Oracle® Fusion Middleware

Installation Guide for Oracle WebCenter

11*g* Release 1 (11.1.1)

E12001-05

November 2010

ORACLE®

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

E12001-05

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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.

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.
italic	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.

1

Installation Overview

Oracle WebCenter is a component of Oracle Fusion Middleware. This chapter provides an overview of Oracle WebCenter and outlines the tasks that a Fusion Middleware administrator must perform to install Oracle WebCenter and get it up and running.

This chapter includes the following sections:

- Section 1.1, "Oracle WebCenter Components"
- Section 1.2, "Oracle WebCenter Installation Roadmap"

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 contains the following components:

- Oracle WebCenter Framework

  Provides the ability to embed portlets, content, and customizable components into WebCenter 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 WebCenter Portlets

  Supports deployment and execution of both standards-based portlets (JSR 168 and WSRP 1.0 and 2.0) and traditional Oracle PDK-Java based portlets. Includes the following preconfigured portlet producers: OmniPortlet, Web Clipping, Rich Text Portlet, WSRP Parameter Form Portlet, sample WSRP portlet producers, and sample PDK-Java portlet producers.

  Configuring this component is optional.

- Oracle WebCenter Discussions

Supports integration of discussion forums and announcements into WebCenter applications.

Configuring this component is optional.

■ Oracle WebCenter Wiki and Blog Server

Supports integration of wikis and blogs into WebCenter applications. Also supports features that enable application users to create their own wikis and blogs.

Configuring this component is optional.

■ Oracle Content Server 10.1.3.5.1

Provides a flexible, secure, centralized, web-based repository that manages all phases of the content lifecycle: from creation and approval, to publishing, searching, expiration, and archival or disposition.

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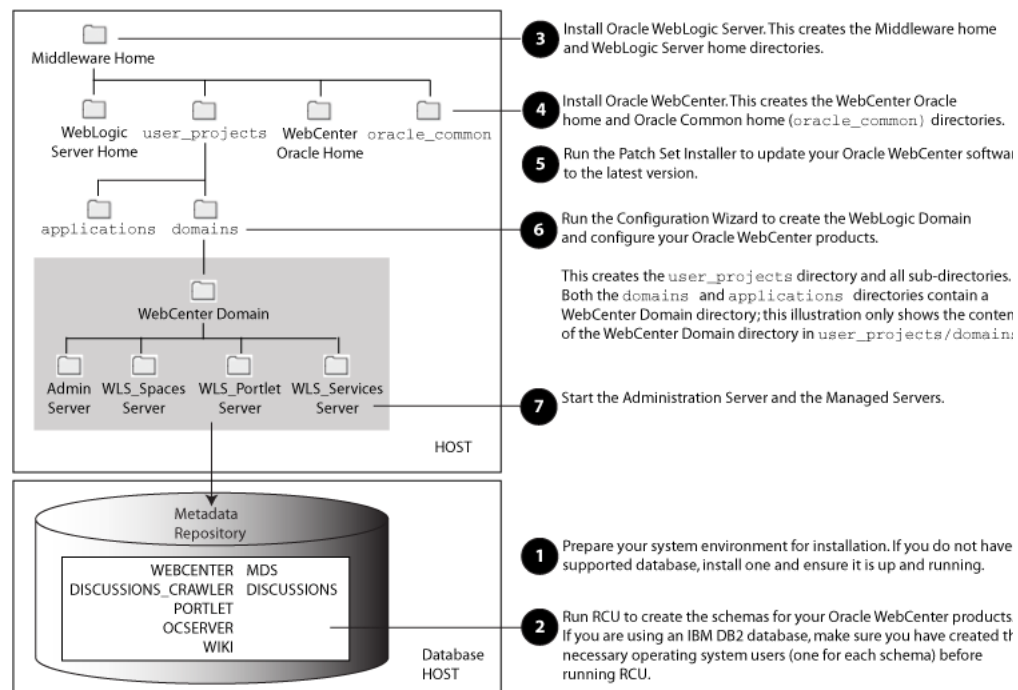
Table 1–1 describes the high-level tasks for installing and configuring Oracle WebCenter, and specifies whether these tasks are mandatory or optional. The table also includes documentation links that you can access to get more details about each task.

Table 1–1   Oracle WebCenter Installation Procedure

Task	Description	Documentation	Mandatory or Optional?
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).	For system requirements information, go to: http://www.oracle.com/technology/software/products/ias/files/fusion_requirements.htm For certification information, go to: http://www.oracle.com/technology/software/products/ias/files/fusion_certification.html	Mandatory
Task 2 - Create WebCenter schemas	Oracle WebCenter components require schemas that must be installed in a supported database. Prepare a database for the WebCenter schemas, then use RCU to create the schemas.	Make sure you have a supported Oracle database up and running. See http://www.oracle.com/technology/software/products/ias/files/fusion_certification.html for more information. See "Creating Schemas" in *Oracle Fusion Middleware Repository Creation Utility User's Guide* for instructions.	Mandatory
Task 3 - Install Oracle WebLogic Server	Oracle WebCenter requires a Middleware home directory. The Middleware home is created during the Oracle WebLogic Server installation. The WebLogic Server installer also creates the WebLogic home directory within the Oracle Middleware home directory.	To download the latest Oracle WebLogic Server, see "Product Distribution" in *Oracle WebLogic Server Installation Guide*. For installation instructions, see "Running the Installation Program in Graphical Mode" in *Oracle WebLogic Server Installation Guide*. For more information about the Middleware home and WebLogic home directories, see "Middleware Home and WebLogic Home Directories" in *Oracle Fusion Middleware Installation Planning Guide*.	Mandatory

Table 1–1   (Cont.) Oracle WebCenter Installation Procedure

Task	Description	Documentation	Mandatory or Optional?
Task 4 - Install Oracle WebCenter	Use the WebCenter installer to install Oracle WebCenter. Within the Middleware home directory, the installer creates the WebCenter Oracle home directory (`Oracle_WC1` by default) and the `oracle_common` home directory, as shown in Figure 1–1. The installer lays down the binaries for various WebCenter products, like WebCenter Spaces and Oracle WebCenter Discussions. **Note**: Oracle WebCenter supports various external content repositories. The WebCenter installer gives you the option to install and configure Oracle Content Server 10.1.3.5.1. If you want to use Oracle Content Server 10.1.3.5.1 as your external content repository, you can choose to install it while installing Oracle WebCenter, or later, by performing a standalone installation. Regardless of when you install Oracle Content Server 10.1.3.5.1, before doing so you must ensure that Oracle HTTP Server is already installed.	Chapter 2, "Installing Oracle WebCenter"	Mandatory
Task 5 - Update your Oracle WebCenter software.	Run the Patch Installer to update your Oracle WebCenter software to the latest version.	"Applying the Latest Oracle Fusion Middleware Patch Set with the Patch Set Installers" in *Oracle Fusion Middleware Patching Guide*.	Mandatory
Task 6 - Configure Oracle WebCenter and create your WebLogic domain.	Run the Oracle Fusion Middleware Configuration Wizard to create and configure a domain for Oracle WebCenter and choose the components you want to install. The installer creates the `user_projects/domain` and `user_projects/applications` directories, both of which contain a WebCenter domain directory. The WebCenter domain directory in the `domains` directory contains the Administration Server and several Managed Servers, depending on the components you choose to install. After the WebCenter domain is created, you can extend it later if you want to add more components to the domain.	Chapter 3, "Configuring Oracle WebCenter."	Mandatory

Table 1–1   (Cont.) Oracle WebCenter Installation Procedure

Task	Description	Documentation	Mandatory or Optional?
Task 7 - Start the Administration Server and managed servers	To start Oracle WebCenter, you must first start the Administration 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.	For information about starting the Administration Server, see Section 3.2.1, "Starting the Servers." For information about starting the Managed Servers and working with WebCenter components, see Section 3.3, "Working with Oracle WebCenter Components.".	Mandatory
Task 8 - 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 the required back-end components. WebCenter Spaces provides several prebuilt workflows for group space membership notifications, group space subscription requests, and so on. To enable them, you must install and configure a Business Process Execution Language (BPEL) server.	Chapter 4, "Preparing Back-End Components for WebCenter Services."	Optional
Task 9 - Install and configure an external LDAP-based identity store	By default, Oracle WebCenter uses Oracle WebLogic Server's embedded LDAP identity store. Although secure, the out-of-the-box embedded LDAP may not scale appropriately for large enterprise production environments. To manage the identities of users across diverse servers and enable single sign-on across applications, you can install and configure an external LDAP-based identity store.	Section 4.8, "Configuring an External LDAP-Based Identity Store."	Optional

2

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, "Patching your Software"

2.1 Preparing to Install

Before you begin, make sure you have completed tasks 1 - 3 in Table 1–1 in Chapter 1, "Installation Overview".

In addition, the following topics should also be considered for your Oracle WebCenter installation:

- Section 2.1.1, "Installing and Configure Java Access Bridge (Windows Only)"
- Section 2.1.2, "Knowing your HTTP Server Web Address"
- Section 2.1.3, "Installing Oracle JDeveloper"
- Section 2.1.4, "Installing WebCenter Back-End Applications"
- Section 2.1.5, "Installing Oracle WebCenter and Oracle Portal, Forms, Reports and Discoverer"
- Section 2.1.6, "Using Custom Port Numbers"

2.1.1 Installing and Configure Java Access Bridge (Windows Only)

If you are installing on a Windows machine, you have the option of installing and configuring Java Access Bridge for Section 508 Accessibility. For more information on how to do this, refer to "Install and Configure Java Access Bridge (Windows Only)" in *Oracle Fusion Middleware Administrator's Guide*.

2.1.2 Knowing your HTTP Server Web Address

If you plan to install Oracle Universal Content Management (UCM) as part of the WebCenter installation, you should know your the address and port number of your HTTP server. An HTTP server is required and must be up and running if you choose to install Oracle UCM.

If your HTTP server is running in a UNIX system, you can find your HTTP server port number by opening the /etc/services file and searching for the string "HTTP."

On Windows systems, you can use the `netstat` command from your DOS prompt to see the ports that are being used on your system.

For more information, see Section 4.3.1.2, "Oracle Content Server 10.1.3.5.1 - Installation".

2.1.3 Installing Oracle JDeveloper

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

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

With WebCenter extensions and Oracle JDeveloper installed, you can write custom WebCenter applications to add services like linking, tagging, and discussions, along with a way for business users to create and customize pages.

If you want to install Oracle JDeveloper, refer to *Oracle Fusion Middleware Installation Guide for Oracle JDeveloper*.

2.1.4 Installing WebCenter Back-End Applications

In addition to WebCenter Spaces, Portlet Producers, Oracle Discussions, Oracle Wiki and Blogs, 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 4, "Preparing Back-End Components for WebCenter Services" for more information.

2.1.5 Installing Oracle WebCenter and Oracle Portal, Forms, Reports and Discoverer

Oracle WebCenter and Oracle Portal, Forms, Reports and Discoverer cannot be installed in the same Middleware home directory. If you plan to install both of these products on your system, you must create a separate Middleware home for each product.

2.1.6 Using Custom Port Numbers

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.

For more information, refer to Chapter 3, "Configuring Oracle WebCenter".

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

2.2 Installing Oracle WebCenter

The Oracle WebCenter products (WebCenter Framework, WebCenter Spaces, WebCenter Portlets, WebCenter Discussions, WebCenter Wiki and Blog Server, and optionally Oracle Universal Content Manager) are installed onto your system by default. 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, "Starting the Installer"
- Section 2.2.2, "Installation Log Files"
- Section 2.2.3, "Inventory Screens (UNIX Only)"
- Section 2.2.4, "Installation Screens and Instructions"

2.2.1 Starting the Installer

The installer requires the location of a Java Runtime Environment (JRE) on your system. When you installed Oracle WebLogic Server, a JRE was installed on your system. You can use this location (the location of the jre directory) to start the installer. The default location for the JRE is *MW_HOME*/jdk160_14_R27.6.4-18 (on UNIX systems) or *MW_HOME*\jdk160_14_R27.6.4-18 (on Windows systems), where *MW_HOME* is the Middleware Home directory.

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

When you provide the *JRE_LOCATION* you must specify an absolute path; relative paths will not work.

On UNIX operating systems:

```
> ./runInstaller -jreLoc JRE_LOCATION
```

On Windows operating systems:

```
D:\ setup.exe -jreLoc JRE_LOCATION
```

You must specify the absolute path to your *JRE_LOCATION*; relative paths are not supported.

> **Note:** You must also specify the *JRE_LOCATION* in the same manner if you are installing Oracle WebCenter on a 64-bit UNIX or Windows operating system with a 32-bit JDK.

