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Installation Guide for Oracle WebCenter
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Oracle Fusion Middleware Installation Guide for Oracle WebCenter 11g Release 1 (11.1.1)

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Preface

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

Intended Audience

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

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Related Documents

For additional information, see the following manuals:

- *Oracle Fusion Middleware Administrator's Guide*
- *Oracle Fusion Middleware Concepts*
- *Oracle Fusion Middleware High Availability Guide*

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.

Installation Overview

Oracle WebCenter, an Oracle Fusion Middleware component, is an integrated suite of components designed for creating portals, web sites, and composite applications. This chapter provides an overview of Oracle WebCenter and outlines the tasks involved in installing and configuring it in a simple, non-cluster topology.

This chapter includes the following sections:

- Section 1.1, "Oracle WebCenter Components"
- Section 1.2, "Oracle WebCenter Installation Roadmap"
- Section 1.3, "Other Starting Points for Oracle WebCenter Installation"

1.1 Oracle WebCenter Components

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

Oracle WebCenter includes the following components:

- **Oracle WebCenter Framework**

Provides the ability to embed portlets, content, and customizable components into WebCenter applications—WebCenter Spaces and WebCenter Portal applications.

Oracle WebCenter Framework is automatically installed when you install Oracle WebCenter.
- **Oracle WebCenter Spaces**

Offers a single, integrated, web-based environment for social networking, communication, and personal productivity through a robust set of services and applications.

Configuring this component is optional.
- **Oracle Portlet Producers**

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

Configuring this component is optional.

- **Oracle WebCenter Discussions Server**

Supports integration of discussion forums and announcements into WebCenter applications.

Configuring this component is optional.
- **Oracle WebCenter 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.

Configuring this component is optional.
- **Oracle WebCenter Analytics Collector**

Delivers comprehensive reporting on activity and content usage within portals and composite applications.

Configuring this component is optional.
- **Oracle WebCenter Activity Graph Engines**

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

Configuring this component is optional.
- **Oracle WebCenter Personalization**

Provides the ability to deliver application content to targeted users based on selected criteria.

Configuring this component is optional.

1.2 Oracle WebCenter Installation Roadmap

Figure 1–1 shows the directory structure of an Oracle WebCenter installation on a single host, using all of the default values.

Figure 1–1 Directory Structure of Oracle WebCenter Installation

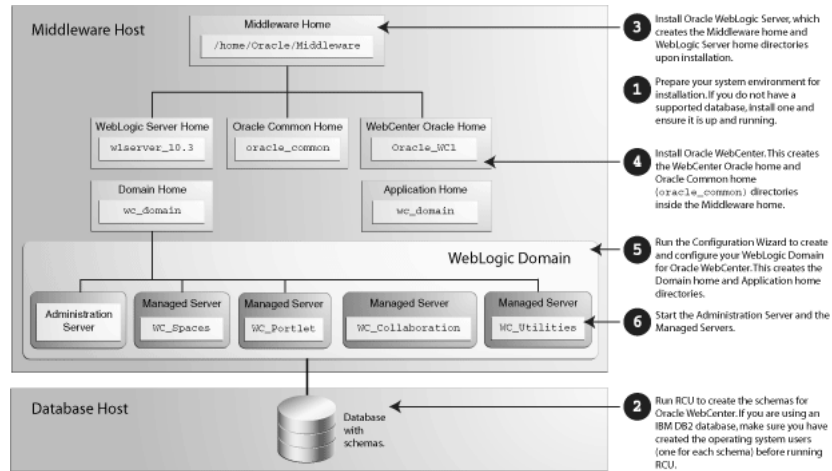


Table 1–1 describes the high-level tasks for installing and configuring Oracle WebCenter, and specifies whether these tasks are mandatory or optional. The table also includes documentation links that you can access to get more details about each task.

Before you start, you might like to read *Oracle Fusion Middleware Installation Planning Guide*.

Table 1–1 Installing Oracle WebCenter in a Simple Topology

Task	Description	Mandatory or Optional?	Documentation
Pre-Installation Tasks			
Task 1 - Prepare your system environment for installation	Ensure that your system environment meets the general installation requirements for Oracle Fusion Middleware, Oracle WebCenter, and Repository Creation Utility (RCU).	Mandatory	<p>For system requirements information, go to:</p> <p>http://www.oracle.com/technetwork/middleware/ias/downloads/fusion-requirements-100147.html</p> <p>For certification information, see <i>System Requirements and Supported Platforms for Oracle Fusion Middleware 11gR1</i> on the Oracle Fusion Middleware Supported System Configurations page:</p> <p>http://www.oracle.com/technetwork/middleware/ias/downloads/fusion-certification-100350.html</p> <p>For interoperability and compatibility, go to <i>Oracle Fusion Middleware Interoperability and Compatibility Guide</i>.</p>
Task 2 - Install and configure a database	Oracle WebCenter requires the availability of a supported database. Ensure that you have a supported database up and running.	Mandatory	<p>For the latest information about supported databases, see <i>System Requirements and Supported Platforms for Oracle Fusion Middleware 11gR1</i> on the Oracle Fusion Middleware Supported System Configurations page:</p> <p>http://www.oracle.com/technetwork/middleware/ias/downloads/fusion-certification-100350.html</p>
Task 3 - Create WebCenter schemas	Use the RCU to create WebCenter schemas. Note: If you are using an IBM DB2 database, make sure you create the operating system users (one for each schema) before running the RCU.	Mandatory	<p>In <i>Oracle Fusion Middleware Repository Creation Utility User's Guide</i>, refer to the following sections:</p> <ul style="list-style-type: none"> ■ Section "Oracle WebCenter Schemas" for information about WebCenter schemas that must be created depending on the WebCenter components you plan to install. ■ Section "Creating Schemas" for information about how to create schemas.

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

Task	Description	Mandatory or Optional?	Documentation
Task 4 - Install Oracle WebLogic Server	Install Oracle WebLogic Server.	Mandatory	<p>See <i>System Requirements and Supported Platforms for Oracle Fusion Middleware 11gR1</i> on the Oracle Fusion Middleware Supported System Configurations page to determine the exact version required for your installation:</p> <p>http://www.oracle.com/technetwork/middleware/ias/downloads/fusion-certification-100350.html</p> <p>See "Product Distribution" in <i>Oracle Fusion Middleware Installation Guide for Oracle WebLogic Server</i> for instructions on how to download the latest Oracle WebLogic Server.</p> <p>See "Running the Installation Program in Graphical Mode" in <i>Oracle Fusion Middleware Installation Guide for Oracle WebLogic Server</i> for installation instructions.</p>
Installation Tasks			
Task 5 - Install Oracle WebCenter	<p>Use the WebCenter installer to install Oracle WebCenter.</p> <p>The installer lays down the binaries for all Oracle WebCenter products.</p> <p>Within the Middleware home directory, the installer creates the Oracle home directory (<i>Oracle_WC1</i> by default) and the Oracle Common home directory (<i>oracle_common</i>), as shown in Figure 1–1.</p>	Mandatory	Chapter 2, "Installing Oracle WebCenter"
Task 6 - Configure a domain for Oracle WebCenter	<p>Create a domain for Oracle WebCenter and choose the components you want to install.</p> <p>The Configuration Wizard creates the Domain home and Application home directories, along with the domain for the products you choose to configure. The Domain home and Application home directories can reside anywhere on your system.</p> <p>While creating your WebCenter domain, if you choose not to configure one or more WebCenter components, you can add them later by extending your WebCenter domain.</p>	Mandatory	Chapter 3, "Configuring Oracle WebCenter"
Post-Installation Tasks			

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

Task	Description	Mandatory or Optional?	Documentation
Task 7 - Start the Administration Server, Node Manager, and managed servers	To start Oracle WebCenter, you must first start the Administration Server. You must also start Node Manager, which allows you to perform common operations for a Managed Server. To start working with any Oracle WebCenter component, you must start the managed server to which that component is deployed. You can then access the component's URL and configure the component according to your requirements.	Mandatory	Section 3.2, "Post-Configuration Tasks"
Task 8 - Install and configure an external LDAP-based identity store	By default, Oracle WebCenter uses Oracle WebLogic Server's embedded LDAP identity store. For a production environment, you must reassociate Oracle WebCenter with an external LDAP-based authentication provider.	Mandatory for production environment	Section 3.3, "Setting Up an External LDAP-Based Identity Store"
Task 9 - Install and configure back-end components for WebCenter services	Developers and applications users can integrate WebCenter services into WebCenter applications. Certain services, such as Documents, rely on back-end components, such as Oracle Content Server. To provide for service integration into WebCenter applications, you must install and configure required back-end components. WebCenter Spaces provides several prebuilt workflows for Space membership notifications, Space subscription requests, and so on. To enable them, you must install and configure a Business Process Execution Language (BPEL) server.	Optional	Chapter 5, "Preparing Back-End Components for WebCenter Services"

1.3 Other Starting Points for Oracle WebCenter Installation

This guide describes Oracle WebCenter installation and configuration in a simple, non-cluster topology. Table 1–2 lists the various other starting points for WebCenter installation.

You might also like to refer to *Oracle WebCenter Installation and Configuration Roadmap* to find instructions about how to install, upgrade, or patch Oracle WebCenter based the starting point that best describes your current environment.

