Oracle® Fusion Middleware

Installing and Configuring Oracle WebLogic Server and Coherence

12*c* (12.1.3)

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Documentation for installers and system administrators that describes how to install and configure Oracle WebLogic Server and Coherence.

ORACLE®

Oracle Fusion Middleware Installing and Configuring Oracle WebLogic Server and Coherence, 12*c* (12.1.3)

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Preface

This document describes how to install and configure Oracle WebLogic Server and Coherence.

Audience

This document is intended for system administrators or application developers who are installing WebLogic Server. It is assumed that readers are familiar with Web technologies and have a general understanding of Windows and UNIX platforms.

Documentation Accessibility

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

Access to Oracle Support

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

Related Documents

For more information, see the following documents in the 12*c* (12.1.3) documentation library:

- *Upgrading Oracle WebLogic Server*

  If you are upgrading your Oracle WebLogic Server installation from an earlier version (for example from a 10.*x* release in 11*g* to a 12*c* release), this document explains how to upgrade the entire WebLogic Server environment, including applications, the WebLogic domains in which they are deployed, and any application data associated with the domain. This may include external resources, such as database servers, firewalls, load balancers, and LDAP servers.

- *Installing and Configuring the Oracle Fusion Middleware Infrastructure*

  Oracle WebLogic Server is also available as part of the Oracle Fusion Middleware Infrastructure distribution. Refer to this book if you want to install Oracle WebLogic Server with Infrastructure capabilities.

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

Planning the Oracle WebLogic Server Installation

This chapter helps to prepare you for installing Oracle WebLogic Server and Coherence.

Various topics are covered that should be reviewed thoroughly to help ensure that you do not encounter any problems either during or after the product installation and domain configuration.

The following sections are included:

- Section 1.1, "Using this Document"
- Section 1.2, "Understanding the WebLogic Server and Coherence Standard Installation Topology"
- Section 1.3, "Roadmap for Installing and Configuring the Installation Topology"
- Section 1.4, "Roadmap for Verifying Your System Environment"
- Section 1.5, "Understanding and Obtaining the Oracle WebLogic Server and Coherence Distribution"

1.1 Using this Document

This section contains the following topics:

- Section 1.1.1, "Using the Standard Installation Topology as a Starting Point"
- Section 1.1.2, "Using this Document in an Upgrade Scenario"
- Section 1.1.3, "Using this Document to Extend a Domain"
- Section 1.1.4, "Using Installation Documents for Development Environments"

1.1.1 Using the Standard Installation Topology as a Starting Point

This guide will help you create the standard installation topology for Oracle WebLogic Server and Coherence (Figure 1–1). This topology can be extended to be highly available and secure, making it suitable for a production system.

The standard installation topology represents a sample topology for this product; it is not the only topology that is supported. For more information, see "Understanding the Standard Installation Topology" in *Planning an Installation of Oracle Fusion Middleware*.

1.1.2 Using this Document in an Upgrade Scenario

If you are installing Oracle WebLogic Server and Coherence as part of an upgrade procedure, follow the instructions in this book to install the software, but do not run the Configuration Wizard to create a WebLogic domain.

After the software is installed, refer to *Upgrading Oracle WebLogic Server*.

1.1.3 Using this Document to Extend a Domain

The instructions in this document describe how to create a new domain; the same instructions can be used to extend an existing domain. If you choose to do this, be sure to read "Installing Multiple Products in the Same Domain" in *Planning an Installation of Oracle Fusion Middleware* for important information.

If you are creating a new domain but your needs do not match the instructions given in the procedure, be sure to make your selections accordingly and refer to the supporting documentation for additional details.

1.1.4 Using Installation Documents for Development Environments

This guide describes how to use the Oracle WebLogic Server and Coherence distribution to install and configure a runtime, production environment for Oracle WebLogic Server.

In addition, Oracle provides Oracle WebLogic Server development-only and supplemental installers.

- The *development-only installer* is a ZIP file that you simply extract to create a WebLogic Server installation. This ZIP file contains a WebLogic Server installation that includes all of the artifacts you need to develop Java applications development. You cannot apply a patch to the development-only installation; the installer does not contain OPatch.