If no JRE location is specified, you will be prompted to provide the location of your JRE before the installer is started:

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

Checking if CPU speed is above 300 MHz.   Actual 2999 MHz    Passed
```

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

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

2.2.2 Installation Log Files

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

2.2.3 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 help, click on the screen name in the table below, 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 createCentralInventory.sh script as root.
		Click **OK** to continue.

2.2.4 Installation Screens and Instructions

Follow the instructions in Table 2–2 to install Oracle WebCenter.

> **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** to access the online help.

Table 2–2 Installation Flow

No.	Screen	When Does This Screen Appear?	Description and Action Required
1	Welcome Screen	Always	Click **Next** to continue.
2	Prerequisite Checks Screen	Always	Click **Next** to continue.
3	Specify Installation Location Screen	Always	Specify the Middleware Home and Oracle Home locations.
			The Oracle Common Home (`oracle_common`) directory will automatically be created inside the Middleware Home; do not use `oracle_common` as the name of your Oracle Home directory.
			Click **Next** to continue.
4	Specify UCM Configuration Options Screen	Always	Select whether or not you want to install Oracle UCM.
			If you do, click **Next** to continue.
			If not, skip to Installation Summary Screen.
5	Specify UCM Database Details Screen	Only if you selected **Install and Configure Oracle Universal Content Management** on the Specify UCM Configuration Options Screen.	Specify the connection details to your database with the `OCSERVER` schema.
			Click **Next** to continue.
6	Installation Summary Screen	Always	Verify the information on this screen.
			Click **Install** to begin the installation.
7	Installation Progress Screen	Always	This screen shows the progress of the installation.
			Click **Next** to continue.
			If you chose not to install Oracle UCM, skip to Installation Complete Screen.
8	Specify UCM Installer Directory Screen	Only if you selected **Install and Configure Oracle Universal Content Management** on the Specify UCM Configuration Options Screen.	Specify the location to the UCM installer.
			Click **Next** to continue.
9	UCM Installation Progress Screen	Only if you selected **Install and Configure Oracle Universal Content Management** on the Specify UCM Configuration Options Screen.	This screen shows the progress of the Oracle UCM installation.
			Click **Next** to continue.
10	Installation Complete Screen	Always	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 Patching your Software

The next step is to patch your Oracle WebCenter software to the latest version by running the Patch Set Installer for Oracle WebCenter.

For instructions, see "Applying the Latest Oracle Fusion Middleware Patch Set with the Patch Set Installers" in *Oracle Fusion Middleware Patching Guide*.

After this is complete, you are ready to run the Configuration Wizard to configure your domain for Oracle WebCenter. Go to Chapter 3, "Configuring Oracle WebCenter" for instructions.

3

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, "Working with Oracle WebCenter Components"

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 3.1.6, "Creating a New Domain". You can also run the Configuration Wizard to extend an existing domain, as described in Section 3.1.7, "Extending an Existing Domain".

3.1.1 Using Default Settings for Managed Servers

During the configuration, the Oracle Fusion Middleware Configuration Wizard automatically creates managed servers in the domain to host the Fusion Middleware system components. 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.

By default, the following Managed Servers are created:

- `WLS_Spaces` - Hosts Oracle WebCenter Spaces
- `WLS_Portlet` - Hosts Oracle WebCenter Portlets
- `WLS_Services` - Hosts Oracle WebCenter Discussions and Oracle WebCenter Wiki and Blog Server

3.1.2 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*.

3.1.3 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*.

3.1.4 Starting the Oracle Fusion Middleware Configuration Wizard

Start the Configuration Wizard from the *WebCenter_ORACLE_HOME*/common/bin (on UNIX operating systems) or *WebCenter_ORACLE_HOME*\common\bin (on Windows operating systems) directory.

On UNIX operating systems:

```
./config.sh
```

On Windows operating systems:

```
config.cmd
```

If this is a new installation and you need to create a new WebLogic domain, follow the instructions in Section 3.1.6, "Creating a New Domain". You can also run the Configuration Wizard to extend an existing WebLogic domain, as described in Section 3.1.7, "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_14_R27.6.4-18 (on UNIX operating systems) or *MW_HOME*\jdk160_14_R27.6.4-18 (on Windows operating systems) directory.

2. Set the JAVA_VENDOR environment variable to "Sun".

3.1.5 Creating a Configuration Log File

Log files of your configuration session 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".

3.1.6 Creating a New Domain

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

3.1.6.1 Select Domain Source Screen Notes

On Windows platforms, if you choose to install Oracle WebCenter Wiki and Blog Server to use the Wiki and Blog services in Oracle WebCenter, then you must modify the *DOMAIN_HOME*\bin\setDomainEnv.cmd.

Search for the following entry in the setDomainEnv.cmd file:

```
if "%WC_APPSDIR_ARGUMENT%"=="" {
set %WC_APPSDIR_ARGUMENT%=-Dwc.apps.dir=%WC_APPS_DIR%
set EXTRA_JAVA_PROPERTIES=%WC_APPSDIR_ARGUMENT% %EXTRA_JAVA_PROPERTIES%
}
```

Replace the entry with the entry given below. The exact changes that you need to make are marked in bold.

```
if "%WC_APPSDIR_ARGUMENT%"=="" {
set %WC_APPSDIR_ARGUMENT%=-Dwc.apps.dir=%WC_APPS_DIR%
set EXTRA_JAVA_PROPERTIES=-Dwc.apps.dir=%WC_APPS_DIR% %EXTRA_JAVA_PROPERTIES%
}
```

3.1.6.2 Configure Administrator Username and Password Screen Notes

The domain administrator you create for Oracle WebCenter is also the administrator for WebCenter Spaces, Oracle WebCenter Discussions, and Oracle WebCenter Wiki and Blogs Server. You can choose to grant domain administrative rights for these WebCenter components to a different user. For information about granting the administrator role to a nondefault 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*.

- Oracle WebCenter Wiki and Blog Server, see the "Managing Users and Roles" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

3.1.7 Extending an Existing Domain

While creating your WebCenter domain, if you chose not to configure any of the following components, you can add them later by extending your domain: Oracle WebCenter Spaces, Oracle WebCenter Portlets, Oracle WebCenter Discussion Server, and Oracle WebCenter Wiki and Blogs Server. If this is a first time configuration or you do not want to add more components, you can skip this section and move to the next section.

Follow the instructions in "Extending WebLogic Domains" in *Oracle WebLogic Server Creating WebLogic 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.

3.2 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 Managed Servers from the Administration Console"
- Section 3.2.3, "Starting Node Manager"
- 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 `startWebLogic.sh` (on UNIX operating systems) or `startWebLogic.cmd` (on Windows operating systems) script in the directory where you created your new domain. The default location is *MW_HOME*/user_projects/domains/*domain_name* (on UNIX operating systems) or *MW_HOME*\user_projects\domains*domain_name* (on Windows operating systems).

    This information was provided on the Specify Domain Name and Location Screen in the Configuration Wizard.

2. Run the `startManagedWebLogic.sh` (on UNIX operating systems) or `startManagedWebLogic.cmd` (on Windows operating systems) script in the `bin` directory inside the directory where you created your domain.

    This command also requires that you specify a server name. The servers that need to be started are:

    - `WLS_Spaces` (Oracle WebCenter Spaces)
    - `WLS_Portlet` (Oracle WebCenter Portlets)
    - `WLS_Services` (Oracle WebCenter Web 2.0 Services)

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

    ```
    MW_HOME/user_projects/domains/domain_name/bin/startManagedWebLogic.sh WLS_
    Spaces
    ```

    On Windows operating systems:

    ```
    MW_HOME\user_projects\domains\domain_name\bin\startManagedWebLogic.cmd WLS_
    Spaces
    ```

    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:

    ```
    MW_HOME/user_projects/domains/domain_name/startManagedWebLogic_readme.txt
    ```

    On Windows operating systems:

    ```
    MW_HOME\user_projects\domains\domain_name\startManagedWebLogic_readme.txt
    ```

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

```
http://host:admin_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 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:

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.

3.2.3 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.

For more information about Node Manager, refer to *Oracle Fusion Middleware Node Manager Administrator's Guide for Oracle WebLogic Server*.

3.2.4 Verifying the Installation

Start your browser and enter the following URLs:

- To access the Administration Server:

```
http://host:admin_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://host:admin_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://host:admin_server_port/em
  ```

- To access WebCenter Spaces:

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

  The default port number for WebCenter Spaces is 8888.

- To access WebCenter Rich Text Portlet:

  ```
  http://host:port/richtextportlet/
  ```

  To access WebCenter WSRP Tools:

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

  To access WebCenter OmniPortlet and Web Clipping Portlets:

  ```
  http://host:port/portalTools/
  ```

  The default port number for WebCenter Portlets is 8889.

- To access WebCenter Discussions:

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

  The default port number for WebCenter Discussions is 8890.

- To access WebCenter Wiki and Blog Server:

  ```
  http://host:port/owc_wiki
  ```

  The default port number for WebCenter Discussions is 8890.

3.3 Working with Oracle WebCenter Components

After creating or extending a domain, you must configure Oracle WebCenter components to prepare them to work with Oracle WebCenter. Depending on the WebCenter component you want to use, perform the tasks listed in Table 3–1.

For information about configuring Oracle Content Server, see Section 4.3.1, "Oracle Content Server 10.1.3.5.1 Requirements".

Table 3–1   Configuring Oracle WebCenter Components

Component	Task Description	Documentation
Oracle WebCenter Spaces	If you want to access WebCenter Spaces, first start the `WLS_Spaces` managed server. Then, access the following URL and log on as an administrator: `http://`*host*`:`*port*`/webcenter` Where, *host*:*port* refers to the host name and port number of the system where Oracle WebCenter is installed. By default, Oracle WebCenter is installed on port 8888.	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*. For more information about starting and stopping managed servers, see "Starting and Stopping Oracle Fusion Middleware" in *Oracle Fusion Middleware Administrator's Guide*.

Oracle WebCenter Portlets	To work with the preconfigured portlets available in Oracle WebCenter, you must:
	
	1. Start the `WLS_Portlet` managed server.
	
	2. Register the required portlet producers to enable application developers or users to add portlets to application pages.
	
	If you want to access preconfigured portlets producer, use any of the following URLs depending on the portlet producer you wish to access:
	
	■ Rich Text portlet
	
	`http://`*host*`:`*port*`/richtextportlet/`
	
	■ WSRP Tools
	
	`http://`*host*`:`*port*`/wsrp-tools/`
	
	■ OmniPortlet and Web Clipping portlets
	
	`http://`*host*`:`*port*`/portalTools`
	
	Where, *host*:*port* refers to the host name and port number of the system where Oracle WebCenter Portlets is installed. By default, Oracle WebCenter Portlets is installed on port 8889.
		For information about:
		
		■ Starting and stopping managed servers, see "Starting and Stopping Oracle Fusion Middleware" in *Oracle Fusion Middleware Administrator's Guide*.
		
		■ Registering, editing, deleting, and deploying portlet producers, see the "Managing Portlet Producers" chapter in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

Table 3–1   (Cont.) Configuring Oracle WebCenter Components

Component	Task Description	Documentation
Oracle WebCenter Discussions	To prepare Oracle WebCenter Discussions to work with Oracle WebCenter, perform the following tasks: 1. Start the managed server `WLS_Services`. 2. Configure Oracle WebCenter Discussions for Web Services Security (WS-Security) to prepare the server for custom WebCenter applications. 3. Register connections to Oracle WebCenter Discussions. You can access Oracle WebCenter Discussions by using 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 start or stop Oracle WebCenter Discussions from Oracle WebLogic Server Administrator Console. To start or stop the discussion server, you must start or stop the `WLS_Services` managed server where Oracle WebCenter Discussions is deployed.	For information about: ■ Starting and stopping managed servers, see "Starting and Stopping Oracle Fusion Middleware" in *Oracle Fusion Middleware Administrator's Guide*. ■ Configuring WS-Security, see the "Configuring WS-Security for a Simple Topology" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*. ■ Registering connections, see the "Managing the Announcements and Discussions Services" chapter in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.
Oracle WebCenter Wiki and Blog Server	To prepare Oracle WebCenter Wiki and Blog Server to work with Oracle WebCenter, perform the following tasks: 1. Start the managed server `WLS_Services`. 2. Register connections to Oracle WebCenter Wiki and Blog Server. You can access Oracle WebCenter Wiki and Blog Server by using the following URL format: `http://host:port/owc_wiki` Where, *host*:*port* refers to the host name and port number of the system where Oracle WebCenter Wiki and Blog Server is installed. By default, this server is installed on port 8890. The `owc_wiki` refers to the Oracle WebCenter Wiki and Blog Server deployment directory.	For information about: ■ Starting and stopping managed servers, see "Starting and Stopping Oracle Fusion Middleware" in *Oracle Fusion Middleware Administrator's Guide*. ■ Registering connections, see the "Managing the Wiki and Blog Services" chapter in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

4

Preparing Back-End Components for WebCenter Services

Oracle WebCenter provides a set of WebCenter services that expose social networking and personal productivity features for inclusion in custom WebCenter applications, as well as use within the WebCenter Spaces application. Some of these services, such as Worklist and Search, rely on back-end components. This chapter describes the tasks required to install such back-end components and integrate them with Oracle WebCenter. The chapter also describes the tasks involved in configuring an external LDAP-based identity store.