Table 1–2 Other Starting Points for Oracle WebCenter Installation

Starting Point	Notes	Documentation Link
New WebCenter Installation		
Instal all Oracle WebCenter products in a single domain on a single host	This scenario is useful if you are trying to set up an evaluation or test environment.	<i>Oracle Fusion Middleware Quick Installation Guide for Oracle WebCenter</i>

Table 1–2 (Cont.) Other Starting Points for Oracle WebCenter Installation

Starting Point	Notes	Documentation Link
Install WebCenter in an enterprise topology	This scenario is for a distributed environment where you may have various components on a variety of different hosts.	<i>Oracle Fusion Middleware Enterprise Deployment Guide for Oracle WebCenter</i> For more information about high availability configuration, see <i>Oracle Fusion Middleware High Availability Guide</i> .
Existing WebCenter Installation		
Upgrade from a previous WebCenter 11g release to the current version		<i>Oracle Fusion Middleware Patching Guide</i>
Upgrade from a previous WebCenter 10g release to the current version		<i>Oracle Fusion Middleware Upgrade Guide for Oracle SOA Suite, WebCenter, and ADF</i>

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

Installing Oracle WebCenter

This chapter describes how to install Oracle WebCenter.

The following topics are covered:

- Section 2.1, "Preparing to Install"
- Section 2.2, "Installing Oracle WebCenter"
- Section 2.3, "Installing Oracle JDeveloper"
- Section 2.4, "Installing WebCenter Back-End Components"

2.1 Preparing to Install

Before you begin, make sure you have completed tasks 1 - 4 listed in Table 1-1 in Chapter 1, "Installation Overview".

2.2 Installing Oracle WebCenter

By default, all Oracle WebCenter components (see Section 1.1, "Oracle WebCenter Components" for a complete list) are installed onto your system. After the products are installed, you can run the Oracle Fusion Middleware Configuration Wizard to configure the product(s) of your choice.

This section contains the following topics:

- Section 2.2.1, "Obtaining the Software"
- Section 2.2.2, "Starting the Installer"
- Section 2.2.3, "Installation Log Files"
- Section 2.2.4, "Inventory Screens (UNIX Only)"
- Section 2.2.5, "Installation Screens and Instructions"

Note: If you want to install Oracle WebCenter and also Oracle Portal, Forms, Reports and Discoverer on your system, you must create a separate Middleware home for each product. Oracle WebCenter and Oracle Portal, Forms, Reports and Discoverer cannot be installed in the same Middleware home directory.

2.2.1 Obtaining the Software

See "Obtain the Oracle Fusion Middleware Software" in *Oracle Fusion Middleware Installation Planning Guide* for information on where to obtain the software.

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

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

2.2.2 Starting the Installer

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

On UNIX operating systems:

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

On Windows operating systems:

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

The installer requires the full path to the location of a Java Runtime Environment (JRE) on your system. When you installed Oracle WebLogic Server, a JRE was installed on your system in the `jdk160_21` directory inside the Middleware home. You can use this location as the `JRE_LOCATION` to start the installer.

On 64-bit platforms, the JRE location is the `JAVA_HOME` you used to install Oracle WebLogic Server.

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

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

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

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

Note: If you are installing Oracle WebCenter on a 64-bit UNIX or Windows operating system with a 32-bit JDK, you must specify the `JRE_LOCATION` using the `-jreLoc` option from the command line. The option to provide your `JRE_LOCATION` at the prompt is not supported in such cases, and the installer will not start.

2.2.3 Installation Log Files

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

2.2.4 Inventory Screens (UNIX Only)

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

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

Table 2–1 *Inventory Directory and Group Screens*

No.	Screen	Description and Action Required
1	Specify Inventory Directory Screen (UNIX Only)	Specify the Oracle inventory directory and group permissions for that directory. The group must have write permissions to the Oracle inventory directory. Click OK to continue.
2	Inventory Location Confirmation Screen (UNIX Only)	Run the <code>createCentralInventory.sh</code> script as root. Click OK to continue.

2.2.5 Installation Screens and Instructions

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

Note: Running the installer as `root` user is not supported.

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

Table 2–2 *Oracle WebCenter Installation Screens in Oracle Universal Installer*

No.	Screen	Description and Action Required
1	Welcome Screen	Click Next to continue.
2	Install Software Updates Screen	Select the method you want to use to receive software updates. Click Next to continue.
3	Prerequisite Checks Screen	Click Next to continue.
4	Specify Installation Location Screen	Specify Oracle Middleware home and Oracle home locations. The Oracle Common home (<code>oracle_common</code>) directory will automatically be created inside the Middleware home; do not use <code>oracle_common</code> as the name of your Oracle home directory. Click Next to continue.
5	Application Server Screen	Select the application server and specify its location. Click Next to continue.

Table 2–2 (Cont.) Oracle WebCenter Installation Screens in Oracle Universal Installer

No.	Screen	Description and Action Required
6	Installation Summary Screen	Verify the installation about to be performed. Click Install to continue.
7	Installation Progress Screen	This screen shows the progress of the installation. When the progress shows 100% complete, click Next to continue.
8	Installation Complete Screen	Click Finish to dismiss the installer.

After the installation is complete, you must configure your products before you can begin using them. Go to Chapter 3, "Configuring Oracle WebCenter".

2.3 Installing Oracle JDeveloper

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

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

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

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

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

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

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

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

2.4 Installing WebCenter Back-End Components

In addition to WebCenter Spaces, Portlet Producers, Oracle Discussions, and optionally Oracle Universal Content Manager, you can integrate several other WebCenter Web 2.0 Services into your applications. Some WebCenter Web 2.0 Services, such as Documents, rely on back-end components, such as Oracle Content Server. Similarly, Worklist relies on Oracle BPEL Process Manager which is available as part of Oracle SOA Suite. To integrate such services into your applications, you must install the required back-end components.

Refer to Chapter 5, "Preparing Back-End Components for WebCenter Services" for more information.

Configuring Oracle WebCenter

This chapter describes how to configure Oracle WebCenter after the components have already been installed.

The following topics are covered:

- Section 3.1, "Configuration Instructions"
- Section 3.2, "Post-Configuration Tasks"
- Section 3.3, "Setting Up an External LDAP-Based Identity Store"

3.1 Configuration Instructions

After the installation is complete, you can configure the components using the Oracle Fusion Middleware Configuration Wizard.

If this is a new installation and you need to create a new domain, follow the instructions in Section 3.1.7, "Creating a New Domain". You can also run the Configuration Wizard to extend an existing domain, as described in Section 3.1.8, "Extending an Existing Domain".

3.1.1 Using Custom Port Numbers for Your Servers

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

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

Oracle recommends that you use the default port numbers for all servers. If you modify the default settings, then you will have to perform some manual configuration steps before the Fusion Middleware environment can be started.

For more information about port numbers, refer to "Port Numbers" in *Oracle Fusion Middleware Administrator's Guide*.

3.1.2 Using Default Settings for Managed Servers

During the configuration, the Oracle Fusion Middleware Configuration Wizard automatically creates certain default Managed Servers in the domain to host the Fusion Middleware system components; only Managed Servers for the components

you choose to configure are created. Oracle recommends that you use the default configuration settings for these Managed Servers. If you modify the default configuration settings, then you will have to perform some manual configuration steps before the Fusion Middleware environment can be started.

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

Table 3–1 Oracle WebCenter Managed Servers

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

3.1.3 Shutting Down Running Managed Servers

Before you start the Configuration Wizard, you must shut down any managed servers that are currently running. If you do not, validation of your managed servers will fail due to port number conflicts from the managed servers that are currently running.

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

3.1.4 Running the Configuration Wizard with an Oracle RAC Database

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

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

3.1.5 Starting the Oracle Fusion Middleware Configuration Wizard

To start the Configuration Wizard on UNIX operating systems:

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

On Windows operating systems:

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

If this is a new installation and you need to create a new WebLogic domain, follow the instructions in Section 3.1.7, "Creating a New Domain". You can also run the Configuration Wizard to extend an existing WebLogic domain, as described in Section 3.1.8, "Extending an Existing Domain".

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

1. Set the `JAVA_HOME` environment variable to the location of the Sun JDK. For example, you can set it to the Sun JDK that was installed with Oracle WebLogic Server in the `MW_HOME/jdk160_21` (on UNIX operating systems) or `MW_HOME\jdk160_21` (on Windows operating systems) directory.
2. Set the `JAVA_VENDOR` environment variable to "Sun".

3.1.6 Creating a Configuration Log File

To create a log file for your configuration session, use the `-log=log_filename` parameter when you start the Configuration Wizard.

On UNIX operating systems:

```
./config.sh -log=log_filename
```

On Windows operating systems:

```
config.cmd -log=log_filename
```

The log files are created in the `WebCenter_ORACLE_HOME/common/bin` (on UNIX operating systems) or `WebCenter_ORACLE_HOME\common\bin` (on Windows operating systems) directory. For more information about the Configuration Wizard log files, see Section D.2.2, "Configuration Log Files".