  You must not use this WebLogic Server installation for production. Do not use the ZIP file installation to configure a production environment. For more information, refer to the readme file in the ZIP archive, which also contains up-to-date information about changes for this release.

- The *supplemental installer* ZIP file is also available to provide additional features, such as server examples, for a development-only installation.

For more information about setting up a development environment, refer to the following resources:

- See "Overview of WebLogic Server Application Development" in *Developing Applications for Oracle WebLogic Server* for a complete list of considerations to keep in mind when you set up a development environment for Oracle WebLogic Server.

- See *Installing Oracle JDeveloper* for instructions to install Oracle JDeveloper, which is an integrated development environment (IDE) for building applications using the latest standards for Java, XML, Web services, and SQL.

1.2 Understanding the WebLogic Server and Coherence Standard Installation Topology

The standard installation topology for Oracle WebLogic Server and Coherence is shown in Figure 1–1.

Figure 1–1   Oracle WebLogic Server and Coherence Topology
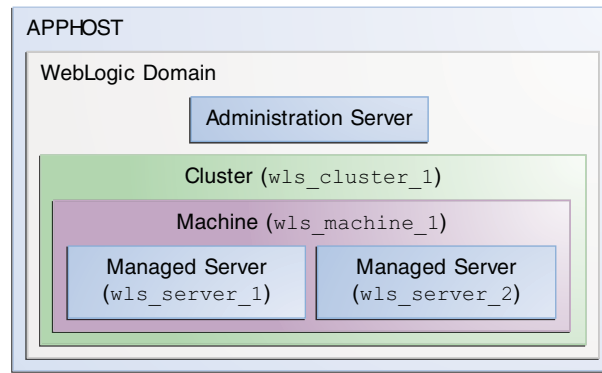
This topology includes a standard WebLogic Server domain that contains two Managed Servers in a cluster and an Administration Server, all configured on a single host.

Each element in this topology illustration is described in Table 1–1.

Table 1–1   Description of the Elements in the Oracle WebLogic Server and Coherence Standard Installation Topology

Element	Description and Links to Additional Documentation
APPHOST	Standard term used in Oracle documentation referring to the machine that is hosting the application tier.
WebLogic Domain	A logically related group of Java components (in this case, the Administration Server, Managed Servers, and other related software components).
	For more information, see "What is an Oracle WebLogic Server Domain" in *Understanding Oracle Fusion Middleware*.
Administration Server	The central control entity of a domain which maintains the domain's configuration objects and distributes configuration changes to Managed Servers.
	For more information, see "What is the Administration Server" in *Understanding Oracle Fusion Middleware*.
Cluster	A collection of multiple WebLogic Server instances running simultaneously and working together.
	For more information, see "Understanding Managed Servers and Managed Server Clusters" in *Understanding Oracle Fusion Middleware*.
Machine	Logical representation of the computer that hosts one or more WebLogic Server instances (servers). Machines are also the logical glue between WebLogic Managed Servers and the Node Manager; in order to start or stop a Managed Server with Node Manager, the Managed Server must be associated with a machine.
Managed Server	Host for your applications, application components, Web services, and their associated resources.
	For more information, see "Understanding Managed Servers and Managed Server Clusters" in *Understanding Oracle Fusion Middleware*.

A roadmap describing the necessary steps to arriving at this topology can be found in Section 1.3.

1.3 Roadmap for Installing and Configuring the Installation Topology

This guide provides all the steps required to install and configure WebLogic Server. Within the procedures, the guide also provides references to additional information you can use if you want to create a modified version of this topology.

Table 1–2 shows the steps required to install and configure Oracle WebLogic Server.