This chapter includes the following sections:

- Section 4.1, "Introduction to WebCenter Services"
- Section 4.2, "Back-End Requirements for the Instant Messaging and Presence (IMP) Service"
- Section 4.3, "Back-End Requirements for Content Integration and the Documents Service"
- Section 4.4, "Back-End Requirements for the Mail Service"
- Section 4.5, "Back-End Requirements for the Search Service"
- Section 4.6, "Back-End Requirements for the Worklist Service"
- Section 4.7, "Back-End Requirements for WebCenter Spaces Workflows"
- Section 4.8, "Configuring an External LDAP-Based Identity Store"

4.1 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 custom WebCenter applications and the WebCenter Spaces application. If a service relies on a back-end component, you must perform the following task to enable users to integrate that service into an application:

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

Table 4–1 describes WebCenter services and lists the back-end component, if any, required for each service.

> **Note:** Many of the WebCenter services listed in Table 4–1 rely only on a database for their functionality, as opposed to a separate back-end product. To integrate such services into your WebCenter applications, you must ensure that a supported database is available with the required schemas. 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."
>
> The Wiki and Blog services rely on Oracle WebCenter Wiki and Blog Server, and the Discussions and Announcements services rely on Oracle WebCenter Discussions. You can choose to install these servers either while installing Oracle WebCenter or later by extending your WebCenter domain. For information about:
>
> - Installing these servers, see Chapter 3, "Configuring Oracle WebCenter."
>
> - Configuring these servers, see Section 3.3, "Working with Oracle WebCenter Components."

Table 4–1   Back-End Requirements for WebCenter Services

Service	Description	Back-End Components Required
Announcements	Enables users to post, personalize, and manage announcements.	Oracle WebCenter Discussions and a supported database containing the `MDS` schema
Blog	Enables blogging functionality within the context of an application.	Oracle WebCenter Wiki and Blog Server
Discussions	Provides the ability to create and participate in threaded discussions	Oracle WebCenter Discussions and a supported database containing the `MDS` schema
Documents	Provides content management and storage capabilities, including content upload, file and folder creation and management, file check out, versioning, and so on.	A content repository such as Oracle Content Server 10.1.3.5.1 or Oracle Portal 11*g*, and a supported database containing the `MDS` schema **Note**: For WebCenter Spaces, you *must* use Oracle Content Server as the default content repository.
Events	Provides group calendars through which users can schedule meetings, appointments, and any other type of team get-together. **Note**: This service is available only in Oracle WebCenter Spaces.	A supported database containing `MDS` and `WEBCENTER` schemas

Table 4–1   (Cont.) Back-End Requirements for WebCenter Services

Service	Description	Back-End Components Required
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 and a supported database containing the MDS schema
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 MDS and WEBCENTER schemas
Lists	Enables users to create, publish, and manage lists.\n\n**Note**: This service is available only in Oracle WebCenter Spaces.	A supported database containing MDS and WEBCENTER schemas
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, and a supported database containing the MDS schema
Notes	Provides the ability to "jot down" and retain quick bits of personally relevant information.\n\n**Note**: This service is available only in Oracle WebCenter Spaces.	A supported database containing MDS and WEBCENTER schemas
People Connections	Provides online social networking tools for creating, interacting with, and tracking the activities of one's enterprise connections.	A supported database containing MDS and WEBCENTER schemas
Recent Activities	Provides a summary view of recent changes to documents, discussions, and announcements.	A supported database containing the MDS schema
RSS	Provides the ability to publish content from other WebCenter services and external sources as news feeds in RSS 2.0 and Atom 1.0 formats.	A supported database containing the MDS schema
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).	Oracle SES 10.1.8.2, updated with the Oracle SES 10.1.8.4.0 patch set and the Oracle SES RSS Connector 10.1.8.4.3 patch set, and a supported database containing the MDS schema
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 MDS and WEBCENTER schemas
Wiki	Provides the ability for geographically diverse teams to originate and collaborate on web documents.	Oracle WebCenter Wiki and Blog Server

Table 4–1 (Cont.) Back-End Requirements for WebCenter Services

Service	Description	Back-End Components Required
Worklist	Provides a personal, at-a-glance view of business processes that require attention. These can include a request for document review and other types of business process that come directly from enterprise applications.	Business Process Execution Language (BPEL) server, and a supported database containing the MDS schema

4.2 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. Oracle WebCenter is certified with Microsoft Live Communications Server 2005, and can be integrated with SIP-based communication servers.

> **Note:** The IMP service can also be integrated with Oracle WebLogic Communications Services (OWLCS) 11*g*. However, OWLCS 11*g* is available for development and evaluation purpose only. You can download it from Oracle Technology Network (OTN) at:
>
> http://www.oracle.com/technology/software/products/owlcs/index.html

This section contains the following subsections:

- Section 4.2.1, "Communication Server - Installation"
- Section 4.2.2, "Communication Server - Configuration and Integration"

4.2.1 Communication Server - Installation

For information about installing Microsoft Live Communications Server 2005, refer to the relevant Microsoft documentation. To use Microsoft Live Communications Server 2005 as the communication server for the IMP service, you must first deploy the Oracle RTC web services for Microsoft Live Communications Server 2005. For information, see the "LCS - Configuration" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

To use a SIP-based communication server, refer to its product documentation for server installation and configuration.

4.2.2 Communication Server - Configuration and Integration

If an LDAP-based identity store is not used for your Oracle WebCenter environment, then you must create WebCenter users on your communication server. For information about creating users on a communication server, refer to your communication server's product documentation.

After installing and configuring your communication server, you must set up connections to the communication server to enable IMP service integration into WebCenter applications. For information about how you can set up connections for the IMP service for WebCenter Spaces applications and any other WebCenter application deployed to a managed server, see the "Setting Up Connections for the

Instant Messaging and Presence Service" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

For information about how developers can set up connections for the IMP service within Oracle JDeveloper while building and testing new custom WebCenter applications, see the "Integrating the Instant Messaging and Presence Service" chapter in the *Oracle Fusion Middleware Developer's Guide for Oracle WebCenter*.

4.3 Back-End Requirements for Content Integration and the Documents Service

The Documents service and content integration capabilities of Oracle WebCenter enable application developers to integrate content into their applications from local file systems and external content repositories. Oracle WebCenter supports content integration with the following external repositories:

- Oracle Content Server 10.1.3.5.1
- Oracle Content Server 11*g*
- Oracle Portal 11*g*
- Microsoft SharePoint MOSS 2007 Service Pack 2
- Microsoft SharePoint WSS version 3 Service Pack 2

> **Note:** You can configure WebCenter Spaces to use any supported external content repository. However, WebCenter Spaces requires Oracle Content Server to be the default repository to enable the personal folder and group space folder functionality.

This section contains the following subsections:

- Section 4.3.1, "Oracle Content Server 10.1.3.5.1 Requirements"
- Section 4.3.2, "Oracle Content Server 11g Requirements"
- Section 4.3.3, "Oracle Portal Requirements"
- Section 4.3.4, "Microsoft SharePoint Requirements"

4.3.1 Oracle Content Server 10.1.3.5.1 Requirements

Table 4–2 describes the tasks that you must perform to use Oracle Content Server 10.1.3.5.1 as an external repository for WebCenter applications.

Table 4–2   Tasks for Preparing Oracle Content 10.1.3.5.1 Server as an External Repository

Task	Mandatory/ Optional?	Documentation
1. Create the `OCSERVER` schema for Oracle Content Server	Mandatory	For information, see Section 4.3.1.1, "Oracle Content Server 10.1.3.5.1 - Prerequisites."
2. Install Oracle HTTP Server	Mandatory	For information, see Section 4.3.1.1, "Oracle Content Server 10.1.3.5.1 - Prerequisites."

Table 4–2   (Cont.) Tasks for Preparing Oracle Content 10.1.3.5.1 Server as an External Repository

Task	Mandatory/ Optional?	Documentation
3. Install Oracle Content Server 10.1.3.5.1	Mandatory	For information, see Section 4.3.1.2, "Oracle Content Server 10.1.3.5.1 - Installation."
4. Configure Oracle Content Server to use an LDAP-based identity store	Mandatory	For information, see the "Configuring the Identity Store" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.
5. Set up a connection to Oracle Content Server for your WebCenter applications	Mandatory	For information, see Section 4.3.1.4, "Oracle Content Server 10.1.3.5.1 - Integration."
6. Configure Oracle Content Server to work with Oracle HTTP Server	Mandatory	For information, see Section 4.3.1.3, "Oracle Content Server 10.1.3.5.1 - Configuration."
7. Enable full-text searching and indexing	Optional	For information, see the "Enabling Full-Text Searching and Indexing" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.
8. Configure Secure Sockets Layer (SSL)	Optional	For information, see the "Configuring Secure Sockets Layer (SSL)" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

This section contains the following subsections:

- Section 4.3.1.1, "Oracle Content Server 10.1.3.5.1 - Prerequisites"

- Section 4.3.1.2, "Oracle Content Server 10.1.3.5.1 - Installation"

- Section 4.3.1.3, "Oracle Content Server 10.1.3.5.1 - Configuration"

- Section 4.3.1.4, "Oracle Content Server 10.1.3.5.1 - Integration"

4.3.1.1 Oracle Content Server 10.1.3.5.1 - Prerequisites

Before installing Oracle Content Server 10.1.3.5.1, you must perform the following tasks:

- Create the `OCSERVER` schema for Oracle Content Server by using RCU. For information, see *Oracle Fusion Middleware Repository Creation Utility User's Guide*.

- Install Oracle HTTP Server. Oracle Content Server and Oracle HTTP Server must be installed on the same system. For information about installing Oracle HTTP Server, see the *Oracle Fusion Middleware Installation Guide for Web Tier*.

4.3.1.2 Oracle Content Server 10.1.3.5.1 - Installation

You can install Oracle Content Server 10.1.3.5.1 by using either of the following approaches:

- During Oracle WebCenter installation. Oracle Content Server installation is integrated with Oracle WebCenter installation. Therefore, you can choose to install

Oracle Content Server 10.1.3.5.1 while installing Oracle WebCenter. For information, see Section 2.2, "Installing Oracle WebCenter."

■ Through a standalone installation. You may want to choose this option if you need to install Oracle Content Server on a different system than the one on which Oracle WebCenter is installed.

To install Oracle Content Server 10.1.3.5.1 separately:

1. Install Oracle Content Server 10.1.3.3.3 from the Oracle Universal Content Management (UCM) media shipped with Oracle WebCenter.

   For information about the installation procedure, see the *Content Server Installation Guide for Microsoft Windows* or the *Content Server Installation Guide for UNIX* available here:

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

2. Run the WebCenter configuration script, `wc_contentserverconfig` to upgrade Oracle Content Server 10.1.3.3.3 and prepare it to work with Oracle WebCenter. This script is available in the root directory of the UCM media shipped with Oracle WebCenter.

   The `wc_contentserverconfig` configuration script installs the following:

   ■ Oracle Content Server 10.1.3.5.1

   ■ Folders_g 10.1.3.5.1 component

   ■ WcConfigure component

   The WcConfigure component performs the following tasks to configure Oracle Content Server for Oracle WebCenter:

   – Sets configuration values for `UseAccounts` and `IsAutoNumber` to `true` and for `AutoNumberPrefix` to `IDC_Name`, if not set already.

   – Updates, if necessary, the JDBC password and its encoding from `ClearText` to `Intradoc`.

   – Adds the document type `DOCUMENT`.

   – Configures folders so that `dDocType` and `dSecurityGroup` are inherited, and the system default information is set as follows: `dDocType=DOCUMENT` and `dSecurityGroup=Public`.

   – Sets `EnableIdcProfileField=1`. This entry makes the server create a new metadata field named `xIdcProfile` and configure the field to use a view of profile trigger values called `ProfileTriggerValues`. The server then sets the profile trigger to the `xIdcProfile` metadata field, if not already set.

To run the `wc_contentserverconfig` WebCenter configuration script:

1. Navigate to the `webcenter-conf` directory, which is in the root directory of the UCM media shipped with Oracle WebCenter.

2. Run the following command:

   On UNIX:

   `./wc_contentserverconfig.sh` *content_server_dir path_to_source_directory*

   Where, *content_server_dir* refers to the Oracle Content Server 10.1.3.3.3 installation directory and *path_to_source_directory* refers to the `webcenter-conf` directory on the UCM media.

For example:

```
./wc_contentserverconfig.sh /myproducts/ucm /myproducts/ucmmedia/webcenter-conf
```

On Windows:

```
wc_contentserverconfig.cmd content_server_dir path_to_source_
directory
```

3. Restart Oracle Content Server Admin Server and Oracle Content Server.

   On UNIX:

   - To restart Admin Server: Run `content_server_`
     `dir`/admin/etc/idcadmin_restart

   - To restart Oracle Content Server: Run `content_server_`
     `dir`/etc/idcserver_restart

     Where, `content_server_dir` refers to the Oracle Content Server
     installation directory.

   For information about how to start, stop, or restart Oracle Content Server, see the
   Content Server Installation Guide for UNIX available here:

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

   On Windows:

   - To restart Admin Server: If Admin Server is running as a Windows service,
     you can restart the service by choosing **Start**, **Settings**, **Control Panel**,
     Administrative Tools, and **Services**. Then, right-click the applicable **IDC
     Content Admin Service** service and choose **Restart**.

