more evenly.	See <i>Server Load Balancing in a High Availability Environment and Configuring Load Balancer Virtual Server Names and Ports in Oracle Fusion Middleware High Availability Guide</i> .

Table 9-3 (Cont.) Tasks Required to Prepare Your Environment for High Availability

Task	Description	More Information
Configuring Node Manager	Node Manager enables you to start, shut down, and restart the Administration Server and Managed Server instances from a remote location. This document assumes you have configured a per-domain Node Manager. Review the Node Manager documentation for information on advanced Node Manager configuration options and features.	See Advanced Node Manager Configuration in <i>Oracle Fusion Middleware Administering Node Manager for Oracle WebLogic Server</i> .

9.4 Connecting Back-End Components

Portal developers can integrate Oracle WebCenter Portal tools and services into a portal. Certain tools and services rely on back-end components; for example, the mail tool relies on a mail server like Microsoft Exchange Server.

To provide for tools and service integration into portals, you must install and configure the required back-end components. For installation and configuration instructions for components, consult the following sections in *Oracle Fusion Middleware Administering Oracle WebCenter Portal*:

- Roadmap for Customizing WebCenter Portal for the First Time
- Managing Tools and Services
- About Analytics in WebCenter Portal
- About BPEL Connections
- Configuring the Discussions Server
- Configuration Roadmap for WebCenter Portal Workflows
- Managing Portlet Producers
- Registering Pagelet Producer
- Registering Instant Messaging and Presence Servers
- Managing Oracle Secure Enterprise Search in WebCenter Portal
- Managing Mail
- Registering Events Servers

9.5 Using Oracle JDeveloper with Oracle WebCenter Portal

You can use Oracle JDeveloper to edit, deploy, and test Oracle WebCenter Portal assets and components.

About Oracle JDeveloper

Oracle JDeveloper is a free integrated development environment (IDE) for building Web service-oriented 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.

For advanced requirements, developers can use JDeveloper to further develop and deploy portal assets and shared libraries (containing custom portal components).

To install Oracle JDeveloper, refer to *Oracle Fusion Middleware Installing Oracle JDeveloper*.

Special Instructions When Installing Oracle JDeveloper for Deploying Assets to WebCenter Portal

Typically, you install Oracle JDeveloper on your development machine and connect to a remote Oracle WebCenter Portal domain to deploy and test portal assets and components. You can also create, edit, and extend assets (such as skins or page templates) in JDeveloper, then deploy them to WebCenter Portal. Developers can deploy portal assets or extensions to WebCenter Portal directly from JDeveloper if they have the required permissions. Developers can use JDeveloper to build custom ADF library components for portals, such as managed beans, task flows, and data controls, and deploy them as shared library extensions to the portal server.

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

To deploy portal assets and components using JDeveloper, you must install the Oracle WebCenter Portal extensions for JDeveloper. This extension bundle is a JDeveloper add-in that provides the complete set of Oracle WebCenter Portal capabilities and features. 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 Oracle WebCenter Portal extensions, see *Installing the WebCenter Portal Extensions for JDeveloper* in *Oracle Fusion Middleware Developing WebCenter Portal Assets and Custom Components with Oracle JDeveloper*.

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 Installing Oracle JDeveloper*.

Deinstalling or Reinstalling Oracle WebCenter Portal

Follow the instructions in this section to deinstall or reinstall Oracle WebCenter Portal.

Oracle recommends that you always use the instructions in this section to remove the software. If you try to remove the software manually, you may encounter problems when you try to reinstall the software again at a later time. Following the procedures in this section ensures that the software is properly removed.

About Product Deinstallation

The Oracle Fusion Middleware deinstaller removes the software from the Oracle home directory.

Stopping Oracle Fusion Middleware

Before running the deinstaller, Oracle recommends that you stop all servers and processes associated with the Oracle home you are going to remove.

Removing Your Database Schemas

Before you remove the Oracle home, Oracle recommends that you run the Repository Creation Utility (RCU) to remove database schemas associated with this domain.

Deinstalling the Software

Follow the instructions in this section to start the product deinstaller and remove the software.

Removing the Oracle Home Directory Manually

After deinstalling the software, you must manually remove your Oracle home directory and any existing subdirectories that the deinstaller did not remove.