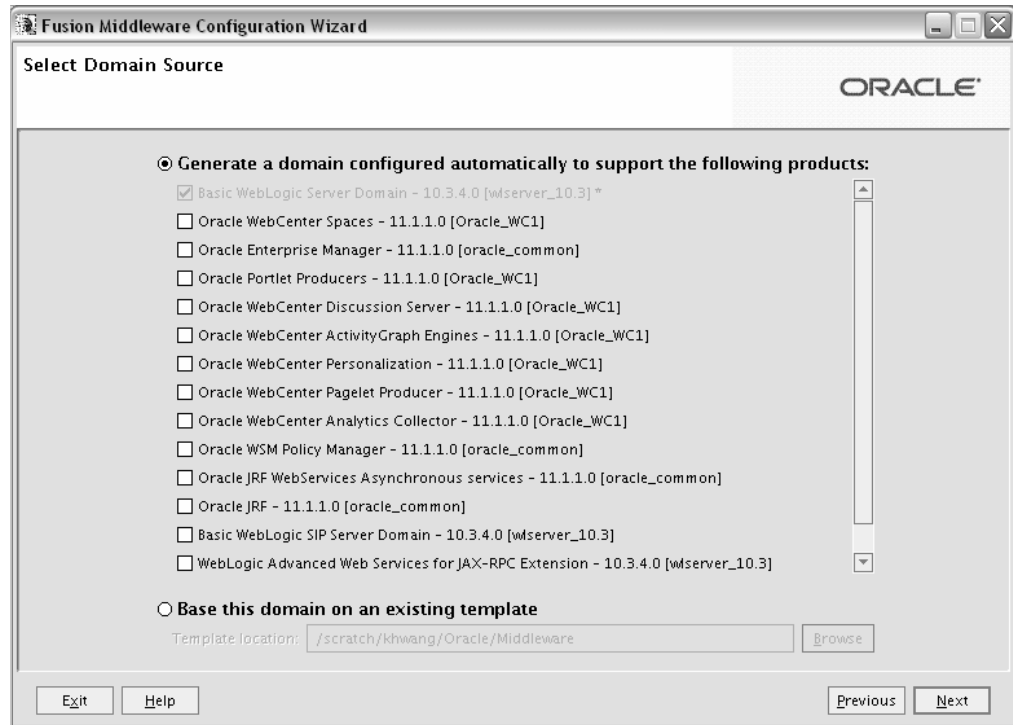
3.1.7 Creating a New Domain

Follow the instructions in "Creating a WebLogic Domain" in *Oracle Fusion Middleware Creating Domains Using the Configuration Wizard* to create a new WebLogic domain for your Oracle WebCenter components.

3.1.7.1 Selecting Oracle WebCenter Products for Configuration

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

Figure 3–1 Configuration Wizard - Oracle WebCenter Products



The following Oracle WebCenter products (Table 3–2) are available for configuration (note that if a product has any dependencies, the dependencies are automatically selected for you):

Table 3–2 Oracle WebCenter Products Available for Configuration

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

3.1.7.2 Specifying a Domain Name

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

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

3.1.7.3 Granting Administrator Privileges to a Non-Default User

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

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

3.1.8 Extending an Existing Domain

While creating your WebCenter domain, if you chose not to configure one or more WebCenter components, you can add them later by extending your existing domain. When you extend your domain, you can add Oracle WebCenter products to an existing Oracle WebCenter domain, or a domain created by another Fusion Middleware product.

- If you want to extend your existing domain using Oracle WebCenter product components, see Section 3.1.8.1, "Using Oracle WebCenter Product Components".
- If you want to extend your existing domain using templates to create custom Managed Servers, see Section 3.1.8.2, "Using Templates to Create Custom Managed Servers".

3.1.8.1 Using Oracle WebCenter Product Components

You can extend your existing WebCenter domain to include additional WebCenter products, or you can extend another product domain (for example, Oracle SOA Suite) to add WebCenter products. In either case, you should refer to *Oracle Fusion Middleware Interoperability and Compatibility Guide* for important information. When you run the Configuration Wizard, you should select **Generate a domain configured automatically to support the following products** on the Select Domain Source screen, then select the product(s) you want to add to the domain.

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

Note: Before proceeding, make sure that schemas exist in your database for the components you are configuring when you extend the domain. For example, if you are planning to extend the domain and configure Oracle WebCenter Discussion Server, then make sure the `prefix_DISCUSSIONS` schema exists in your Oracle database before you continue.

3.1.8.2 Using Templates to Create Custom Managed Servers

You can extend an existing domain by specifying an extension template `.jar` file that includes additional applications and services. You can also customize the JDBC connections and change the JMS file store. The Configuration Wizard uses your input to update the configuration files, such as `config.xml`, and all other generated components in the domain directory, as required.

3.1.8.2.1 Templates for WebCenter Portal or WebCenter Producer Applications If you want to develop your own WebCenter Portal or WebCenter Producer applications, you must select the appropriate template included with your Oracle WebCenter installation. On the Select Domain Source screen, select **Base this domain on an existing template**. Click the **Browse** button to find the appropriate template:

- For WebCenter Portal applications, find and select the following template:

On UNIX operating systems:

```
WebCenter_ORACLE_HOME/common/templates/applications/oracle.wc_custom_portal_
template_11.1.1.jar
```

On Windows operating systems:

```
WebCenter_ORACLE_HOME\common\templates\applications\oracle.wc_custom_portal_
template_11.1.1.jar
```

The Managed Server created by this custom template has the default name of `WC_CustomPortal`.

- For WebCenter Producer applications, find and select the following template:

On UNIX operating systems:

```
WebCenter_ORACLE_HOME/common/templates/applications/oracle.wc_custom_services_
producer_template_11.1.1.jar
```

On Windows operating systems:

```
WebCenter_ORACLE_HOME\common\templates\applications\oracle.wc_custom_services_
producer_template_11.1.1.jar
```

The Managed Server created by this custom template has the default name of `WC_CustomServicesProducer`.

If your WebCenter services use the security and policy manager, you must run the Configuration Wizard a second time to extend your domain with the Oracle WSM Policy Manager template. This template is available on the Select Domain Source screen. You do not have to do this if your WebCenter services do not use the security and policy manager.

If you are an application developer and want to build WebCenter Portal applications, you must also run the RCU to create a second version of the WebCenter (`prefix_WEBCENTER`) schema. Note that this schema is separate from the WebCenter schema used by Oracle WebCenter Spaces, so you should make sure you use a different schema prefix. For information about the WebCenter services that require the WebCenter schema, see Table 5–1. For information about how to create schemas, refer to *Creating Schemas in Oracle Fusion Middleware Repository Creation Utility User's Guide*.

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

3.1.8.2.2 Creating Multiple Custom Managed Servers A template can only be applied once to a domain. If you want to create multiple custom Managed Servers, you must clone the existing custom Managed Server with the `cloneWebCenterManagedServer()` WLST command.

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

3.2 Post-Configuration Tasks

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

- Section 3.2.1, "Starting the Servers"
- Section 3.2.2, "Starting Node Manager"
- Section 3.2.3, "Starting Managed Servers from the Administration Console"
- Section 3.2.4, "Verifying the Installation"

3.2.1 Starting the Servers

To get your deployments up and running, you must start the Administration Server and various Managed Servers:

1. Run the `DOMAIN_HOME/bin/startWebLogic.sh` (on UNIX operating systems) or `DOMAIN_HOME\bin\startWebLogic.cmd` (on Windows operating systems) script.
2. Run the `DOMAIN_HOME/bin/startManagedWebLogic.sh` (on UNIX operating systems) or `DOMAIN_HOME\bin\startManagedWebLogic.cmd` (on Windows operating systems) script. This command also requires that you specify a server name. The servers that need to be started are:
 - `WC_Spaces` - Hosts Oracle WebCenter Spaces
 - `WC_Portlet` - Hosts Oracle WebCenter Portlets and Oracle Pagelet Producer
 - `WC_Collaboration` - Hosts Oracle WebCenter Discussions
 - `WC_Uutilities` - Hosts utility applications, such as Activity Graph and Analytics.

For example, to start the Oracle WebCenter Spaces server on a UNIX operating system:

```
DOMAIN_HOME/bin/startManagedWebLogic.sh WC_Spaces http://administration_server_host:administration_server_port
```

On Windows operating systems:

```
DOMAIN_HOME\bin\startManagedWebLogic.cmd WC_Spaces http://administration_server_host:administration_server_port
```

Before the server is started, you will be prompted for the WebLogic Server username and password. These were provided on the Configure Administrator Username and Password Screen in the Configuration Wizard.

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

`DOMAIN_HOME/startManagedWebLogic_readme.txt`

On Windows operating systems:

`DOMAIN_HOME\startManagedWebLogic_readme.txt`

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

`http://administration_server_host:administration_server_port/console`

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

3.2.2 Starting Node Manager

Node Manager is a Java utility that runs as separate process from Oracle WebLogic Server and allows you to perform common operations for a Managed Server, regardless of its location with respect to its Administration Server. For example, Node Manager can be used for:

- Starting servers on remote machines (via the Console).
- Automatically restarting failed servers.
- Automatic Service Migration when using consensus-based leasing.
- Whole Server Migration.

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

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

Instructions for starting Node Manager and using Node Manager to control servers can be found in "Using Node Manager" in *Oracle Fusion Middleware Node Manager Administrator's Guide for Oracle WebLogic Server*.

3.2.3 Starting Managed Servers from the Administration Console

In order to start a Managed Server from the Administration Console, you must first create a machine, then associate the Managed Server with that machine. This can be accomplished using the Oracle Fusion Middleware Configuration Wizard:

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

If you did not create a machine and associate your Managed Servers with the machine using the Configuration Wizard, you can also do this from the Administration Console:

Note: Node Manager (see Section 3.2.2, "Starting Node Manager") must be up and running in order to start Managed Servers from the Administration Console.

1. Login to the Administration Console.
2. Navigate to **Environment > Machines**.
3. Click **New**.
4. Enter a machine name (for example, Machine-WC).
5. In the Administration Console, navigate to **Environment > Servers** and select the Managed Server for which you want to associate this machine (Machine-WC). Use the drop-down list to associate the Managed Server with the machine.