   - To restart Oracle Content Server: If Oracle Content Server is running as a
     Windows service, you can restart the service by choosing **Start**, **Settings**,
     Control Panel, **Administrative Tools**, and **Services**. Then, right-click the
     applicable **IDC Content Service** service and choose **Restart**.

     If Oracle Content Server is running as an application, you can restart the
     server by simply closing the Oracle Content Server window and starting it
     again.

   For information about how to start, stop, or restart Oracle Content Server, see the
   Content Server Installation Guide for Microsoft Windows available here:

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

4.3.1.3 Oracle Content Server 10.1.3.5.1 - Configuration

If you choose to use Oracle Content Server 10.1.3.5.1 as your external content
repository, you must configure it with an LDAP-based identity store. For identity
propagation, Oracle Content Server and Oracle WebCenter must use the same LDAP
identity store. You can optionally configure Oracle Content Server for full-text search
support. It is recommended that you use the `OracleTextSearch` option for enabling
full-text search. To provide additional security for connections between WebCenter
applications or components, you can enable Secure Sockets Layer (SSL) on Oracle
Content Server.

For information about configuring Oracle Content Server, see the "Oracle Content
Server 10.1.3.5.1 - Configuration" section in the *Oracle Fusion Middleware
Administrator's Guide for Oracle WebCenter*.

You must configure Oracle Content Server to work with Oracle HTTP Server. Oracle HTTP Server configuration enables you to manage Oracle Content Server through a browser or add content on the server through WebDAV. This section describes how to configure Oracle Content Server to work with Oracle HTTP Server.

> **Note:** Oracle Content Server and Oracle HTTP Server must be installed on the same system.

To configure Oracle Content Server to work with Oracle HTTP Server:

1. Shut down Oracle Content Server and the Admin Server, if running:

   To stop Oracle Content Server, run this command:

   content_server_dir/etc/idcserver_stop

   To stop the Admin Server, run this command:

   content_server_dir/admin/etc/idcadmin_stop

2. In the `config.cfg` file, add the `SocketHostAddressSecurityFilter` entry, if not already present. The file is located in the *content_server_dir*/config directory. Set the entry to a pipe-delimited list of all hosts allowed to access Oracle Content Server.

   For example:

   `SocketHostAddressSecurityFilter=127.0.0.1 | `*allowed_host_IP*

   Where: *allowed_host_IP* refers to IP addresses of all hosts allowed to connect to Oracle Content Server through a TCP socket port. This must include the network IP address of the server on which Oracle Content Server is installed.

3. Edit the *content_server_dir*/admin/bin/intradoc.cfg file to add the `SocketHostAddressSecurityFilter` entry if the entry is not there in the file. See step 2 for values of this entry.

4. Restart Oracle Content Server and Admin Server.

To configure Oracle HTTP Server for Oracle Content Server:

1. Open the `httpd.conf` file. This file is available at the following path:

   OHS_ORACLE_HOME/instances/*instance_name*/config/OHS/*ohs_name*/httpd.conf

   Where:

   - *OHS_ORACLE_HOME* is the Oracle HTTP Server installation directory

   - *instance_name* is the instance where Oracle HTTP Server is running

   - *ohs_name* is the server name of Oracle HTTP Server

2. Add the following entry to the `httpd.conf` file of Oracle HTTP Server:

   `include `*content_server_dir*`/data/users/apache22/apache.conf`

3. Restart Oracle Content Server.

4. Restart Oracle HTTP Server.

   For example, you can use the following command:

   OHS_ORACLE_HOME/instances/*instance_name*/bin/opmnctl stopall /opmnctl startall

4.3.1.4 Oracle Content Server 10.1.3.5.1 - Integration

After configuring Oracle Content Server 10.1.3.5.1, you must set up content repository connections to the server to enable integration of the Documents service into your WebCenter applications. For information about how you can register content repositories and manage connections for WebCenter Spaces and any other WebCenter application deployed to a managed server, see the "Managing Content Repositories" chapter in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

For information about how developers can set up content repository connections within Oracle JDeveloper while building and testing new custom WebCenter applications, see the "Integrating the Documents Service" and "Integrating Content" chapters in the *Oracle Fusion Middleware Developer's Guide for Oracle WebCenter*.

4.3.2 Oracle Content Server 11*g* Requirements

Table 4–3 lists the tasks involved in preparing Oracle Content Server 11*g* as an external repository for WebCenter applications.

Table 4–3 Tasks for Preparing Oracle Content Server 11g as an External Repository

Task	Mandatory/Optional?
Install Oracle Content Server 11*g*	Mandatory
Enable the Folders_g component	Mandatory
Enable the WebCenterConfigure component	Mandatory
Configure Oracle Content Server to use an LDAP-based identity store	Mandatory
Set up a connection to Oracle Content Server for your WebCenter applications	Mandatory
Configure FileStore Provider	Optional
Configure Secure Sockets Layer (SSL)	Optional
Configure SES Crawler	Optional
Enable OracleTextSearch	Optional

This section includes the following subsections:

- Section 4.3.2.1, "Oracle Content Server 11g - Installation"

- Section 4.3.2.2, "Oracle Content Server 11g - Configuration"

- Section 4.3.2.3, "Oracle Content Server 11g - Integration"

4.3.2.1 Oracle Content Server 11*g* - Installation

Oracle Content Server 11*g* is not shipped with Oracle WebCenter. Oracle Content Server 11*g* 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. For information about how to install Oracle Content Server 11*g*, see the *Oracle Fusion Middleware Installation Guide for Oracle Enterprise Content Management Suite*.

> **Note:** Oracle recommends that you install Oracle Content Server 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.

4.3.2.2 Oracle Content Server 11*g* - Configuration

Table 4–3 lists the mandatory and optional tasks that you may need to perform to configure Oracle Content Server 11*g* as an external repository for WebCenter applications. For information, see the "Oracle Content Server 11g - Configuration" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

4.3.2.3 Oracle Content Server 11*g* - Integration

To use Oracle Content Server 11*g* as a content repository, you must create a repository connection and set the document properties. For information about how to register content repositories and manage repository connections, see the "Managing Content Repositories" chapter in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

For information about how developers can set up content repository connections within Oracle JDeveloper while building and testing new custom WebCenter applications, see the "Integrating the Documents Service" and "Integrating Content" chapters in the *Oracle Fusion Middleware Developer's Guide for Oracle WebCenter*.

4.3.3 Oracle Portal Requirements

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

This section contains the following subsections:

- Section 4.3.3.1, "Oracle Portal - Installation"
- Section 4.3.3.2, "Oracle Portal - Integration"

4.3.3.1 Oracle Portal - Installation

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

4.3.3.2 Oracle Portal - Integration

After installing Oracle Portal, you must set up content repository connections to use Oracle Portal. For information about how you can register content repositories and manage connections for WebCenter Spaces and any other WebCenter application deployed to a managed server, see the "Managing Content Repositories" chapter in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

For information about how developers can set up content repository connections within Oracle JDeveloper while building and testing new custom WebCenter applications, see the "Integrating the Documents Service" chapter in the *Oracle Fusion Middleware Developer's Guide for Oracle WebCenter*.

4.3.4 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 4.3.4.1, "Microsoft SharePoint - Installation"

- Section 4.3.4.2, "Microsoft SharePoint - Integration"

4.3.4.1 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

For information about how to install Microsoft SharePoint, refer to the relevant Microsoft documentation.

4.3.4.2 Microsoft SharePoint - Integration

To use Microsoft SharePoint as a content repository for custom WebCenter applications, you must install the Oracle WebCenter adapter for Microsoft SharePoint on the managed server to which you plan to deploy these applications. This adapter supports various features including reading and writing of files to the SharePoint server. For information about the adapter and how to install it, refer to the sections "What You Should Know About Microsoft SharePoint Repository Connections" and "Microsoft SharePoint - Installation" in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

In the development environment, custom WebCenter application developers must install the Oracle WebCenter Adapter for Microsoft SharePoint in JDeveloper and 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 the *Oracle Fusion Middleware Developer's Guide for Oracle WebCenter*.

After deploying your custom WebCenter applications, you can use, if required, the WLST commands to register, modify, or delete a connection to the Microsoft SharePoint server. For information, see the chapter "Managing Content Repositories" in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter.*

4.4 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 required product.

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 Oracle WebCenter's identity store. For information about adding users on a mail server, refer to the product documentation of your server. For more information about adding users to an identity store, see the "Configuring the Identity Store" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

After setting up a mail server, you must create a connection to it. For information about how you can register mail servers and set up connections for WebCenter Spaces

and any other WebCenter application deployed to a managed server, see the "Setting Up Connections for the Mail Service" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

For information about how developers can set up connections for the Mail service within Oracle JDeveloper while building and testing new custom WebCenter applications, see the "Integrating the Mail Service" chapter in the *Oracle Fusion Middleware Developer's Guide for Oracle WebCenter*.

4.5 Back-End Requirements for the Search Service

To search for content created by other WebCenter services within WebCenter applications, the Search service does not require any separate back-end installation. However, you can extend WebCenter searches to include external content repositories by using 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.

This section contains the following subsections:

- Section 4.5.1, "Oracle SES - Installation"
- Section 4.5.2, "Oracle SES - Integration"

4.5.1 Oracle SES - Installation

To install Oracle SES:

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 Online Documentation Library 10*g* Release 1 (10.1.8.2) available here on OTN:

   `http://www.oracle.com/technology/documentation/ses.html`

2. Install the Oracle SES 10.1.8.4.0 patch set.

   To do this, download the Automated Release Update (ARU) 10634423 from `http://support.oracle.com`.

3. Install the Oracle SES RSS Connector 10.1.8.4.3 patch set.

   To do this, download the ARU 11876570 from `http://support.oracle.com`.

4.5.2 Oracle SES - Integration

After installing Oracle SES, you must create a connection to it. For information about how you can register Oracle SES connections for WebCenter Spaces and any other WebCenter application deployed to a managed server, see the "Setting Up Connections for the Search Service" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

For information about how developers can set up connections for the Search service within Oracle JDeveloper and include Oracle SES search results in WebCenter search results, see the "Integrating the Search Service" chapter in the *Oracle Fusion Middleware Developer's Guide for Oracle WebCenter*.

4.6 Back-End Requirements for the Worklist Service

The Worklist service relies on a Business Process Execution Language (BPEL) server provided by Oracle SOA Suite.

To make the Worklist service available, you must install Oracle SOA Suite. For information about how to install Oracle SOA Suite, see the *Oracle Fusion Middleware Installation Guide for Oracle SOA Suite*.

After installing Oracle SOA Suite, you must set up connections to the BPEL server to enable integration of the Worklist service into WebCenter applications. No further configuration is required on Oracle SOA or Oracle WebCenter. For information about how you can configure BPEL connections for WebCenter Spaces and custom WebCenter applications deployed to a managed server, see the "Setting Up Connections for the Worklist Service" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

For information about how developers can set up BPEL connections within Oracle JDeveloper while building and testing new custom WebCenter applications, see the "Integrating the Worklist Service" chapter in the *Oracle Fusion Middleware Developer's Guide for Oracle WebCenter*.

> **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 WebCenter applications and the BPEL server. 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 LDAP and SSO configuration, see the "Managing Security" chapter in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

4.7 Back-End Requirements for WebCenter Spaces Workflows

WebCenter Spaces provides several prebuilt workflows that handle group space membership notifications, group space subscription requests, and so on. WebCenter Spaces workflows rely on the BPEL server that is provided by Oracle SOA Suite. Table 4–4 describes the tasks that you must perform to enable workflow functionality in WebCenter Spaces.

Table 4–4   Tasks for Enabling WebCenter Spaces Workflows

Task	Mandatory/Optional?	Documentation
1. Install Oracle SOA Suite	Mandatory	For information, see Section 4.7.1, "Oracle SOA Suite - Installation."
2. Deploy WebCenter Spaces workflows to Oracle SOA by deploying `sca_CommunityWorkflows.jar` and `WebCenterWorklistDetailApp.ear`	Mandatory	For information, see Section 4.7.2, "Oracle SOA Server - Workflow Deployment."

Table 4–4 (Cont.) Tasks for Enabling WebCenter Spaces Workflows

Task	Mandatory/Optional?	Documentation
3. Configure WS-Security to secure Web Service calls between Oracle SOA and Oracle WebCenter	Mandatory	For information, see Section 4.7.3, "Oracle SOA and Oracle WebCenter - WS-Security Configuration."
4. Register a connection with the BPEL server	Mandatory	For information, see Section 4.7.4, "Oracle WebCenter - BPEL Server Connection Setup."

> **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 WebCenter applications and the BPEL server. 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 enables 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 LDAP and SSO configuration, see the "Managing Security" chapter in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

This section contains the following subsections:

- Section 4.7.1, "Oracle SOA Suite - Installation"

- Section 4.7.2, "Oracle SOA Server - Workflow Deployment"

- Section 4.7.3, "Oracle SOA and Oracle WebCenter - WS-Security Configuration"

- Section 4.7.4, "Oracle WebCenter - BPEL Server Connection Setup"

4.7.1 Oracle SOA Suite - Installation

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

4.7.2 Oracle SOA Server - Workflow Deployment

WebCenter Spaces workflows are deployed to an Oracle SOA server. To prepare a SOA server for workflows, you must deploy the following files to the server:

- `sca_CommunityWorkflows.jar`, this application contains the workflow logic that determines the task flows to be generated and API to be invoked. This composite is located at the following path in your Oracle SOA installation:

  SOA_ORACLE_HOME`/webcenter/modules/oracle.webcenter.sca_`
  `11.1.1/sca_CommunityWorkflows.jar`

  Where, *SOA_ORACLE_HOME* refers to the Oracle SOA installation directory.