Table 1–2   Oracle WebLogic Server and Coherence Installation Procedure

Task	Description	Documentation
Verify your system environment	Before beginning the installation, verify that the minimum system and network requirements are met.	Section 1.4.
Obtain the appropriate distribution	To create the topology described in this section, obtain the Oracle WebLogic Server and Coherence distribution.	Section 1.5.
Determine your installation directories	Verify that the directories that will need to be created can be created or accessed by the installer, and exist on systems that meet the minimum requirements.	"What are the Key Oracle Fusion Middleware Directories?" in *Understanding Oracle Fusion Middleware*.
Install the software	Run the installation program to install the software.	Chapter 2.
Create a WebLogic domain	Use the Fusion Middleware Configuration Wizard to create a WebLogic domain.	Chapter 3.
Perform post-installation tasks	After your domain is created, you can begin to manage the components in your domain, or continue to modify your environment for high availability.	Chapter 4.

1.4 Roadmap for Verifying Your System Environment

This section (Table 1–3) contains important information that you must read and understand prior to beginning the installation and configuration process. It identifies important tasks and checks to perform to make sure your environment is properly prepared for installing and configuring Oracle Fusion Middleware WebLogic Server and Coherence.

Table 1–3   Roadmap for Verifying Your System Environment

Task	Description	Documentation
Verify certification and system requirements.	Verify that your operating system is certified and properly configured for Oracle Fusion Middleware WebLogic Server and Coherence installation and configuration.	See "Verifying Certification, System Requirements and Interoperability" in *Planning an Installation of Oracle Fusion Middleware*.
Identify a proper installation user.	Verify that the installation user has the proper permissions to install and configure the software.	See "Selecting an Installation User" in *Planning an Installation of Oracle Fusion Middleware*.
Select the installation and configuration directories on your system.	Verify that you are able to create the necessary directories for installation and configuration, according to the recommended directory structure.	See "Selecting Directories for Installation and Configuration" in *Planning an Installation of Oracle Fusion Middleware*.
Install a certified JDK.	The installation program for the distribution requires that your system have a certified JDK.	See "Installing a JDK" in *Planning an Installation of Oracle Fusion Middleware*.

1.5 Understanding and Obtaining the Oracle WebLogic Server and Coherence Distribution

For complete information about how to obtain Oracle Fusion Middleware software, see "Understanding and Obtaining Product Distributions" in *Planning an Installation of Oracle Fusion Middleware*.

To download the Oracle WebLogic Server and Coherence software for development or evaluation, see the following location on the Oracle Technology Network (OTN):

```
http://www.oracle.com/technetwork/middleware/fusion-middleware/downloads/index.html
```

For more information about locating and downloading Oracle Fusion Middleware products, see the *Oracle Fusion Middleware Download, Installation, and Configuration Readme Files* on OTN.

To obtain Oracle WebLogic Server and Coherence, go to Oracle Technology Network and follow these steps:

1. Find `fmw_12.1.3.0.0_wls_Disk1_1of1.zip` and download this file onto your system.

2. Extract the contents of this `.zip` file onto your system. One of the files extracted will be `fmw_12.1.3.0.0_wls.jar`; this file will be used to run the product installer and install the software onto your system (Chapter 2).

   The Oracle SOA Suite and Business Process Management distribution contains the products and feature sets described in Appendix A.

2

Installing the Oracle WebLogic Server and Coherence Software

This chapter describes how to start the Oracle WebLogic Server and Coherence installation program in graphical mode. It also describes the sequence of screens that appear in the installation process.

The following sections are included:

- Section 2.1, "Starting the Installation Program"
- Section 2.2, "Navigating the Installation Screens"
- Section 2.3, "Understanding the Coherence Installation Type"

2.1 Starting the Installation Program

To start the installation program, perform the following steps.

1. Log in to the target system.

2. The installer requires that a certified JDK already exists on your system. For more information, see the appropriate certification document for 12*c* (12.1.3) on the *Oracle Fusion Middleware Supported System Configurations* page.

3. Change to the directory that contains the downloaded installation program.

4. Launch the installation program by invoking `java -jar` from the JDK directory on your system, as shown in the examples below:

   On UNIX operating systems:

   ```
   /home/Oracle/jdk7_51/jdk1.7.0_51/bin/java -jar fmw_12.1.3.0.0_wls.jar
   ```

   On Windows operating systems:

   ```
   C:\Program Files\Java\jdk1.7.0_51\bin\java -jar fmw_12.1.3.0.0_wls.jar
   ```

   Be sure to replace JDK location in these examples with the actual JDK location on your system.