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

After this procedure, the Managed Server will start successfully and be accessible.

3.2.4 Verifying the Installation

Start your browser and enter the following URLs:

- To access the Administration Server:

`http://administration_server_host:administration_server_port`

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

- To access the Administration Server console:

`http://administration_server_host:administration_server_port/console`

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

- To access Enterprise Manager:

`http://administration_server_host:administration_server_port/em`

- To access WebCenter Spaces:

`http://WC_Spaces_server_host:WC_Spsaces_server_port/webcenter`

The default port number for WebCenter Spaces is 8888.

- To access WebCenter Pagelet Producer:

`http://WC_Portlet_server_host:WC_Portlet_server_port`

The default port number for WebCenter Pagelet Producer is 8889.

To access the WebCenter Pagelet Producer console:

`http://WC_Portlet_server_host:WC_Portlet_server_port/pageletadmin`

- To access WebCenter Analytics, Activity Graph and Personalization Server:

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

To access WebCenter Activity Graph:

`http://WC_Uilities_server_host:WC_Uilities_server_`

`port/activitygraph-engines/Login.jsp`

To access WebCenter Personalization Server:

`http://WC_Uilities_server_host:Wc_Uilities_server_
port/wcps/api/property/resourceIndex`

The default port number for the WebCenter Analytics, Activity Graph and Personalization Server is 8891.

- To access WebCenter OmniPortlet and Web Clipping Portlets:

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

The default port number for WebCenter Portlets is 8889.

- To access WebCenter Discussions:

`http://WC_Collaboration_server_host:WC_Collaboration_server_port/owc_
discussions`

The default port number for WebCenter Discussions is 8890.

3.3 Setting Up an External LDAP-Based Identity Store

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

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

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

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

Task	Description	Mandatory/Optional?
1. Install an external LDAP-based identity store	Install an external LDAP-based identity store, such as Oracle Internet Directory. For information about how to install Oracle Identity Management, see <i>Oracle Fusion Middleware Installation Guide for Oracle Identity Management</i> .	Mandatory

Table 3–3 (Cont.) Tasks for Configuring an External LDAP-Based Identity Store

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

If you configure an external LDAP-based identity store, WebCenter Spaces and all the back-end components configured for any WebCenter services must use the *same* external LDAP-based identity store. Table 3–4 describes whether additional configuration is required for any back-end component if a shared external LDAP-based identity store is used.

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

Table 3–4 Configuring Back-End Components for a Shared External LDAP-Based Identity Store

Back-End Component	Out-Of-The-Box Support	Additional Configuration Requirement
Oracle WebCenter Discussions	Embedded LDAP store	No additional configuration required on Oracle WebCenter Discussions to use an external LDAP-based identity store.
Oracle Content Server	Database	<p>Configure Oracle Content Server to use the same external LDAP-based identity store as Oracle WebCenter.</p> <p>For information, see the "Reassociating the Identity Store with an External LDAP Authentication Provider" section in <i>Oracle Fusion Middleware Installation Guide for Oracle Enterprise Content Management Suite</i>.</p>

Table 3–4 (Cont.) Configuring Back-End Components for a Shared External LDAP-Based Identity Store

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

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

Getting Started with WebCenter Components

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

This chapter includes the following sections:

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

4.1 Oracle WebCenter Components and Managed Servers

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

Table 4–1 Oracle WebCenter Components and Managed Servers

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

For deploying WebCenter Portal applications, you must create a custom portal WebLogic managed server.

4.2 Working with WebCenter Spaces

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

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

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

While creating your WebCenter 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 Spaces. For information, see the section "Granting the WebCenter Spaces Administrator Role" in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

WebCenter Spaces supports automatic configuration of certain Oracle WebCenter services. Every time you start WebCenter Spaces, connections for certain WebCenter services are automatically created, unless they already exist. You do not need to manually create certain connections. Table 4–2 lists such WebCenter Spaces connections.

Table 4–2 Connections Automatically Configured for WebCenter Spaces

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

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

- WebCenter Spaces and the target component must be installed in the same domain.
- The managed server of the target component must have an explicit listening address. If its listening address is empty or null or "localhost", then it must have a system associated to it that has an explicit address.
- The target component must not be deployed to a cluster.

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). In addition, the target component will not be automatically configured if it does not pass the target component-specific rules. For information, refer to the required target component-specific section in this chapter.

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

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

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

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

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

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

4.3 Working with Oracle WebCenter Discussions

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

To access Oracle WebCenter Discussions:

1. Start the managed server `WC_Collaboration`.

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

2. Go to the following URL:

```
http://host:port/owc_discussions
```

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

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

The default domain administrator created for Oracle WebCenter is also the administrator for Oracle WebCenter Discussions. 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 Oracle WebCenter Discussions. For information, see section "Granting Administrator Role for Oracle WebCenter Discussions Server" in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

To prepare Oracle WebCenter Discussions to work with Oracle WebCenter, perform the following tasks:

1. Enable the WS-Security trusted authentication for Oracle WebCenter Discussions, depending on your topology. WS-Security establishes a trust relationship between your WebCenter applications and Oracle WebCenter Discussions so that your application can pass the user identity information to the server without knowing the user's credentials. For information, see section "Discussions Server - Security Considerations" in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.
2. Register a connection to Oracle WebCenter Discussions.

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

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

- WebCenter Spaces and Oracle WebCenter Discussions 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 Discussions is not deployed to a cluster.
- The user granted the Administrative role exists.

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

4.4 Working with Oracle Portlet Producers

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

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

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

- OmniPortlet and Web Clipping portlets

`http://host:port/portalTools`

- WSRP Tools

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

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

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

1. Start the WC_Portlet managed server.

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

2. Register the required preconfigured portlet producers.

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

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

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

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

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

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

4.5 Oracle WebCenter Pagelet Producer

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

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

`http://host:port/`

Where, *host:port* refers to the host name and port number of the system where WebCenter Pagelet Producer is installed. The default port number is 8889.

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

`http://host:port/pageletadmin`

All post deployment connection configuration is stored in the Oracle Metadata Services (MDS) repository. Pagelet Producer stores all configuration data on a separate partition in the MDS schema of RCU. Typically, this schema is installed as part of the Oracle WebCenter 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 WebCenter Pagelet Producer:

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

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

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

- WebCenter Spaces and Oracle WebCenter Pagelet Provider 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.
- Oracle WebCenter Pagelet Provider is not deployed to a cluster.

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

4.6 Working with Oracle WebCenter Analytics Collector

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

Out-of-the-box, the Analytics Collector is configured to receive events using installation defaults. However, it is not configured to send events to the Analytics Collector. If you want to collect usage and performance metrics for WebCenter Spaces (or any WebCenter Portal application) you must register the Analytics Collector and enable event collection.

To work with Oracle WebCenter Analytics Collector:

1. Start the `WC_Uutilities` managed server.

2. Register an Analytics Collector for WebCenter applications. For information, see the "Managing the Analytics Service" chapter in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

4.7 Working with Oracle WebCenter Activity Graph Engines

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

To access Activity Graph Engines, use the following URL:

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

The default port number for Activity Graph is 8891.

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

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

To work with Oracle WebCenter Activity Graph Engines:

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

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

4.8 Working with Oracle WebCenter Personalization Server

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

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

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

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

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

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

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

To work with Oracle WebCenter Personalization Server:

1. Start the `WC_Uilities` managed server.

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

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

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

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

4.9 Working with Custom Portal

Application developers can use Oracle JDeveloper to develop WebCenter Portal applications and WebCenter Producer applications. To enable deployment of these applications, you must create a custom portal WebLogic managed server provisioned with Oracle WebCenter Framework shared libraries. For information, see Section 3.1.8.2, "Using Templates to Create Custom Managed Servers."

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

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

Preparing Back-End Components for WebCenter Services

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

This chapter includes the following sections:

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

5.1 Introduction to WebCenter Services

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

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

- Supported databases, refer to the following link:
http://www.oracle.com/technology/software/products/ias/files/fusion_certification.html
- Installing a database and creating schemas, see Chapter 2, "Installing Oracle WebCenter."

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

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

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

Table 5–1 Back-End Requirements for WebCenter Services

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

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

Service	Description	Back-End Component Required in Addition to a Supported Database with MDS Schema	Connection Configuration
Discussions	Provides the ability to create and participate in threaded discussions.	Oracle WebCenter Discussions, and a supported database containing the Discussions schema	Connection required. Connection automatically configured for WebCenter Spaces if conditions are met. For information, see Section 4.3, "Working with Oracle WebCenter Discussions."
Documents	Provides content management and storage capabilities, including content upload, file, folder, wiki and blog creation and management, file check out, file versioning, and so on.	A content repository such as Oracle Content Server 11g or Oracle Portal 11g	Connection required. Connection automatically configured for WebCenter Spaces if conditions are met. For information, see Section 5.3.1.3, "Oracle Content Server 11g - Integration."
Events	Provides personal and Space-specific calendars that users can use to schedule meetings, appointments, or any other type of team get-together. Note: This service is available only in WebCenter Spaces.	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 Space calendars.
Instant Messaging and Presence (IMP)	Provides the ability to observe the online presence status of other authenticated users (whether online, offline, busy, or idle), and to contact them instantly.	Microsoft Live Communication Server 2005	Connection must be created manually.