- `WebCenterWorklistDetailApp.ear`, this application contains task detail pages that provide the user interface elements for workflows. The application is located at the following path in your Oracle SOA installation:

*SOA_ORACLE_*
HOME/webcenter/applications/WebCenterWorklistDetailApp.ear

4.7.2.1 Deploying sca_CommunityWorkflows.jar

You can deploy `sca_CommunityWorkflows.jar` by using any of the following methods based on your preference:

■   Oracle WebLogic Scripting Tool (WLST)

For information, see the "Oracle SOA Suite Custom WLST Commands" chapter in the *Oracle Fusion Middleware WebLogic Scripting Tool Command Reference*.

■   Ant

For information, see the "Deploying SOA Composite Applications" chapter in the *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite*.

■   Oracle Enterprise Manager Fusion Middleware Control

This section describes how to deploy the JAR by using Fusion Middleware Control.

To deploy the `sca_CommunityWorkflows.jar` by using Fusion Middleware Control:

1.   To start Fusion Middleware Control, enter the URL in the following format in your web browser:

    `http://host_name.domain_name:port_number/em`

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

2.   Enter the Oracle Fusion Middleware administrator user name and password and click **Login**.

    Only the Fusion Middleware administrator can log on to Fusion Middleware Control. The default user name for the administrator user is `weblogic`. This is the account you can use to log on to Fusion Middleware Control for the first time.

3.   Under **WebLogic Domain** in the navigation panel on left, right-click your SOA domain, select **SOA Deployment**, and then **Deploy**. (Figure 4–1)

Figure 4–1   Deploying the Composite to a SOA Managed Server
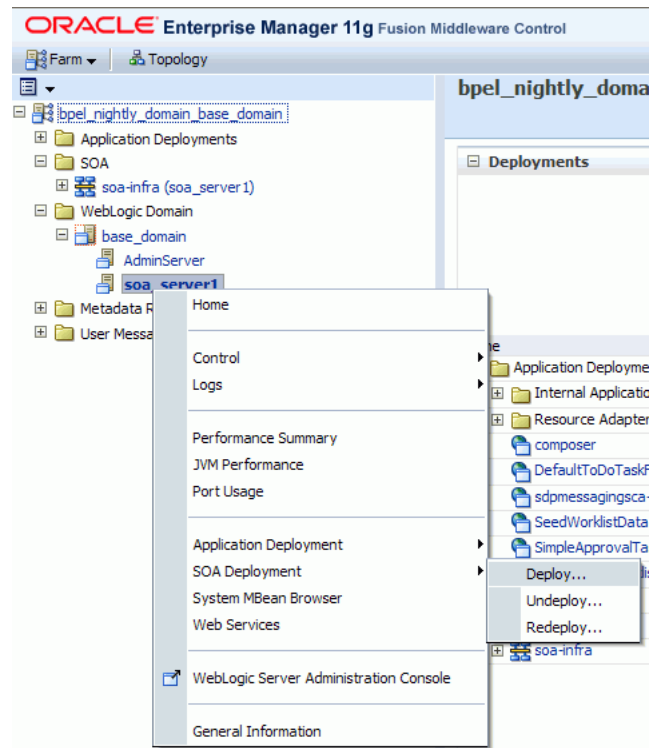
4. On the **Select Archive** page, enter the path to `sca_CommunityWorkflows.jar`. (Figure 4–2)

   You can find this application at the following location in your Oracle SOA installation:

   SOA_ORACLE_HOME`/webcenter/modules/oracle.webcenter.sca_`
   `11.1.1/sca_CommunityWorkflows.jar`

Figure 4–2   Deploying the Composite - Select Archive Page
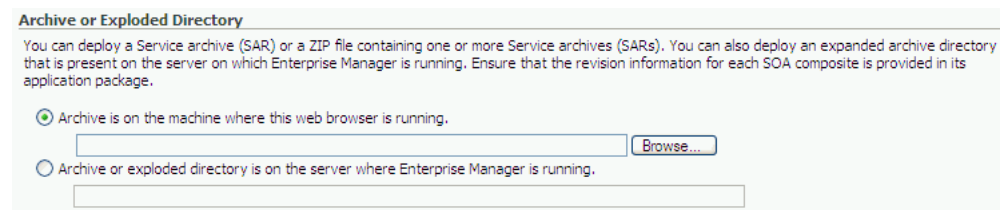
5. Click **Next**.

6. On the **Select Target** page, select the Managed Server to which you want to deploy the SOA composite application. (Figure 4–3)

Figure 4–3 Deploying the Composite - Select Target Page
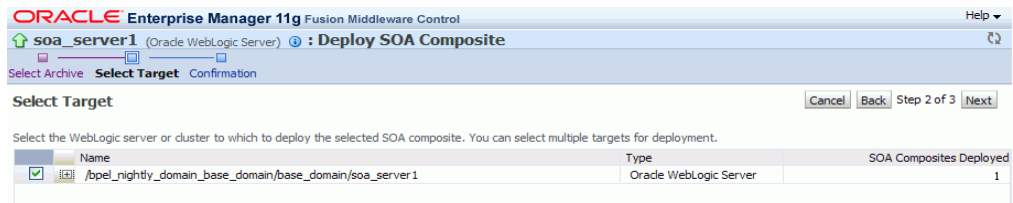
7. Click **Next**.

8. On the **Confirmation** page, select **Deploy as default revision**. (Figure 4–4)

Figure 4–4 Deploying the Composite - Confirmation Page
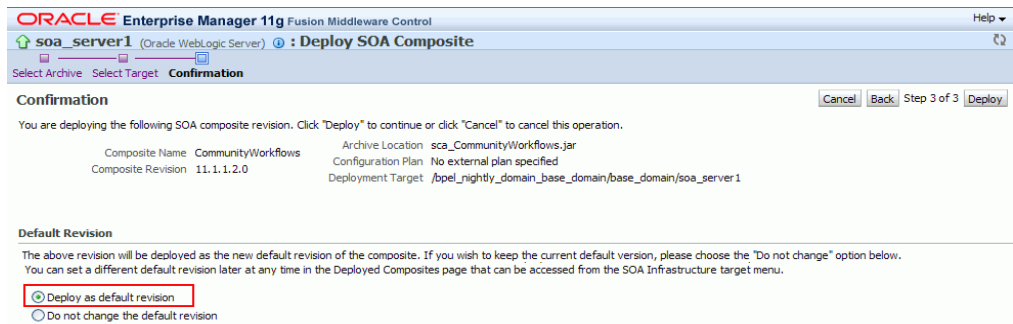
9. Click **Deploy**.

After the composite is successfully deployed, it is listed under your Oracle SOA Managed Server. (Figure 4–5)

Figure 4–5 Composite Deployed to an Oracle SOA Managed Server
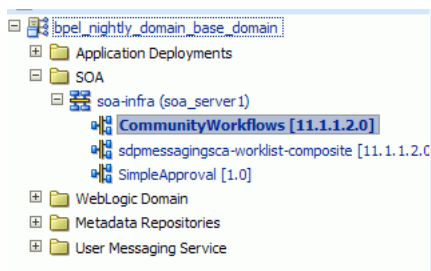
For more information about deploying, redeploying, and undeploying SOA applications, see the "Deploying SOA Composite Applications" chapter in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite*.

4.7.2.2 Deploying WebCenterWorklistDetailApp.ear

To deploy the `WebCenterWorklistDetailApp.ear` application, you can either use WLST or Fusion Middleware Control.

For information about deploying Java EE applications by using WLST, see the "Deploying Applications" chapter in the *Oracle Fusion Middleware Administrator's Guide*.

To deploy `WebCenterWorklistDetailApp.ear` by using Fusion Middleware Control:

1. Log on to Fusion Middleware Control as an administrator.

2. Under **WebLogic Domain**, right-click the SOA domain, select **Application Deployment**, and then select **Deploy**.

3. On the **Select Archive** page, enter the path to `WebCenterWorklistDetailApp.ear`. (Figure 4–6)

   You can find the application at the following location in your Oracle SOA installation:

   SOA_ORACLE_ HOME/webcenter/applications/WebCenterWorklistDetailApp.ear

Figure 4–6   Specifying the Path to WebCenterWorklistDetailApp.ear

4. On the **Select Target** page, select the Oracle SOA managed server to which you want to deploy the application. (Figure 4–7)

Figure 4–7   Selecting Target Server

5. Click **Next**.

6. On the **Application Attributes** page, click **Next**. (Figure 4–8)

Figure 4–8 Specifying Application Attributes
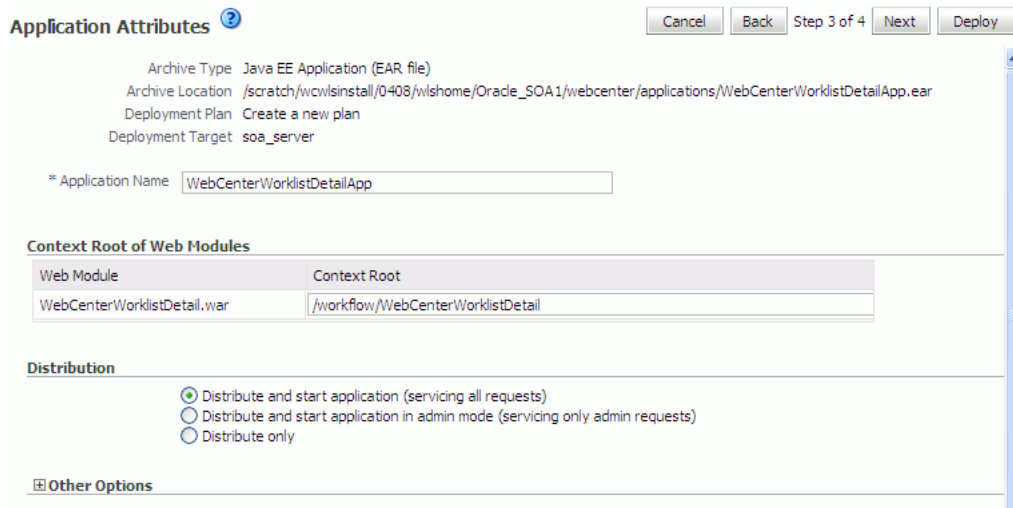
7. On the **Deployment Settings** page, click **Deploy**. (Figure 4–9)

Figure 4–9 Deploying WebCenterWorklistDetailApp.ear
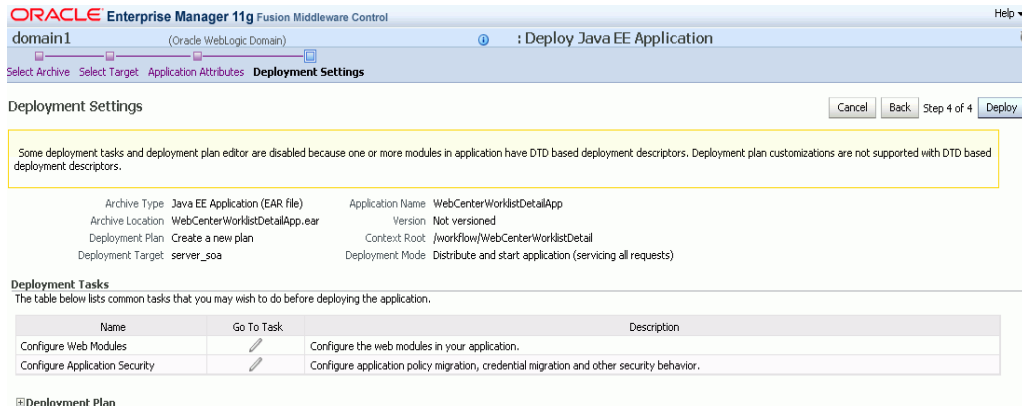
After the composite is successfully deployed, a confirmation message is displayed and the application is shown in the **Application Deployments** tab in Fusion Middleware Control.

Figure 4–10 Deployed EAR Application
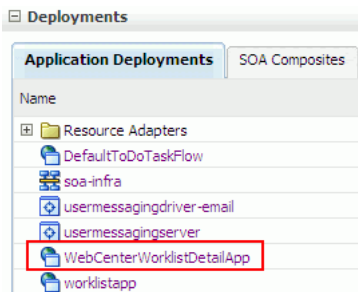
4.7.3 Oracle SOA and Oracle WebCenter - WS-Security Configuration

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 for WebCenter Applications and Components" chapter in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

4.7.4 Oracle WebCenter - BPEL Server Connection Setup

If you want to use WebCenter Spaces workflows, you must create a connection to the BPEL server provided by Oracle SOA Suite.