When the installation program appears, you are ready to begin the installation. See Section 2.2 for a description of each installation program screen.

2.2 Navigating the Installation Screens

The installation program displays a series of screens, in the order listed in Table 2–1.

Each installation screen has a help button that you can click to get more information.

Table 2–1 Oracle WebLogic Server and Coherence Installation Screens

Screen	Description
Installation Inventory Setup	On UNIX operating systems, this screen will appear if this is the first time you are installing any Oracle product on this host. Specify the location where you want to create your central inventory. Make sure that the operating system group name selected on this screen has write permissions to the central inventory location.
	For more information about the central inventory, see "Understanding the Oracle Central Inventory" in *Installing Software with the Oracle Universal Installer*.
	This screen will not appear on Windows operating systems.
Welcome	This screen introduces you to the product installer.
Installation Location	Use this screen to specify the location of your Oracle home directory.
	For more information about Oracle Fusion Middleware directory structure, see "Selecting Directories for Installation and Configuration" in *Planning an Installation of Oracle Fusion Middleware*.
Installation Type	Options are **Weblogic Server**, **Coherence**, and **Complete with Examples**. To create the standard installation topology for WebLogic Server and Coherence, select **WebLogic Server**.
	NOTE: The topology in this document does not include server examples; Oracle strongly recommends that you do not install the examples into a production environment.
	See Section 2.3 for more information about the **Coherence** installation type.
	See Appendix A, "Understanding the Oracle WebLogic Server and Coherence Distribution" for more information about Oracle WebLogic Server installation types.
Prerequisite Checks	This screen verifies that your system meets the minimum necessary requirements.
	If there are any warning or error messages, you can refer to one of the following documents in Section 1.4.
Specify Security Updates	If you already have an Oracle Support account, use this screen to indicate how you would like to receive security updates.
	If you do not have one and are sure you want to skip this step, clear the check box and verify your selection in the follow-up dialog box.
Installation Summary	Use this screen to verify the installation options you selected. If you want to save these options to a response file, click **Save Response File** and provide the location and name of the response file. Response files can be used later in a silent installation mode.
	For more information about silent or command line installation, see "Using the Oracle Universal Installer in Silent Mode" in *Installing Software with the Oracle Universal Installer*.
Installation Progress	This screen shows the progress of the installation.

Table 2–1   (Cont.) Oracle WebLogic Server and Coherence Installation Screens

Screen	Description
Installation Complete	This screen appears when the installation is complete.
	The next step is to launch the Configuration Wizard to create your WebLogic domain. There are two ways to do this:
	■ Select **Automatically Launch the Configuration Wizard** on this screen. After you click **Finish** to dismiss the installer, the Configuration Wizard is started and you can begin to configure your domain. If you choose to do this, proceed to Section 3.1.2.
	■ Do not select **Automatically Launch the Configuration Wizard** on this screen. After you click **Finish** to dismiss the installer, you must manually start the Configuration Wizard to begin configuring your domain. If you choose to do this, proceed to Section 3.1.1.
	If you chose the **Complete with Examples** installation type, this screen will give you the option to start the Quick Start Configuration Wizard, which enables you to create sample domains. For more information, see "Quick Start Configuration Wizard" in *Creating Domains Using the Configuration Wizard*.

2.3 Understanding the Coherence Installation Type

For the WebLogic Server and Coherence standard installation topology, select the **WebLogic Server** installation type. When you select this installation type and use the instructions in this guide, the standard installation topology includes a Coherence cluster that contains storage-enabled Managed Coherence Servers.

The **Coherence Installation** installation type is available for users who want to deploy and manage Coherence applications using the WebLogic Management Framework. For more information, see the following:

■   "Deploying Coherence Applications" in *Administering Oracle Coherence*.

■   "What is the WebLogic Management Framework?" in *Understanding Oracle Fusion Middleware*.