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

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 <code>WEBCENTER</code> schema	No separate connection required.
Lists	Enables users to create, publish, and manage lists. Note: This service is available only in Oracle WebCenter Spaces.	A supported database containing the <code>WEBCENTER</code> schema	No separate connection required.
Mail	Provides easy integration with IMAP and SMTP mail servers to enable users to perform simple mail functions such as viewing, reading, creating, and deleting messages, creating messages with attachments, and replying to or forwarding existing messages.	A mail server based on IMAP4 and SMTP, such as Microsoft Exchange Server 2003	Connection must be created manually.
Notes	Provides the ability to "jot down" and retain quick bits of personally relevant information. Note: This service is available only in Oracle WebCenter Spaces.	A supported database containing the <code>WEBCENTER</code> schema	No separate connection required.
People Connections	Provides online social networking tools for creating, interacting with, and tracking the activities of one's enterprise connections.	A supported database containing the <code>WEBCENTER</code> schema	No separate connection required.
Personalization	Delivers targeted content based on both user and application context.	Oracle WebCenter Personalization Server	Connection required. Connection automatically configured for WebCenter Spaces if conditions met. For information, see Section 4.8, "Working with Oracle WebCenter Personalization Server."

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

Service	Description	Back-End Component Required in Addition to a Supported Database with MDS Schema	Connection Configuration
Polls	Enables users to create, edit, and take online polls. With polls, users can survey their audience (such as their opinions and their experience level), check whether they can recall important information, and gather feedback on the efficacy of presentations.	A supported database containing the <code>WEBCENTER</code> schema	No separate connection required.
Recent Activities	Provides a summary view of recent changes to documents, discussions, and announcements.	None	No separate connection required.
RSS	Provides the ability to publish content from other WebCenter services and external sources as news feeds in the RSS 2.0 and Atom 1.0 formats. RSS news feeds are available from WebCenter Spaces only. The RSS Viewer task flow is available in both WebCenter Spaces and WebCenter Portal applications.	None	No separate connection required.
Search	Provides the ability to search tags, services, an application, or an entire site. WebCenter searches can be extended to external content repositories by connecting WebCenter applications to Oracle Secure Enterprise Search (Oracle SES)	No separate back-end component required if Oracle Search services adapters are used to search WebCenter objects. To search external repositories outside of Oracle WebCenter, Oracle SES 10.1.8.2 updated with latest patch sets, or Oracle SES 11g updated with latest patches is required.	No separate connection required for Oracle Search service adapters. Connection required for Oracle SES.
Tags	Provides the ability to assign one or more personally relevant keywords to a given page or document, making those items more easily discoverable in search results.	A supported database containing the <code>WEBCENTER</code> schema	No separate connection required.

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

Service	Description	Back-End Component Required in Addition to a Supported Database with MDS Schema	Connection Configuration
Worklist	Provides a personal, at-a-glance view of business processes that require attention. These can include a request for document review and other types of business process that come directly from enterprise applications.	Business Process Execution Language (BPEL) server	Connection required. Connection automatically configured for WebCenter Spaces if conditions listed in Section 4.2, "Working with WebCenter Spaces" are met.

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

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

- Microsoft Office Communications Server (OCS) 2007
- Microsoft Live Communications Server (LCS) 2005
- Oracle WebLogic Communications Services (OWLCS) 11g

Note: Oracle WebLogic Communications Services (OWLCS) 11g is available only for development and evaluation purposes, and is not meant for the production environment.

You can download OWLCS from Oracle Technology Network (OTN) at:

<http://www.oracle.com/technology/software/products/owlcs/index.html>

This section includes the following subsections:

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

5.2.1 Communication Server - Installation

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

For detailed OWLCS installation instructions, see *Oracle WebLogic Communication Services Installation Guide*.

5.2.2 Communication Server - Configuration and Integration

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

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

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

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

5.3 Back-End Requirements for the Documents Service

The Documents service provides content management and storage capabilities for WebCenter applications. To use the Documents service, you must have a content repository at the back end that contains the documents you want to manage. Oracle WebCenter supports content integration with the following external repositories:

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

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

This section includes the following subsections:

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

5.3.1 Oracle Content Server Requirements

Oracle WebCenter supports the following versions of Oracle Content Server as external content repositories:

- For WebCenter Spaces - Oracle Content Server 11.1.1.4.0 or later
- For WebCenter Portal applications - Oracle Content Server 10.1.3.5.1, 11.1.1.4.0 or later

Note: Oracle strongly recommends that you use Oracle Content Server 11.1.1.4.0 or later as your content repository to take advantage of the new content management features. If you use Oracle Content Server 10.1.3.5.1, you will have access only to a subset of features. For information, see the table "Oracle WebCenter Features Supported by Oracle Content Server 10.1.3.5.1 and 11g" in *Oracle Fusion Middleware Patching Guide*."

This section includes the following subsections:

- Section 5.3.1.1, "Oracle Content Server 11g - Installation"
- Section 5.3.1.2, "Oracle Content Server 11g - Configuration"
- Section 5.3.1.3, "Oracle Content Server 11g - Integration"

5.3.1.1 Oracle Content Server 11g - Installation

Oracle Content Server 11g is installed as a part of Oracle Universal Content Management (Oracle UCM). Oracle UCM is a product of Oracle Enterprise Content Management Suite, which is an Oracle Fusion Middleware component. You must install Oracle Content Server 11.1.1.4.0 or later to use it as a content repository for Oracle WebCenter.

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

For information about how to install Oracle Content Server and Oracle IBR, see *Oracle Fusion Middleware Installation Guide for Oracle Enterprise Content Management Suite*.

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

5.3.1.2 Oracle Content Server 11g - Configuration

You must configure Oracle Content Server to prepare it as an external content repository for Oracle WebCenter.

By default, Oracle Enterprise Content Management Suite uses the Oracle WebLogic Server embedded Lightweight Directory Application Protocol (LDAP) server. In a production system, Oracle Enterprise Content Management Suite applications must

use an external LDAP authentication provider rather than the default embedded LDAP server. Therefore, you must reassociate your Oracle Content Server's identity store with an external LDAP-based identity store.

For information about the mandatory and optional tasks involved in Oracle Content Server configuration, see the "Oracle Content Server 11g - Configuration" section in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

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

5.3.1.3 Oracle Content Server 11g - Integration

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

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

5.3.2 Oracle Portal Requirements

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

This section includes the following subsections:

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

5.3.2.1 Oracle Portal - Installation

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

5.3.2.2 Oracle Portal - Configuration

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

5.3.2.3 Oracle Portal - Integration

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

5.3.3 Microsoft SharePoint Requirements

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

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

5.3.3.1 Microsoft SharePoint - Installation

Oracle WebCenter supports the following Microsoft SharePoint versions:

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

Refer to the appropriate Microsoft SharePoint documentation for installation information.

5.3.3.2 Microsoft SharePoint - Integration

To support Microsoft SharePoint as a content repository for WebCenter Portal applications, you must install Oracle WebCenter Adapter for Microsoft SharePoint on the target managed server to which you plan to deploy your applications. For information, refer to the "Installing Oracle WebCenter Adapter for Microsoft SharePoint" section in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

In a development environment, to be able to create a WebCenter Portal application that uses Microsoft SharePoint as a content repository, application developers must first install Oracle WebCenter Adapter for Microsoft SharePoint into JDeveloper. Then they must register a connection to the Microsoft SharePoint server for their application. For information, see the "Installing the Oracle WebCenter Adapter for Microsoft SharePoint" and "How to Create a Content Repository Connection Based on the Oracle WebCenter Adapter for Microsoft SharePoint" sections in *Oracle Fusion Middleware Developer's Guide for Oracle WebCenter*.

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

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

5.4 Back-End Requirements for the Events Service

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

You must prepare Microsoft Exchange Server for working with Oracle WebCenter. You must also create a connection to the mail server. For information about configuring Microsoft Exchange Server, refer to the "Managing the Events Service" chapter in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

5.5 Back-End Requirements for the Mail Service

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

To enable WebCenter users to access the Mail service from within a WebCenter application, it is essential that users created on the mail server correspond with the users created in the identity store used by Oracle WebCenter. For information about configuring a mail server, see the "Mail Server - Configuration" section in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

To enable WebCenter users to access mail within a WebCenter application, you must register the appropriate mail server. For information about how to register a mail server and set up connections for WebCenter Spaces and WebCenter Portal applications deployed to a managed server, see the "Registering Mail Servers" section in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

5.6 Back-End Requirements for the Search Service

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

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

This section contains the following subsections:

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

5.6.1 Oracle SES - Installation

Supported Oracle SES versions include 10.1.8.4.x and 11.1.2.

This section contains the following subsections:

- Section 5.6.1.1, "Installing Oracle SES 10.1.8.4.x"

- Section 5.6.1.2, "Installing Oracle SES 11.1.2"

5.6.1.1 Installing Oracle SES 10.1.8.4.x

To install Oracle SES 10.1.8.4.x:

1. Install Oracle SES 10.1.8.2.

For information about how to install Oracle SES 10.1.8.2, refer to the Oracle Secure Enterprise Search Online Documentation Library 10g Release 1 (10.1.8.2) available here on OTN:

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

2. Install the Oracle SES 10.1.8.4.0 patch set.

To do this, download patch 7514463 from <http://support.oracle.com>.

3. Install the Oracle SES RSS Connector 10.1.8.4.4 patch set.

To do this, download patch 9022819 from <http://support.oracle.com>.