To configure a 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 the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

   > **Note:** You can configure the Worklist service and WebCenter Spaces workflows to either share the same BPEL server connection or use separate connections.
   >
   > In Oracle Enterprise Manager Fusion Middleware Control, you register a BPEL server connection by adding a Worklist connection. By default, this connection is configured to be used both by the Worklist service and the WebCenter Spaces application. There is no separate option available for adding a BPEL server connection for WebCenter Spaces.

2. Select the BPEL server connection for WebCenter Spaces workflows in WebCenter Spaces. For information, see the "Specifying the BPEL Server Hosting WebCenter Spaces Workflows" sections in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

4.8 Configuring 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 and should be replaced 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 and credential store with an external LDAP-based identity store.

Table 4–5 describes the tasks that you must perform to configure an external LDAP-based identity store for Oracle WebCenter.

Table 4–5   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 *Oracle Fusion Middleware Installation Guide for Oracle Identity Management*.	Mandatory
2. Configure Oracle WebCenter identity store to use the external LDAP	Reassociate the identity store with an external LDAP, rather than the default embedded LDAP. For information, see the "Configuring the Identity Store" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.	Mandatory
3. Configure the policy and credential stores	Reassociate Oracle WebCenter's policy store and credential store with an external LDAP. For information, see the "Configuring the Policy and Credential Store" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.	Mandatory

You can configure WebCenter Spaces as well as the back-end components for WebCenter services to use a shared external LDAP-based identity store. If you wish to configure a shared external LDAP-based identify store, perform the tasks listed in Table 4–5, and then configure the back-end components as described in Table 4–6.

> **Note:**   If you want to configure a shared external LDAP-based identity store, then the WebCenter Spaces application and all the back-end components configured for your WebCenter services must use the *same* external LDAP-based identity store.

Table 4–6 lists the back-end components for various WebCenter services and specifies the out-of-the-box identity store support available for these components. Table 4–6 also describes whether additional configuration is required for any back-end component if a shared external LDAP-based identity store is used.

Table 4–6   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.
Oracle WebCenter Wiki and Blog Server	Embedded LDAP store	No additional configuration required.

Table 4–6 (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 Content Server	Database	Configure the Oracle Content Server to use the same external LDAP-based identity store as Oracle WebCenter.
		For information, see the "Oracle Content Server Prerequisites" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.
Oracle SES	None	Configure Oracle SES to use the same external LDAP-based identity store as Oracle WebCenter.
		For information about configuring LDAP in Oracle SES, see the "Security in Oracle Secure Enterprise Search" chapter in the *Oracle Secure Enterprise Search Administrator's Guide*. This guide is available in the Oracle Secure Enterprise Search Online Documentation Library 10*g* Release 1 (10.1.8.2) available here on OTN:
		http://www.oracle.com/technology/documentation/ses.html
Oracle SOA Suite (BPEL server)	Embedded LDAP store	Configure Oracle SOA Suite to use the same external LDAP-based identity store as Oracle WebCenter. For information about:
		■ Configuring LDAP authentication providers, see the "Configuring Authentication Providers" chapter in the *Oracle Fusion Middleware Securing Oracle WebLogic Server*.
		■ Listing Oracle Internet Directory as the first authentication provider, see the "Listing Oracle Internet Directory as the First Authentication Provider" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite*.

5

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 5.1, "Deinstallation Instructions"
- Section 5.2, "Reinstallation"

5.1 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)

5.1.1 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*.

5.1.2 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*.

5.1.3 Removing Oracle Universal Content Management

If you installed Oracle UCM as part of the Oracle WebCenter installation, then you can skip this section.

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. Instructions for doing so can be found in *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 them proceed with the deinstallation of Oracle WebCenter.

5.1.4 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.

5.1.4.1 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 5–1 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 5–1   Deinstallation Flow

No.	Screen	Description and Action Required
1	Welcome Screen	Click **Next** to continue.

Table 5–1   (Cont.) Deinstallation Flow

No.	Screen	Description and Action Required
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 5.1.4.3, "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.

5.1.4.2 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 5–1 to remove the Oracle Common home.

5.1.4.3 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.

5.1.5 Removing Oracle WebLogic Server

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

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**.

5.1.6 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.

5.1.7 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 11.1.1.3.0

- Oracle WebCenter 11g - Home1

- Oracle WebLogic

5.1.8 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.

5.2 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.

A

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

- Prerequisite Checks Screen

- Specify Installation Location Screen

- Specify UCM Configuration Options Screen

- Specify UCM Database Details Screen

- Installation Summary Screen

- Installation Progress Screen

- Specify UCM Installer Directory Screen

- UCM Installation Progress Screen

- Installation Complete Screen

Installation screens and instructions for WebCenter back-end components can be found in Chapter 4, "Preparing Back-End Components for WebCenter Services".

A.1 Specify Inventory Directory Screen (UNIX Only)
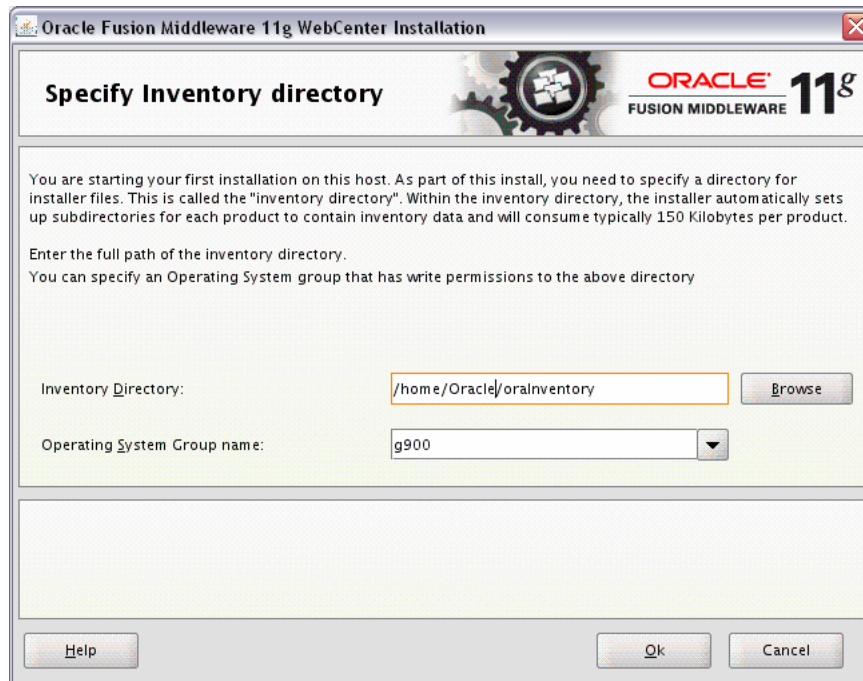
This screen appears for UNIX systems only; if this is your first Oracle installation on this host, you must specify the location of the inventory directory. This inventory directory is used by the installer to keep track of all Oracle products installed on the computer.

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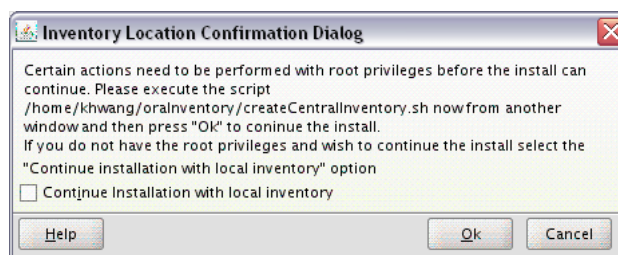
This screen appears for UNIX systems only; you are asked to run the *inventory_ directory*/createCentralInventory.sh script as root.

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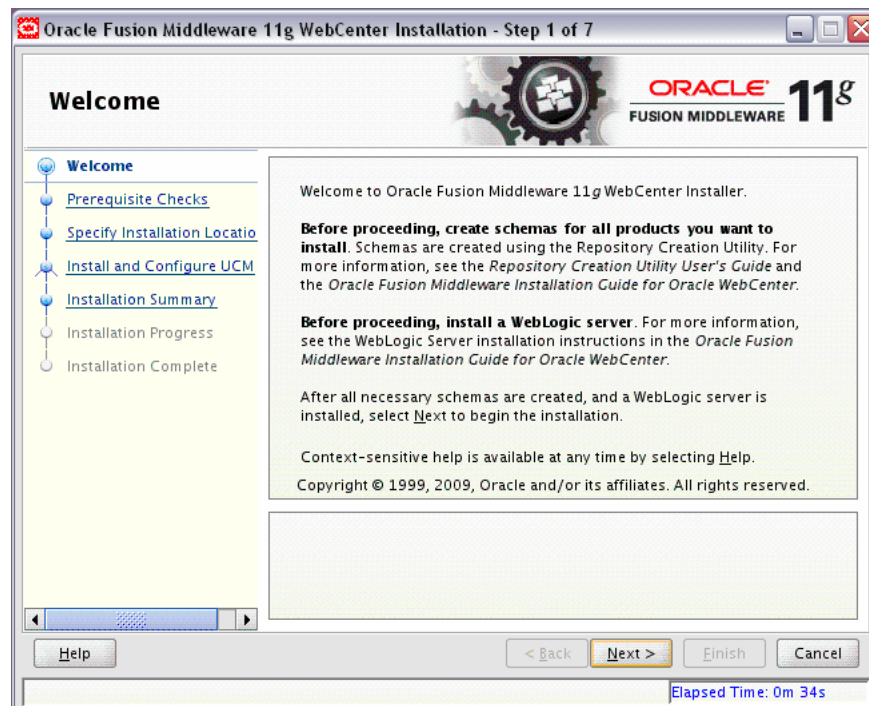
The Welcome screen is displayed each time you start the installer.

A.4 Prerequisite Checks Screen
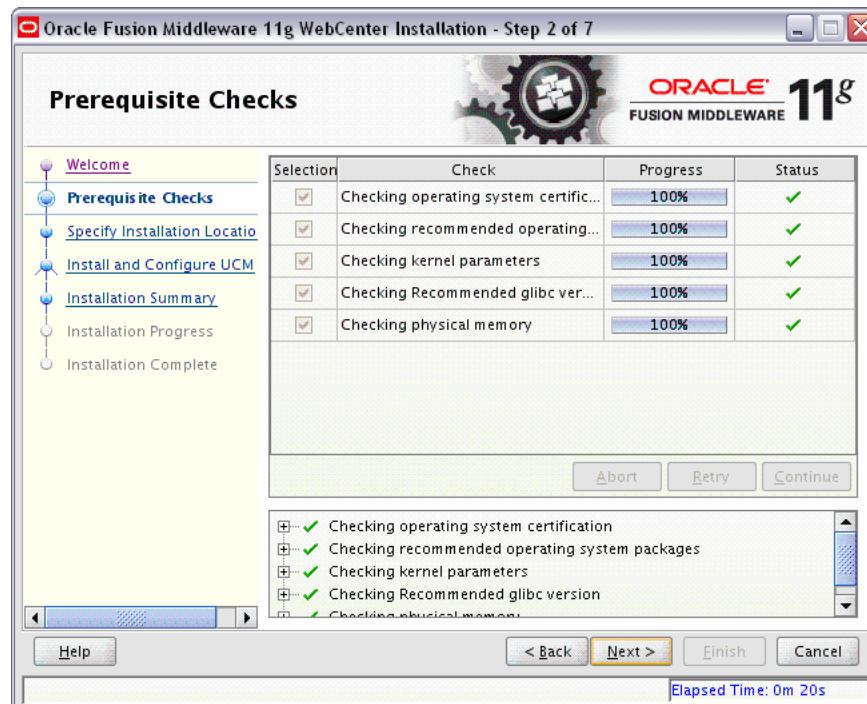
If there is a problem, a short error message appears in the bottom portion of the screen. Fix the error and click **Retry** to try again.

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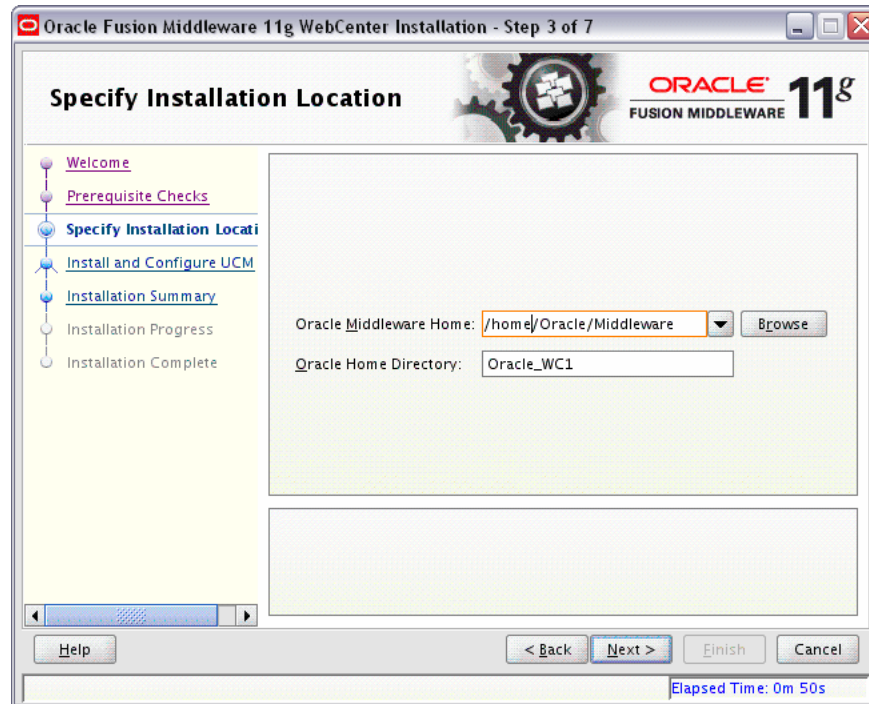
In the Oracle Middleware Home field, specify the absolute path to your existing Oracle Middleware Home directory. If you do not know the full path to your Middleware Home, you can click **Browse** to select an existing directory in your system.