3

Creating and Configuring the WebLogic Domain

This chapter describes the steps required to create the WebLogic Server domain after the Oracle Fusion Middleware WebLogic Server and Coherence software has been successfully installed.

The following topics are covered:

- Section 3.1, "Configuring the WebLogic Domain"
- Section 3.2, "Starting the Servers"
- Section 3.3, "Verifying the Configuration"

3.1 Configuring the WebLogic Domain

This section provides instructions for creating a WebLogic domain using the Configuration Wizard. For more information on other methods available for domain creation, see "Additional Tools for Creating, Extending, and Managing WebLogic Domains" in *Creating Domains Using the Configuration Wizard*.

The following topics are covered in this section:

- Section 3.1.1, "Starting the Configuration Wizard"
- Section 3.1.2, "Navigating the Configuration Wizard Screens to Configure the Domain"

3.1.1 Starting the Configuration Wizard

To begin domain configuration, navigate to the `ORACLE_HOME/oracle_common/common/bin` directory and start the WebLogic Server Configuration Wizard.

On UNIX operating systems:

```
./config.sh
```

On Microsoft Windows operating systems:

```
config.cmd
```

3.1.2 Navigating the Configuration Wizard Screens to Configure the Domain

Follow the instructions in this section to configure the domain using the Configuration Wizard.

> **Note:** You can use the same procedure described in this section to extend an existing domain. If your needs do not match the instructions given in the procedure, be sure to make your selections accordingly, or refer to the supporting documentation for additional details.
>
> If you need to configure multiple products in a single domain, refer to "Installing Multiple Products in the Same Domain" in *Planning an Installation of Oracle Fusion Middleware* for important information.

- Task 1, "Selecting the Domain Type and Domain Home Location"
- Task 2, "Selecting the Configuration Templates"
- Task 3, "Configuring the Administrator Account"
- Task 4, "Specifying the Domain Mode and JDK"
- Task 5, "Selecting Advanced Configuration Options"
- Task 6, "Configuring the Administration Server Listen Address"
- Task 7, "Configuring Node Manager"
- Task 8, "Configuring Managed Servers"
- Task 9, "Configure a Cluster"
- Task 10, "Assigning Managed Servers to the Cluster"
- Task 11, "Configuring Coherence Clusters"
- Task 12, "Configuring a New Machine"
- Task 13, "Assigning Servers to Machines"
- Task 14, "Reviewing Your Configuration Specifications and Configuring the Domain"
- Task 15, "Writing Down Your Domain Home and Administration Server URL"

Task 1 Selecting the Domain Type and Domain Home Location

On the Configuration Type screen, select **Create a New Domain**.

In the Domain Location field, specify your Domain home directory.

It is recommended that you locate your Domain home in accordance with the directory structure summarized in "What are the Key Oracle Fusion Middleware Directories?" in *Understanding Oracle Fusion Middleware*, where the Domain home is located outside the Oracle home directory. This directory structure will help you avoid issues when you need to upgrade or re-install your software.

> **Tip:** More information about the Domain home directory can be found in "Choosing a Domain Home" in *Planning an Installation of Oracle Fusion Middleware*.
>
> More information about reinstalling the software can be found in Section 5.7
>
> More information about the other options on this screen can be found in Configuration Type in *Creating Domains Using the Configuration Wizard*.

Task 2 Selecting the Configuration Templates

On the Templates screen select the following templates for configuration:

- **Basic WebLogic Server Domain** (selected by default)

- **WebLogic Coherence Cluster Extension**

  Selecting this template will cause the Managed Servers in the cluster to be managed Coherence servers, and the cluster will be a managed Coherence cluster. This serves as a starting point for setting up your Coherence environment. For more detailed information and next steps, see Table 4–1.

> **Tip:**   More information about the options on this screen can be found in Templates in *Creating Domains Using the Configuration Wizard*.

Task 3 Configuring the Administrator Account

On the Administrator Account screen, specify the user name and password for the default WebLogic Administrator account for the domain. This account is used to boot and connect to the domain's Administration Server.

> **Tip:**   You must make a note of the user name and password you choose to enter here; you will need this in order to be able to start and access the Administration Server.