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

5.6.1.2 Installing Oracle SES 11.1.2

Oracle SES 11.1.2 is available on the Oracle WebCenter companion CD.

To install Oracle SES 11.1.2:

1. Install Oracle SES 11.1.2.

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

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

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

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

3. Install the patch for Oracle XML connector 11.1.2.0.2. For this, download patch 10070215.

4. Install the patch for Oracle Database connector 11.1.2.0.2. For this, download patch 10070226.

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

5.6.2 Oracle SES - Configuration

For information about configuring Oracle SES, see the "Oracle SES - Configuration" chapter in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

For information about registering connection to Oracle SES, see the "Registering Oracle Secure Enterprise Search Servers" section in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

5.7 Back-End Requirements for the Worklist Service

Installation

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

Configuration

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

For information about any BPEL server prerequisites and for manually setting up BPEL connections, refer to the "Managing the Worklist Service" chapter in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

For WebCenter 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 Oracle WebCenter and Oracle SOA. You can achieve this by creating identical user names in both the identity stores or by using a shared LDAP-based identity store for Single Sign-On (SSO) authentication. SSO authentication enable users to log in once and seamlessly navigate between WebCenter applications and BPEL applications without having to log in to each application separately. For information about setting up an external shared LDAP-based server, see Section 3.3, "Setting Up an External LDAP-Based Identity Store."

5.8 Back-End Requirements for WebCenter Spaces Workflows

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

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

Table 5–2 Tasks for Enabling WebCenter Spaces Workflows

Task	Mandatory/Optional?	Documentation
1. Install Oracle SOA Suite	Mandatory	For information, see Section 5.8.1, "Oracle SOA Suite - Installation"
2. Extend the SOA server domain with the <code>oracle.wc_composite_template_11.1.1.jar</code> template	Mandatory	For information, see Section 5.8.2, "Oracle SOA Server - Extending the Domain"
3. Configure WS-Security to secure Web Service calls between Oracle SOA and Oracle WebCenter	Mandatory	For information, see Section 5.8.3, "Oracle SOA and Oracle WebCenter - WS-Security Configuration"
4. Register a connection with the BPEL server	Mandatory, if not automatically configured	For information, see Section 5.8.4, "Oracle WebCenter - Configuring the BPEL Server Connection"

Note: For WebCenter 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 Oracle WebCenter and Oracle SOA. You can achieve this by creating identical user names in both the identity stores or by using a shared LDAP-based identity store for Single Sign-On (SSO) authentication. For information about setting up an external shared LDAP-based server, see Section 3.3, "Setting Up an External LDAP-Based Identity Store."

5.8.1 Oracle SOA Suite - Installation

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

5.8.2 Oracle SOA Server - Extending the Domain

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

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

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

5.8.3 Oracle SOA and Oracle WebCenter - WS-Security Configuration

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

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

5.8.4 Oracle WebCenter - Configuring the BPEL Server Connection

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

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

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

To configure a BPEL server connection for WebCenter Spaces workflows:

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

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

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

Deinstalling Oracle WebCenter

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

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

The following topics are covered:

- Section 6.1, "Deinstallation Instructions"
- Section 6.2, "Reinstallation"

6.1 Deinstallation Instructions

Follow the instructions in this section to remove Oracle WebCenter and related software from your system. The following tasks should be completed:

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

6.1.1 Stopping Oracle Fusion Middleware

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

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

6.1.2 Removing Oracle WebCenter Schemas

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

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

6.1.3 Removing Oracle Universal Content Management

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

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

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

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

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

6.1.4 Removing Oracle WebCenter

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

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

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

6.1.4.1 Removing the WebCenter Oracle Home

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

On UNIX operating systems:

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

On Windows operating systems:

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

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

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

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

Table 6–1 Deinstallation Flow

No.	Screen	Description and Action Required
1	Welcome Screen	Click Next to continue.
2	Deinstall Oracle Home Screen	Verify the Oracle home you are about to deinstall. Click Deinstall to continue. On the Warning screen, select whether or not you want the deinstaller to remove the Oracle home directory in addition to removing the software. Click Yes to have the deinstaller remove the software and Oracle home, No to remove only the software, or Cancel to return to the previous screen. If you select No , go to Section 6.1.4.3, "Manually Removing Your Oracle Home Directories" for instructions on how to manually remove your Oracle home directory.
3	Deinstallation Progress Screen	This screen shows the progress and status of the deinstallation.
4	Deinstallation Complete Screen	Click Finish to dismiss the screen.

6.1.4.2 Removing the Oracle Common Home

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

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

On UNIX operating systems:

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

On Windows operating systems:

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

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

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

6.1.4.3 Manually Removing Your Oracle Home Directories

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

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

On a Windows operating system, if your WebCenter Oracle home directory was `C:\Oracle\Middleware\Oracle_WC1`, use a file manager window and navigate to

the `C:\Oracle\Middleware` directory, then right-click on the `Oracle_WC1` folder and select **Delete**.

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

6.1.5 Removing Oracle WebLogic Server

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

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

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

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

6.1.6 Removing Oracle JDeveloper

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

6.1.7 Removing the Program Groups (Windows Only)

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

- Oracle Fusion Middleware 11.1.1.5.0
- Oracle WebCenter 11g - Home1
- Oracle WebLogic

6.1.8 Rebooting Your System (Windows Only)

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

6.2 Reinstallation

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

Oracle WebCenter Installation Screens

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

- Specify Inventory Directory Screen (UNIX Only)
- Inventory Location Confirmation Screen (UNIX Only)
- Welcome Screen
- Install Software Updates Screen
- Prerequisite Checks Screen
- Specify Installation Location Screen
- Application Server Screen
- Installation Summary Screen
- Installation Progress Screen
- Installation Complete Screen

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

A.1 Specify Inventory Directory Screen (UNIX Only)

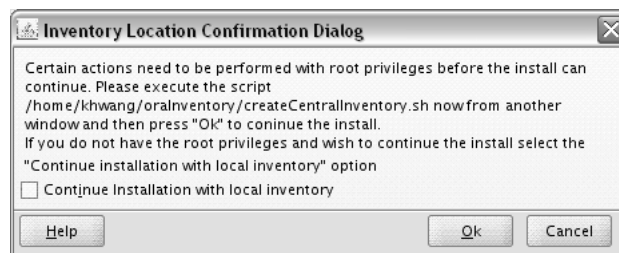


This screen appears for UNIX systems only; if this is your first Oracle installation on this host, you must specify the location of the inventory directory. This inventory directory is used by the installer to keep track of all Oracle products installed on the computer.

The default inventory location is *User_Home/orainventory*.

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

A.2 Inventory Location Confirmation Screen (UNIX Only)



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

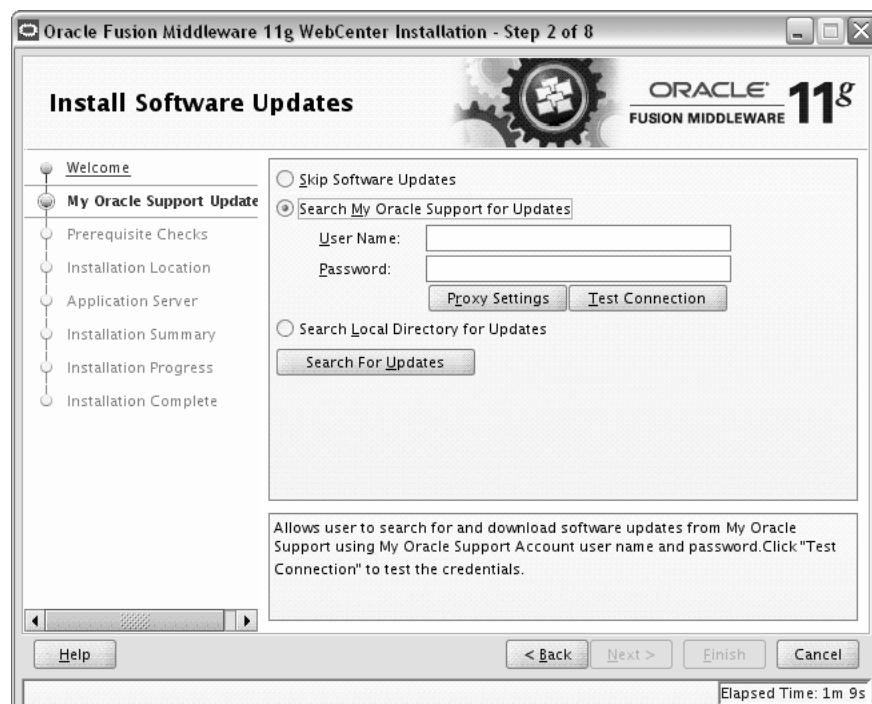
If you do not have root access on this machine but wish to continue with the installation, select **Continue installation with local inventory**.

A.3 Welcome Screen



The Welcome screen is displayed each time you start the installer.

A.4 Install Software Updates Screen



Select the method you want to use for installing software updates.

- Skip Software Updates
You can choose to skip this option for now.
- Search My Oracle Support for Updates.

If you have a My Oracle Support account, you can specify your account name and password to have the installer automatically download applicable software updates from My Oracle Support. After entering your credentials, you can test the connection by clicking **Test Connection**. Click **Proxy Settings** if you need to configure a proxy server in order to have the installer access My Oracle Support.