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.

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 Directory" in *Oracle Fusion Middleware Installation Planning Guide*.

A.6 Specify UCM Configuration Options Screen
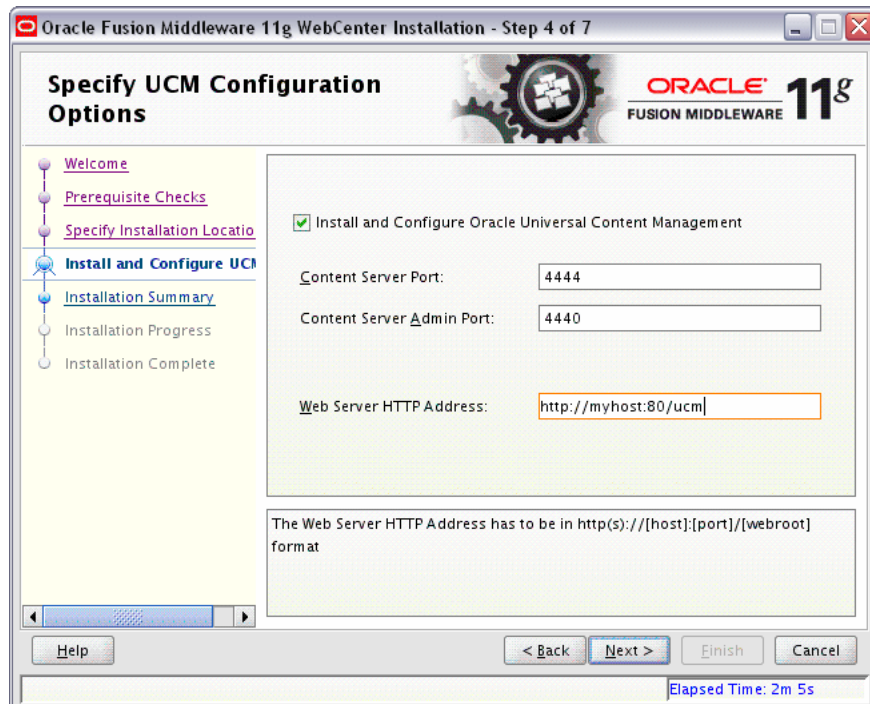
Select **Install and Configure Oracle Universal Content Management** if you want to install Oracle UCM.

> **Note:** If you are using a Microsoft SQL Server database, do not select **Install and Configure Oracle Universal Content Management** on this screen. Oracle UCM can be configured to run on SQL Server, but should be installed separately.

> **Note:** By default, version 10*g* (10.1.3.5.1) is installed on your system. If you already have a previous version of Oracle UCM installed on your system, you must apply the patch to upgrade to version 10.1.3.5.1 in order to get Oracle UCM working with Oracle WebCenter.

Specify the following information:

- Content Server Port

The Content Server comes as part of Oracle UCM and performs content management tasks. Enter the port number that will be used to connect to the Content Server. The default is 4444.

- Content Server Admin Port

  Oracle UCM also comes with an Administration Server that handles administrative tasks. Enter the port number that will be used to connect to the Administration Server. The default is 4440.

- Web Server HTTP Address

  Oracle UCM must also be installed on a machine with an existing HTTP server. The web server address is the URL used to access Content Server, including the relative root specific to Content Server. For example, if you install Content Server on a web server with the HTTP address of `http://www.yourcompany.com` and you want to use `ucm` as the relative root, you would specify `http://www.yourcompany.com/ucm/` as the HTTP address in this field. The address must be in the format:

  `http://host:port/webroot`

  For secure connections:

  `https://host:ssl_port/webroot`

A.7 Specify UCM Database Details Screen
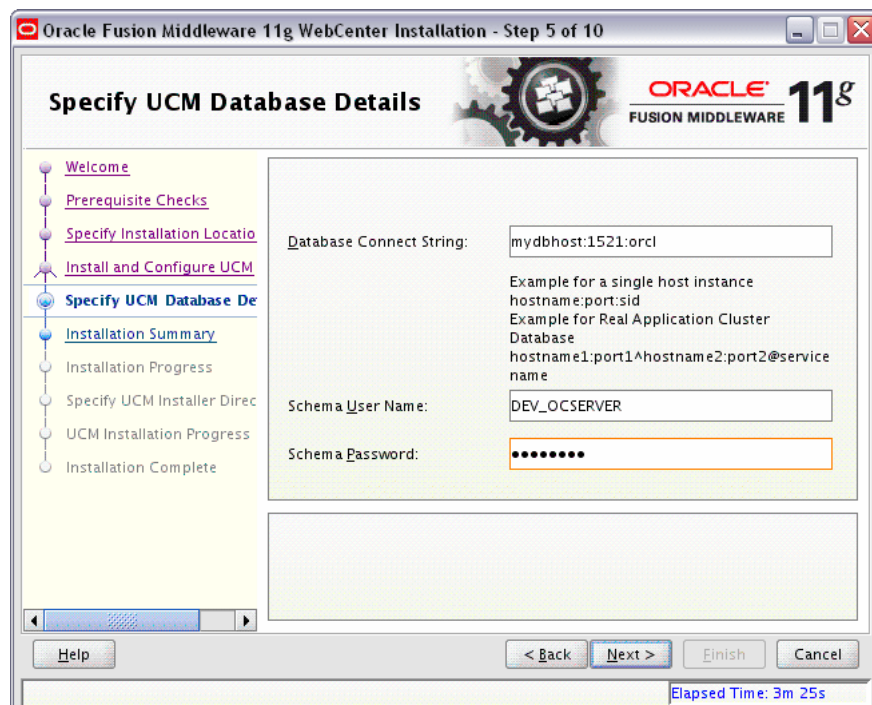
Specify the connection details to your Oracle database containing the `OCSERVER` schema:

- Database Connect String

Enter the hostname, port number, and service name of your Oracle database. Use the following format:

host.port.servicename

Note: Support for Oracle RAC databases is not available out-of-the-box. You must configure your Oracle RAC database after Oracle UCM is installed.

Refer to "Reconfiguring the Content Server to Support RAC" in *Oracle Fusion Middleware Enterprise Deployment Guide for Oracle WebCenter* for more information.

The default port number for Oracle Databases is 1521.

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

- Schema Username

  Enter the name of your Content Server schema in the following format:

  prefix_schemaname

  You would have provided this information on the Select Components Screen when creating your schemas using Repository Creation Utility (RCU). For more information, refer to *Oracle Fusion Middleware Repository Creation Utility User's Guide*.

- Schema Password

  Enter the password for your schema. You would have provided this information on the Schema Passwords Screen when creating your schemas using Repository Creation Utility (RCU). For more information, refer to *Oracle Fusion Middleware Repository Creation Utility User's Guide*.

A.8 Installation Summary Screen
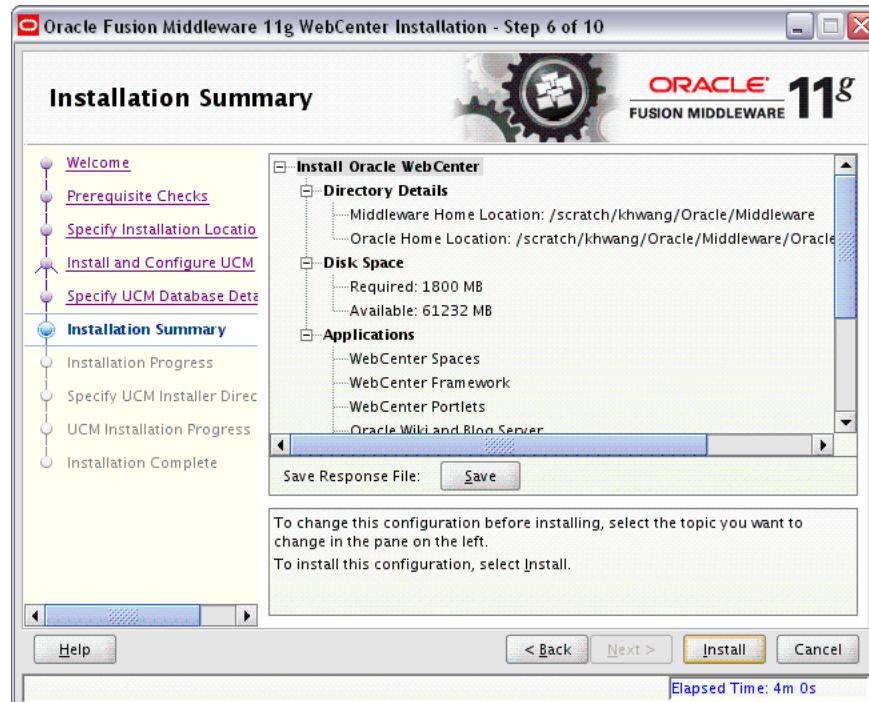
Review the information on this screen, and click **Install** to begin the installation. The operations summarized on this page will be performed when you click **Install**.

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
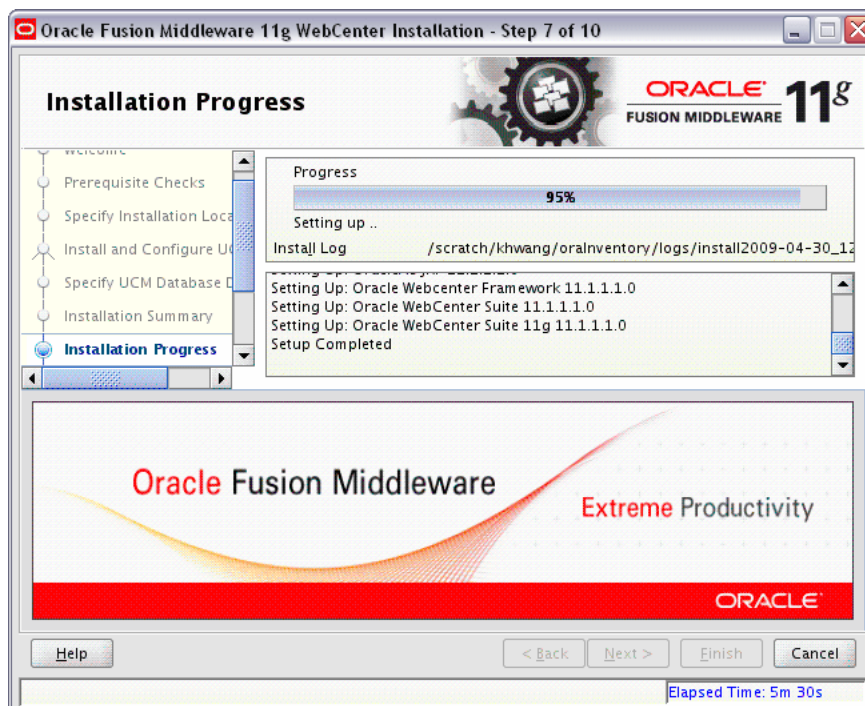
This screen shows you the progress of the installation.

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 Specify UCM Installer Directory Screen

Provide the location of the Oracle UCM installer. This is the directory under which the `install/UCM/ContentServer/`*`platform`* (on UNIX systems) or `install\UCM\ContentServer\`*`platform`* (on Windows systems) exists.

On UNIX systems, this directory is typically `products/ContentServer` on the installation DVD. If you extracted the contents of the installation DVD to your local disk, then you should point to `products/ContentServer` in the directory on your disk where you extracted the software. For example:

`/tmp/webcenter/install/products/ContentServer`

On Windows systems, this directory is typically `products\ContentServer` on the installation DVD. If you extracted the contents of the installation DVD to your local disk, then you should point to `products\ContentServer` in the directory on your disk where you extracted the software. For example:

`C:\TMP\Install\products\ContentServer`

> **Note:**   For this location, you cannot specify a Universal Naming Convention (UNC) path, such as `\\server\content\ContentServer`.
>
> Instead, you must map this network path to a drive, and then provide the mapped drive as the installation location. For example, using either the `NET SHARE` command or **Tools > Map Network Drive** from Windows Explorer, you could map the `M:\` drive to the `\\server\content` directory, then provide the installation location as `M:\ContentServer`.