Removing the Program Shortcuts on Windows Operating Systems

On Windows operating systems, you must also manually remove the program shortcuts; the deinstaller does not remove them for you.

Removing the Domain and Application Data

After deinstalling the software, you must remove the domain and application data.

Reinstalling the Software

You can reinstall your software into the same Oracle home as a previous installation only if you deinstalled the software by following the instructions in this section, including manually removing the Oracle home directory.

10.1 About Product Deinstallation

The Oracle Fusion Middleware deinstaller removes the software from the Oracle home directory.

The following table summarizes the deinstallation tasks.

Table 10-1 Roadmap for Product Deinstallation

Task	Description	Documentation
Stop Oracle Fusion Middleware	All servers and processes in your domain should be stopped before running the deinstaller.	See Stopping Oracle Fusion Middleware .
Remove your database schemas	Run Repository Creation Utility to remove your database schemas.	See Removing Your Database Schemas .
Remove the software	Run the product deinstaller to remove Oracle Fusion Middleware Infrastructure. Note that if your Oracle home contains multiple products, you must run the deinstaller multiple times, once for each product.	See Deinstalling the Software .
Remove the Oracle home directory	The deinstaller does not remove all files and folders from the Oracle home directory. After the deinstaller is finished, you must manually remove the Oracle home to complete your product removal.	See Removing the Oracle Home Directory Manually .
Remove your domain and application data	The deinstaller does not remove data contained in your Domain home or Application home directories, even if they are located inside the Oracle home. You must remove these directories manually.	See Removing the Domain and Application Data .

10.2 Stopping Oracle Fusion Middleware

Before running the deinstaller, Oracle recommends that you stop all servers and processes associated with the Oracle home you are going to remove.

For more information, see *Stopping an Oracle Fusion Middleware Environment* in *Oracle Fusion Middleware Administering Oracle Fusion Middleware*.

10.3 Removing Your Database Schemas

Before you remove the Oracle home, Oracle recommends that you run the Repository Creation Utility (RCU) to remove database schemas associated with this domain.

Each domain has its own set of schemas, uniquely identified by a custom prefix (see *About Custom Prefixes* in *Oracle Fusion Middleware Creating Schemas with the Repository Creation Utility*). This set of schemas cannot be shared with any other domain (see *Planning Your Schema Creation* in *Oracle Fusion Middleware Creating Schemas with the Repository Creation Utility*).

If there are multiple sets of schemas on your database, be sure to identify the schema prefix associated with the domain you are removing.

For schema removal steps, see *Dropping Schemas in Oracle Fusion Middleware Creating Schemas with the Repository Creation Utility*.

10.4 Deinstalling the Software

Follow the instructions in this section to start the product deinstaller and remove the software.

If you want to perform a silent (command-line) deinstallation, see *Running the Oracle Universal Installer for Silent Deinstallation in Oracle Fusion Middleware Installing Software with the Oracle Universal Installer*.

[Starting the Deinstallation Program](#)

[Selecting the Product to Deinstall](#)

[Navigating the Deinstallation Screens](#)

10.4.1 Starting the Deinstallation Program

To start the deinstaller:

- **On UNIX**

On the command line, enter the following commands:

```
cd $ORACLE_HOME/oui/bin
./deinstall.sh
```

- **On Windows**

Do one of the following:

- Use a file manager window to navigate to the `ORACLE_HOME\oui\bin` directory and double-click on `deinstall.cmd`.

- Open a command prompt and enter the following commands:

```
cd %ORACLE_HOME%\oui\bin
deinstall.cmd
```

- From the **Start** menu, select **All Programs**, then **Oracle**, then **OracleHome**, and then **Uninstall Oracle Software**.

10.4.2 Selecting the Product to Deinstall

Because multiple products exist in the Oracle home, ensure that you are deinstalling the correct product.

After you run the deinstaller, the Distribution to Uninstall screen opens. From the drop-down list, select **WebCenter Portal 12.2.1.2.0** and click **Uninstall**. The deinstallation program shows the screens listed in [Navigating the Deinstallation Screens](#).