Configure your proxy server with the following screen:

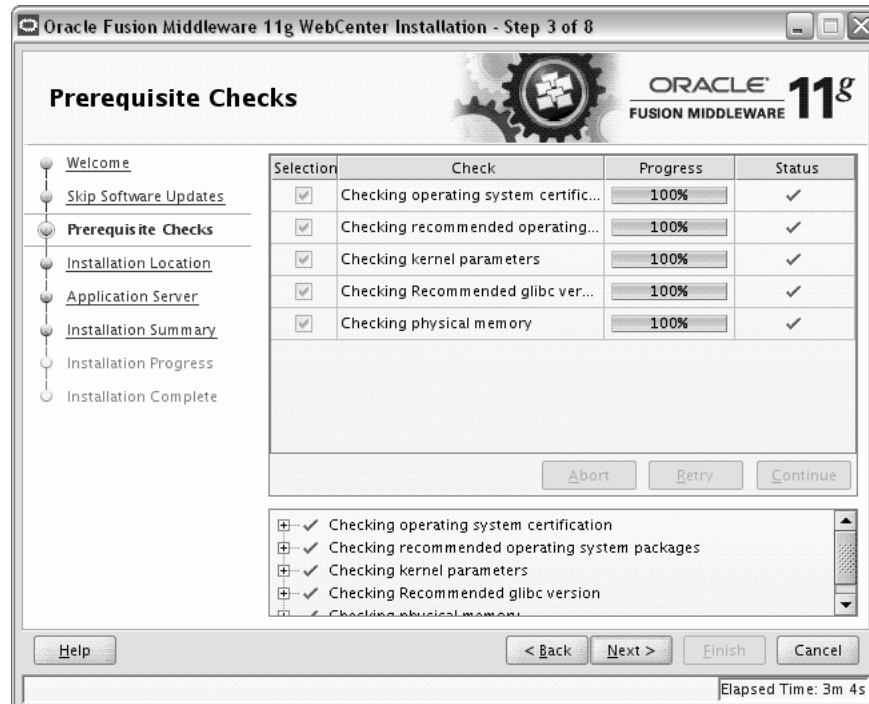


- Search Local Directory for Updates.

If you have software updates available locally, you can specify the location by using this option. When you select **Search Local Directory for Updates** an additional "Location" field will appear, as shown below:



A.5 Prerequisite Checks Screen

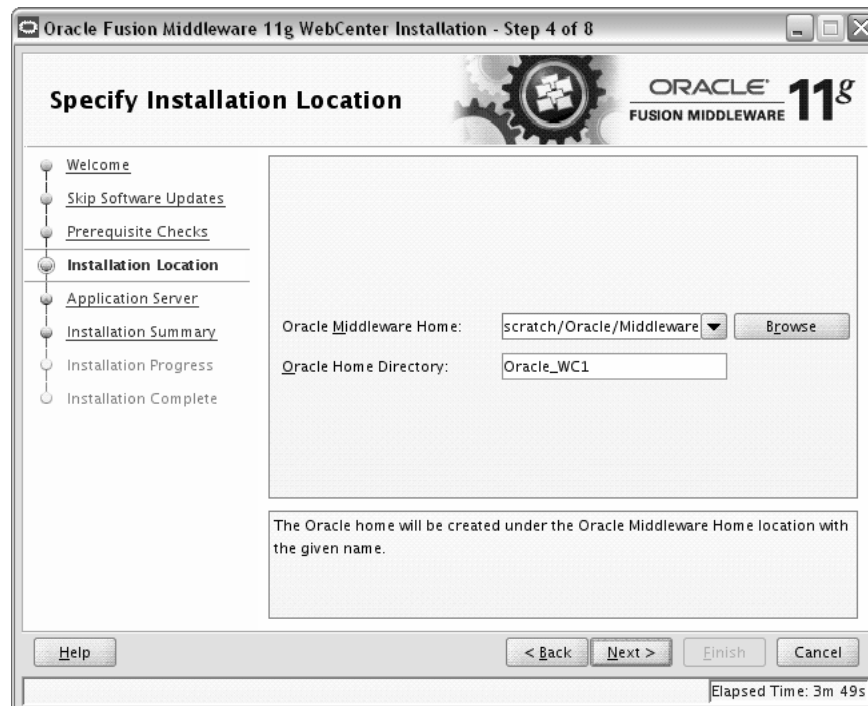


If there is a problem, a short error message appears in the bottom portion of the screen. Fix the error and click **Retry** to try again.

If you want to ignore the error or warning messages and continue with the installation, click **Continue**.

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

A.6 Specify Installation Location Screen



In the Oracle Middleware home field, specify the absolute path to your existing Oracle Middleware home directory. If you do not know the full path to your Middleware home, you can click **Browse** to select an existing directory in your system.

In the Oracle Home Directory field, specify the directory inside the Oracle Middleware home where you want to install your products:

- If you specify a directory that already exists, it must be either:
 - An empty directory inside the Oracle Middleware home (for example, you have created an empty directory inside the Middleware home in advance of this installation and should specify this directory here).
 - An existing Oracle home directory (for example, you are adding Oracle Universal Content Management to an existing WebCenter Oracle home directory).
- If you specify a new directory, it will be created inside the Oracle Middleware home.

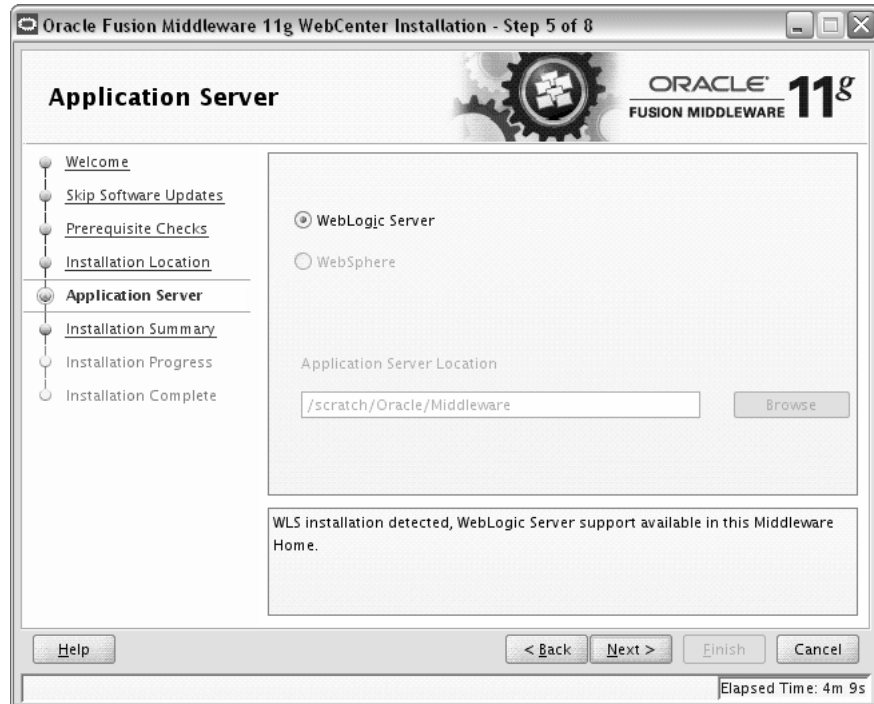
Note: You cannot specify `oracle_common` as the Oracle home directory.

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

The Oracle home directory is where your products will be installed. All software binaries will reside in this directory, and no runtime process can write to this directory.

Note: For the remainder of this document, this directory will be referred to as your WebCenter Oracle home to avoid any confusion with the Oracle home directories of other Oracle Fusion Middleware products. For more information about Oracle home directories, refer to "Oracle Home and Oracle Common Home Directories" in *Oracle Fusion Middleware Installation Planning Guide*.

A.7 Application Server Screen



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

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

A.8 Installation Summary Screen



Review the information on this screen, and click **Install** to begin the installation. The operations summarized on this page will be performed when you click **Install**.

If you want to make any changes to the configuration before starting the installation, use the navigation pane and select the topic you want to edit.

If you want to save this configuration to a text file, click **Save**. This file can be used later if you choose to perform the same installation from the command line. See Appendix C, "Silent Installation and Deinstallation" for more information.

A.9 Installation Progress Screen



This screen shows you the progress of the installation.

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

A.10 Installation Complete Screen



This screen summarizes the installation that was just completed.

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

Oracle WebCenter Deinstallation Screens

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

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

B.1 Welcome Screen



The Welcome screen is displayed each time you start the deinstaller.

Click **Next** to continue.

B.2 Deinstall Oracle Home Screen

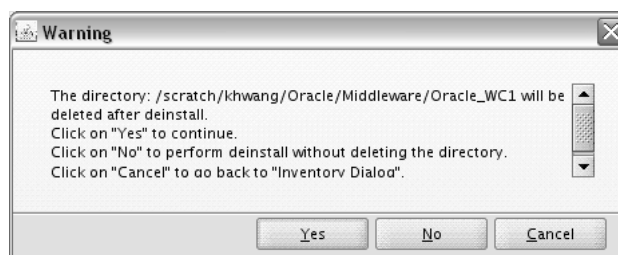


This screen shows the Oracle home directory that is about to be deinstalled. This is the Oracle home directory from which the deinstaller was started.

Note: Before you choose to remove this Oracle Home, make sure that it is not in use by an existing domain.