Task 4 Specifying the Domain Mode and JDK

On the Domain Mode and JDK screen:

- Select **Production** in the Domain Mode field.

- Select **Oracle Hotspot JDK** in the JDK field.

Selecting **Production Mode** on this screen gives your environment a higher degree of security, requiring a user name and password to deploy applications and to start the Administration Server.

> **Tip:**   More information about the options on this screen, including the differences between development mode and production mode, can be found in Domain Mode and JDK in *Creating Domains Using the Configuration Wizard*.

Task 5 Selecting Advanced Configuration Options

To complete domain configuration for the topology, select the following options on the Advanced Configuration screen:

- Administration Server

  This is required to properly configure the listen address of the Administration Server.

- Node Manager

- Managed Servers, Clusters and Coherence

  This is required to configure the Managed Servers and cluster, and also for configuring the machine and targeting the Managed Servers to the machine.

  > **Tip:** If you want to configure dynamic clusters, see the following:
  >
  > - "Overview of Dynamic Clusters" in *Understanding Oracle WebLogic Server*.
  >
  > - "Creating Dynamic Clusters" in *Administering Clusters for Oracle WebLogic Server*.

Task 6 Configuring the Administration Server Listen Address

On the Administration Server screen, select the drop-down list next to Listen Address and select the IP address on the host where the Administration Server will reside. Do not use "All Local Addresses."

Task 7 Configuring Node Manager

The Node Manager screen can be used to select the type of Node Manager you want to configure, along with the Node Manager credentials.

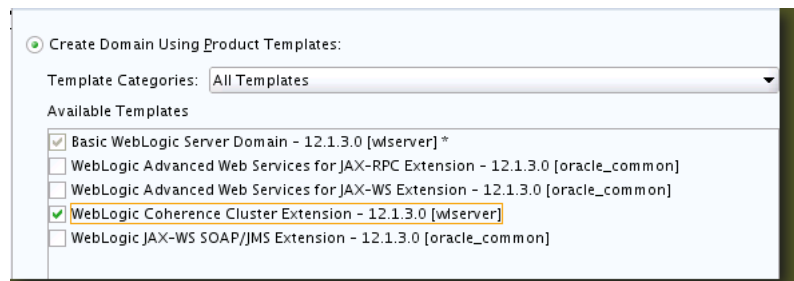Select **Per Domain Default Location** as the Node Manager type, then specify the user name and password.

> **Tip:** More information about the options on this screen can be found in Node Manager in *Creating Domains Using the Configuration Wizard*.
>
> More information about the types of Node Manager can be found in "Node Manager Overview" in *Administering Node Manager for Oracle WebLogic Server*.

Task 8 Configuring Managed Servers

Use the Managed Servers screen to create two new Managed Servers:

1. Click the **Add** button to create a new Managed Server.

2. Specify `wls_server_1` in the Server name column.

3. In the Listen Address drop-down list, select the IP address of the host on which the Managed Server will reside. Do not use "All Local Addresses."

4. Repeat this process to create a second Managed Server named `wls_server_2`.

   Configuring a second Managed Server is one of the steps needed to configure the standard topology for high availability. If you are not creating a highly available environment, then this step is optional.

   For more information about the high availability standard topology, see "Understanding the Fusion Middleware Standard HA Topology" in *High Availability Guide*.

   For more information about the next steps to prepare for high availability after your domain is configured, see Section 4.3.

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

Server Name	Listen Address	Listen Port	Enable SSL	SSL Listen Port
wls_server_1	localhost	7003	☐	Disabled
wls_server_2	localhost	7004	☐	Disabled

> **Tip:** More information about the options on this screen can be found in Managed Servers in *Creating Domains Using the Configuration Wizard*.

Task 9 Configure a Cluster

Use the Clusters screen to create a new cluster.

1. Click the **Add** button.

2. Specify `wls_cluster_1` in the Cluster Name field.

3. Leave the cluster Address field blank.

Cluster Name	Cluster Address	Frontend Host	Frontend HTTP Port	Frontend HTTPS Port
wls_cluster_1			0	0

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

> **Tip:** More information about the options on this screen can be found in Clusters in *Creating Domains Using the Configuration Wizard*.