Note:

You can deinstall Oracle Fusion Middleware Infrastructure after you deinstall Oracle WebCenter Portal software by running the deinstallation wizard again. Before doing so, make sure there are no other products using the Infrastructure; those products will no longer function once the Infrastructure is removed. You will not encounter the Distribution to Uninstall screen if no other software depends on Oracle Fusion Middleware Infrastructure. For deinstallation instructions, see *Deinstalling Oracle Fusion Middleware Infrastructure* in *Oracle Fusion Middleware Installing and Configuring the Oracle Fusion Middleware Infrastructure*.

10.4.3 Navigating the Deinstallation Screens

The deinstaller shows a series of screens to confirm the deinstallation of the software.

If you need help on screen listed in [Table 10-2](#), click **Help** on the screen.

Table 10-2 Deinstallation Screens and Descriptions

Screen	Description
Welcome	Introduces you to the product deinstaller.
Deinstallation Summary	Shows the Oracle home directory and its contents that will be deinstalled. Verify that this is the correct directory. If you want to save these options to a response file, click Save Response File and enter the response file location and name. You can use response file later during a silent deinstallation. For more on silent or command line deinstallation, see <i>Running the Oracle Universal Installer for Silent Deinstallation</i> in <i>Installing Software with the Oracle Universal Installer</i> . Click Deinstall to begin removing the software.
Deinstallation Progress	Shows the deinstallation progress.
Deinstallation Complete	Appears when the deinstallation is complete. Review the information on this screen, then click Finish to dismiss the deinstaller.

10.5 Removing the Oracle Home Directory Manually

After deinstalling the software, you must manually remove your Oracle home directory and any existing subdirectories that the deinstaller did not remove.

For example, if your Oracle home directory is `/home/Oracle/product/ORACLE_HOME` on a UNIX operating system, enter the following commands:

```
cd /home/Oracle/product
rm -rf ORACLE_HOME
```

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

10.6 Removing the Program Shortcuts on Windows Operating Systems

On Windows operating systems, you must also manually remove the program shortcuts; the deinstaller does not remove them for you.

To remove the program shortcuts on Windows:

1. Go to the `C:\ProgramData\Microsoft\Windows\Start Menu\Programs\Oracle\ORACLE_HOME\Product` directory.
2. If you only have one product installed in your Oracle home, delete the `ORACLE_HOME` directory. If you have multiple products installed in your Oracle home, delete all products before deleting the `ORACLE_HOME` directory.

10.7 Removing the Domain and Application Data

After deinstalling the software, you must remove the domain and application data.

To remove the domain and application data:

1. Manually remove your Domain home directory. For example:

On a UNIX operating system, if your Domain home directory is `/home/Oracle/config/domains/wcp_domain`, enter the following command:

```
cd /home/Oracle/config/domains
rm -rf wcp_domain
```

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

2. Manually remove your Application home directory. For example:

On a UNIX operating system, if your Application home directory is `/home/Oracle/config/applications/wcp_domain`, enter the following commands:

```
cd /home/Oracle/config/applications
rm -rf wcp_domain
```

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

3. Back up the `domain_registry.xml` file in your Oracle home, then edit the file and remove the line associated with the domain you are removing. For example, to remove the `wcp_domain`, find the following line and remove it:

```
<domain location="/home/Oracle/config/domains/wcp_domain"/>
```

Save and exit the file when you are finished.

10.8 Reinstalling the Software

You can reinstall your software into the same Oracle home as a previous installation only if you deinstalled the software by following the instructions in this section, including manually removing the Oracle home directory.

When you reinstall, you can then specify the same Oracle home as your previous installation.

Consider the following cases where the Oracle home is not empty:

- Installing in an existing Oracle home that contains the same feature sets.

The installer warns you that the Oracle home you specified during installation already contains the same software you are trying to install.

- Installing in an existing, non-empty Oracle home.

For example, suppose that you chose to create your Domain home or Application home somewhere inside your existing Oracle home. This data is not removed during the deinstallation process, so if you try to reinstall into the same Oracle home, the installer does not allow it. Your options are:

1. Deinstall your software from the Oracle home (as this section describes) and then remove the Oracle home directory. After you deinstall the software and remove the Oracle home directory, you can reinstall and reuse the same Oracle home location. Any domain or application data that was in the Oracle home must be re-created.
2. Select a different Oracle home directory.