A.11 UCM Installation Progress Screen
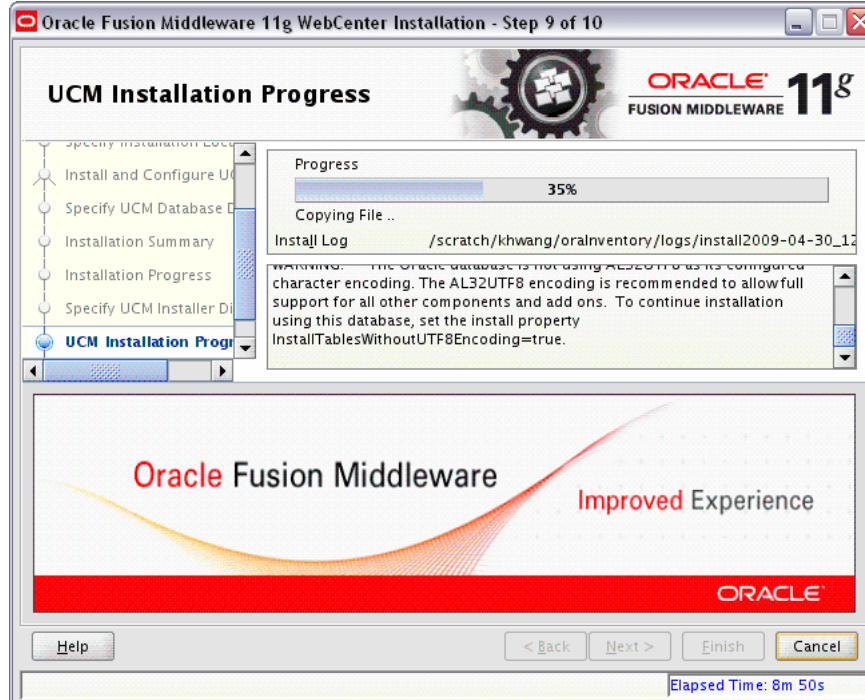
This screen shows you the progress of the Oracle UCM installation.

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.12 Installation Complete Screen
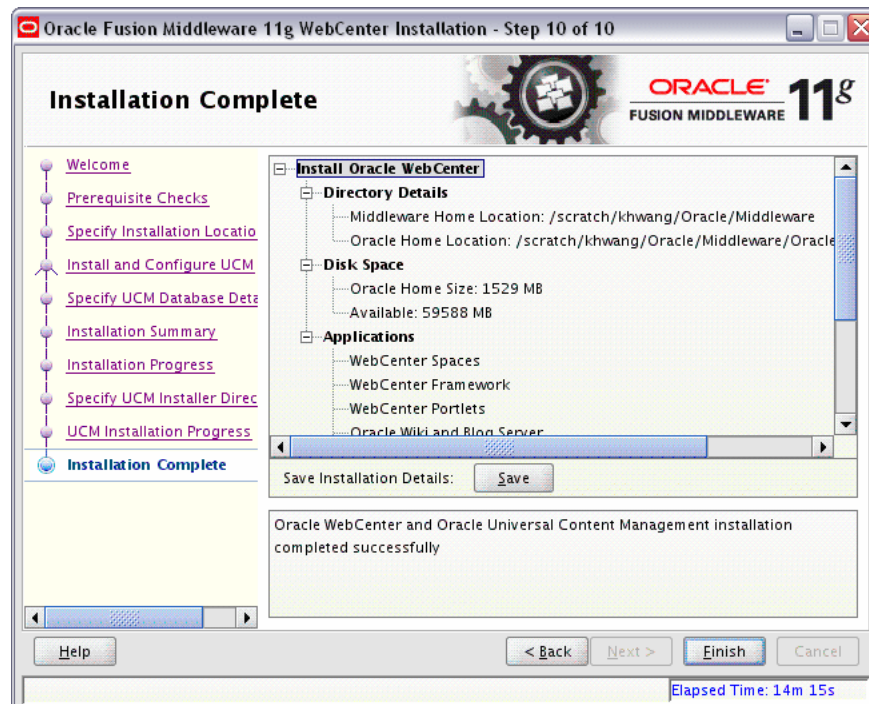
This screen summarizes the installation that was just completed.

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

B

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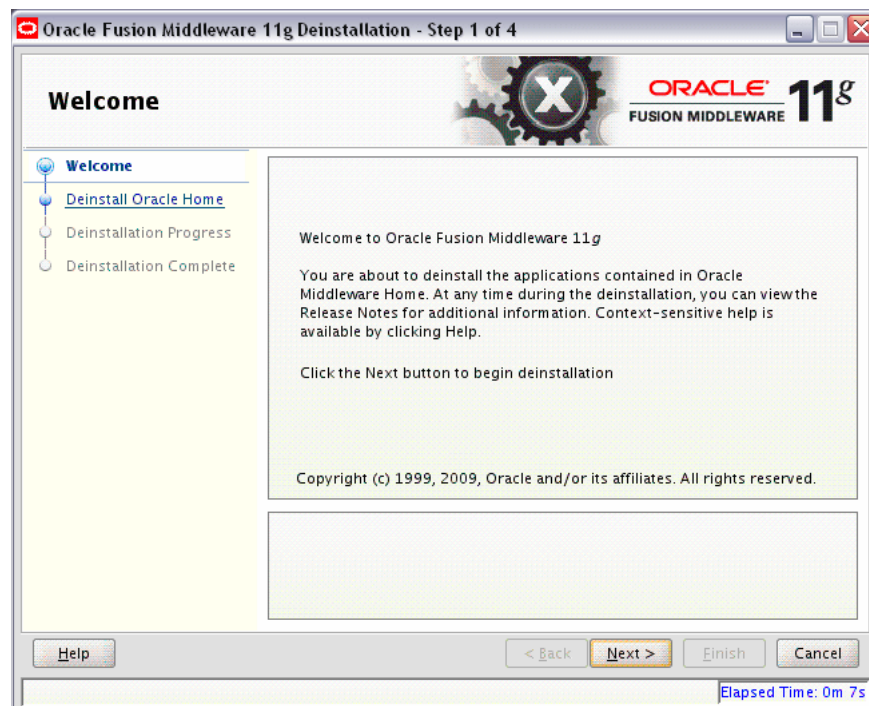
The Welcome screen is displayed each time you start the deinstaller.

Click **Next** to continue.

B.2 Deinstall Oracle Home Screen
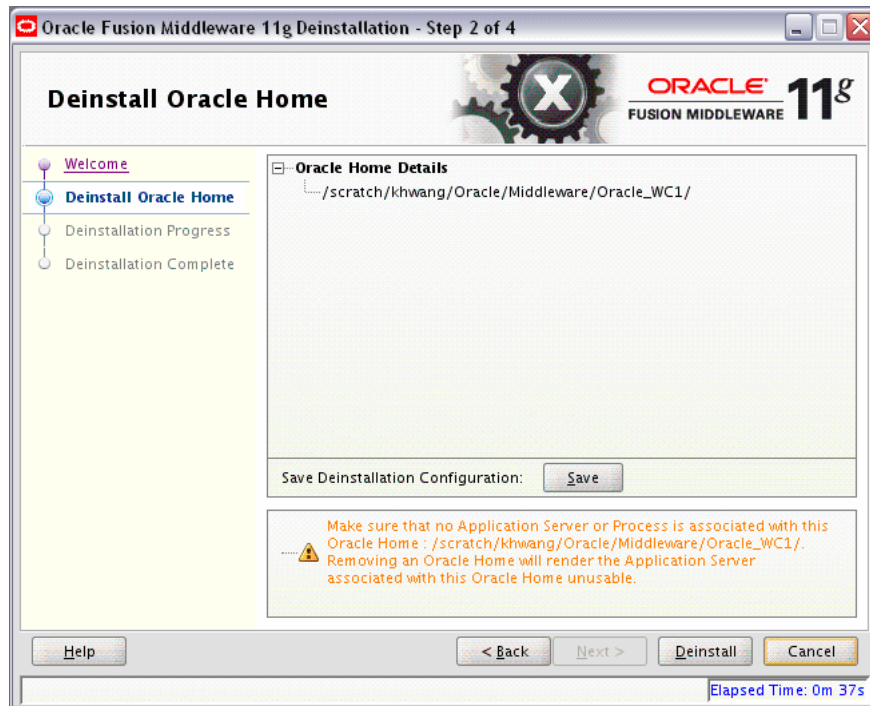
This screen shows the Oracle home directory that is about to be deinstalled. This is the Oracle home directory from which the deinstaller was started.

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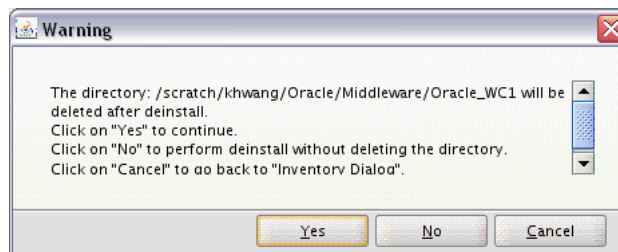
Click **Yes** to remove the software and the Oracle home directory from which the deinstaller was started.

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
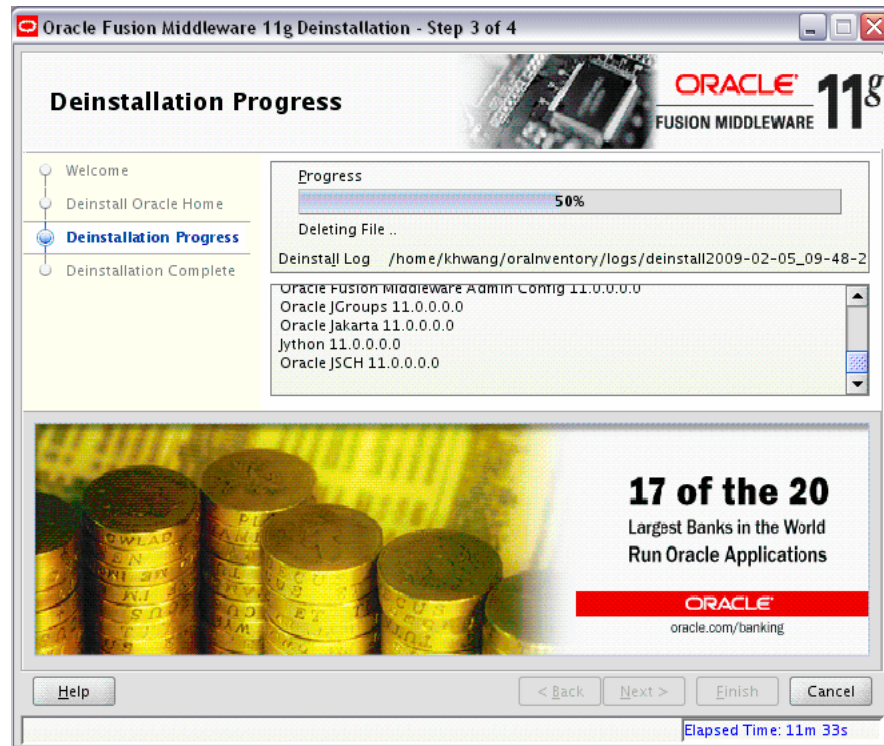
This screen shows you the progress of the deinstallation.

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.

C

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.rsp` is provided in the `Disk1/stage/Response` (on UNIX operating systems) or `Disk1\stage\Response` (on Windows operating systems) directory on the installation CD-ROM. This template response file can be used to install the Oracle WebCenter software only. You will still need to run the Configuration Wizard separately to create or extend your WebLogic domain and configure Oracle WebCenter products.

The only parameters you need to specify in this file are `ORACLE_HOME` and `MIDDLEWARE_HOME`:

```
[ENGINE]

#DO NOT CHANGE THIS.
Response File Version=1.0.0.0.0

[GENERIC]

#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 WebCenter Oracle Home.
ORACLE_HOME=/home/middleware/Oracle_WC1

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


[SYSTEM]


[APPLICATIONS]


[RELATIONSHIPS]
```

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 on the installation CD-ROM. 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]
```

D

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 the latest updates. The most current version of the release notes is available on Oracle Technology Network (`http://www.oracle.com/technology/documentation`).

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

  `http://www.oracle.com/technology/software/products/ias/files/fusion`
  `_requirements.htm`

- 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 5, "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:

- `install`*`date-time-stamp`*`.log`

  This is the main log file.

- `install`*`date-time-stamp`*`.out`

  This log file contains the output and error streams during the installation.

- `installActions`*`date-time-stamp`*`.log`

  This file is used by the installer GUI to keep track of internal information.

- `installProfile`*`date-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.

- `oraInstall`*`date-time-stamp`*`.log`

  This log file contains the output stream of the copy session.

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

- `timeTaken`*`date-time-stamp`*`.log`

  This file contains information for the amount of time taken to move between screens (applicable for GUI installations only).

- `time`*`date-time-stamp`*`.log`

  This file contains time information for the copy session.

If you start the installer with the `-printmemory` parameter, the `memory`*`date-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 2.2.1, "Starting the Installer" for more information.

D.4 Need More Help?

If this appendix does not solve the problem you encountered, try these other sources:

- *Oracle Fusion Middleware Release Notes*, available on the Oracle Technology Network (http://www.oracle.com/technology/documentation)

- My Oracle Support (formerly Oracle*MetaLink*: http://metalink.oracle.com)

If you do not find a solution for your problem, open a service request.

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