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

The following warning screen will appear:

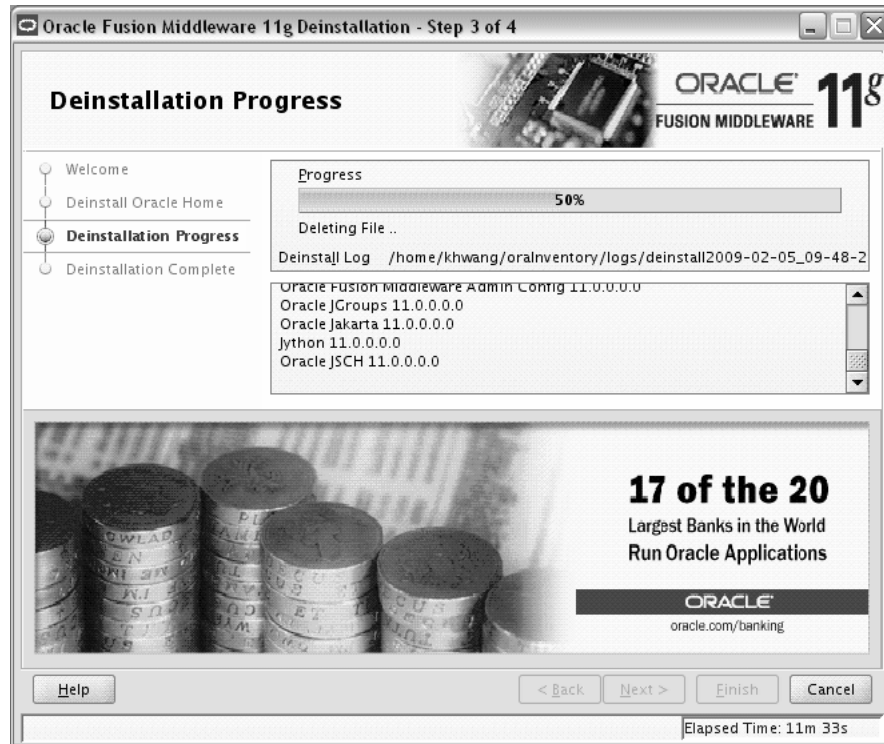


Click **Yes** to remove the software and the Oracle home directory from which the deinstaller was started.

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

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

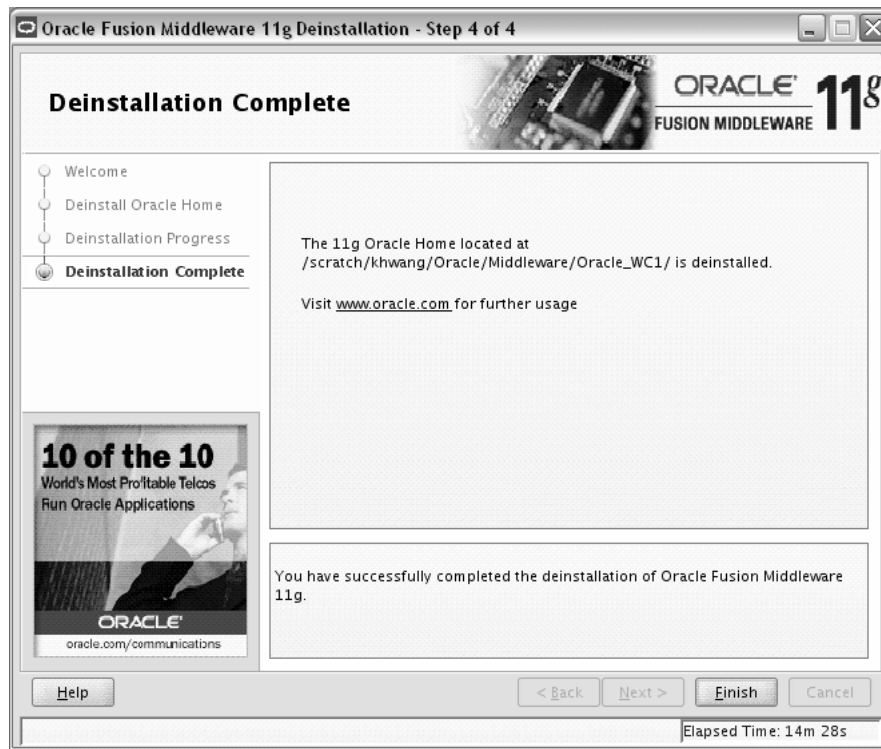
B.3 Deinstallation Progress Screen



This screen shows you the progress of the deinstallation.

If you want to quit before the deinstallation is completed, click **Cancel**.

B.4 Deinstallation Complete Screen



This screen summarizes the deinstallation that was just completed.

Click **Finish** to dismiss the screen.

Silent Installation and Deinstallation

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

- Section C.1, "About Silent Installation and Deinstallation"
- Section C.2, "Oracle WebCenter Response Files"

C.1 About Silent Installation and Deinstallation

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

C.2 Oracle WebCenter Response Files

Oracle recommends creating your response file by first running the install GUI, then clicking **Save** on the Installation Summary Screen. You will be prompted for a name and location where you want to create this response file. After it is created, you can use it exactly as-is to replicate the installation on other systems, or modify it as needed.

C.2.1 Installation Response File

A sample installation response file called `sampleResponse_wls.rsp` is provided in the `Disk1/stage/Response` (on UNIX operating systems) or `Disk1\stage\Response` (on Windows operating systems) directory in the location where you downloaded and unzipped your archive file for installation. This template response file can be used to install the Oracle WebCenter software. You will still need to run the Configuration Wizard separately to create or extend your WebLogic domain and configure Oracle WebCenter products.

Below are the contents of the `sampleResponse_wls.rsp` file:

```
[ENGINE]

#DO NOT CHANGE THIS.
Response File Version=1.0.0.0.0

[GENERIC]

#Set this to true if you wish to specify a directory where latest updates are
downloaded. This option would use the software updates from the specified
directory
SPECIFY_DOWNLOAD_LOCATION=false

#
```

```
SKIP_SOFTWARE_UPDATES=true

#If the Software updates are already downloaded and available on your local
system, then specify the path to the directory where these patches are available
and set SPECIFY_DOWNLOAD_LOCATION to true
SOFTWARE_UPDATES_DOWNLOAD_LOCATION=

#Provide the Oracle Home location. The location has to be the immediate child
under the specified Middleware Home location. The Oracle Home directory name may
only contain alphanumeric , hyphen (-) , dot (.) and underscore (_) characters,
and it must begin with an alphanumeric character. The total length has to be less
than or equal to 128 characters. The location has to be an empty directory or a
valid SOA Oracle Home.
ORACLE_HOME=/home/middleware/Oracle_WC1

#Provide existing Middleware Home location.
MIDDLEWARE_HOME=/home/middleware

#Application Server choices are WLS, WAS, JBoss
APPSERVER_TYPE=WLS

[SYSTEM]

[APPLICATIONS]

[RELATIONSHIPS
]
```

The parameters you should change in this file are:

- `SKIP_SOFTWARE_UPDATES`. Set this to `true` if you do not want to configure your system to receive software updates. If you do, then set this parameter to `false`. Set the `SPECIFY_DOWNLOAD_LOCATION` parameter to `true` if you want to specify a directory where the latest updates are downloaded, then specify this location with the `SOFTWARE_UPDATES_DOWNLOAD_LOCATION` parameter.
- `ORACLE_HOME`. Specify the full path to your Oracle home directory.
- `MIDDLEWARE_HOME`. Specify the full path to your Middleware home directory.

C.2.2 Deinstallation Response File

A sample deinstallation response file called `deinstall_oh.rsp` is provided in the `Disk1/stage/Response` (on UNIX operating systems) or `Disk1\stage\Response` (on Windows operating systems) directory in the location where you downloaded and unzipped your archive file for installation. This template response file can be used to deinstall a WebCenter Oracle home.

The contents of the `deinstall_oh.rsp` file are shown below:

```
[ENGINE]

#DO NOT CHANGE THIS.
Response File Version=1.0.0.0.0

[GENERIC]

#Identifies if the Instance deinstallation is valid or not
DEINSTALL_IN_ASINSTANCE_MODE=false
```

[SYSTEM]

[APPLICATIONS]

[RELATIONSHIPS]

Troubleshooting

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

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

D.1 General Troubleshooting Tips

If you encounter an error during installation:

- Read the *Oracle Fusion Middleware Release Notes for Linux x86* or *Oracle Fusion Middleware Release Notes for Microsoft Windows (32-Bit)* (depending on your platform) for the latest updates. The most current version of the release notes is available on the Oracle Fusion Middleware 11 g Release 1 (11.1.1) Documentation page on Oracle Technology Network:

<http://www.oracle.com/technetwork/middleware/docs/middleware-093940.html>

Click the **View Library** link for the documentation library corresponding to your release. The Release Notes are available in the library.

- Verify that your computer meets the requirements specified in the System Requirements and Specifications document:

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

- If you entered incorrect information on one of the installation screens, return to that screen by clicking **Back** until you see the screen.
- If an error occurred while the installer is copying or linking files:
 1. Note the error and review the installation log files.
 2. Remove the failed installation by following the steps in Chapter 6, "Deinstalling Oracle WebCenter".
 3. Correct the issue that caused the error.
 4. Restart the installation.

D.2 Installation and Configuration Log Files

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

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

D.2.1 Installation Log Files

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

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

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

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

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

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

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

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

D.2.2 Configuration Log Files

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

On UNIX operating systems:

```
% ./config.sh -log=log_filename
```

On Windows operating systems:

```
G:\ config.cmd -log=log_filename
```

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

D.3 Keeping Track of Your JRE Location

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

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

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

D.4 Need More Help?

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

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