Task 10 Assigning Managed Servers to the Cluster

Use the Assign Servers to Clusters screen to assign `wls_server_1` and `wls_server_2` to the new cluster `wls_cluster_1`.

1. In the Clusters pane, select the cluster to which you want to assign the servers; in this case, `wls_cluster_1`.

2. In the Servers pane, assign `wls_server_1` to `wls_cluster_1` by doing one of the following:

   - Click once on `wls_server_1` to select it, then click on the right arrow to move it beneath the selected cluster (`wls_cluster_1`) in the Clusters pane.

   - Double-click on `wls_server_1` to move it beneath the selected cluster (`wls_cluster_1`) in the clusters pane.

3. Repeat to assign `wls_server_2` to `wls_cluster_1`.
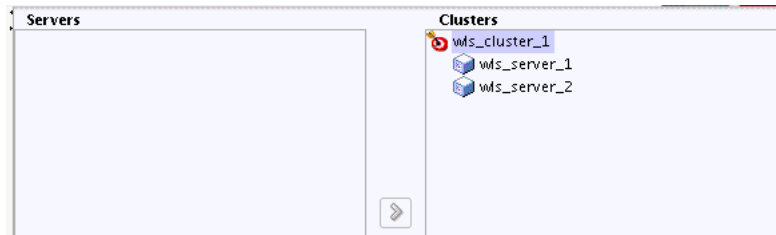
> **Tip:** More information about the options on this screen can be found in Assign Servers to Clusters in *Creating Domains Using the Configuration Wizard*.

Task 11 Configuring Coherence Clusters

Use the Coherence Clusters screen to configure the Coherence cluster that is automatically added to the domain. Leave the default port number 0 as the Coherence cluster listen port.

> **Note:** Setting the unicast listen port to 0 creates an offset for the Managed Server port numbers. The offset is 5000, meaning the maximum allowed value that can be assigned to a Managed Server port number is 60535, instead of 65535.

See Table 4–2 for more information and next steps for configuring Coherence.

> **Note:** For Coherence licensing information, refer to "Oracle Coherence" in *Licensing Information*.

Task 12 Configuring a New Machine

Use the Machines screen to create a new machine in the domain. A machine is required in order for the Node Manager to be able to start and stop the servers.

> **Tip:** If you plan to create a high availability environment and know the list of machines required for your target topology, you can follow the directions in this section to create all of the machines at this time. For more information, see "Optional Scale Out Procedure" in *High Availability Guide*.

1. Click the **Add** button to create a new machine.

2. Specify `wls_machine_1` in the Name field.

3. In the Node Manager Listen Address field, select the IP address of the machine where the Managed Servers are being configured.

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

4. Verify the port in the Node Manager Listen Port field.

   The port number `5556`, shown in this example, may be referenced by other examples in the documentation. Replace this port number with your own port number as needed.

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

> **Tip:** More information about the options on this screen can be found in Machines in *Creating Domains Using the Configuration Wizard*.
>
> If you plan to create a high availability environment and know the list of machines required for your target topology, you can create all of the machines at this time. For more information, see "Optional Scale Out Procedure" in *High Availability Guide*.

Task 13 Assigning Servers to Machines

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

1. In the Machines pane, select the machine to which you want to assign the servers; in this case, `wls_machine_1`.

2. In the Servers pane, assign `AdminServer` to `wls_machine_1` by doing one of the following:

   - Click once on `AdminServer` to select it, then click on the right arrow to move it beneath the selected machine (`wls_machine_1`) in the Machines pane.

   - Double-click on `AdminServer` to move it beneath the selected machine (`wls_machine_1`) in the Machines pane.

3. Repeat to assign both `wls_server_1` and `wls_server_2` to `wls_machine_1`.

> **Tip:** More information about the options on this screen can be found in Assign Servers to Machines in *Creating Domains Using the Configuration Wizard*.

Task 14 Reviewing Your Configuration Specifications and Configuring the Domain

The Configuration Summary screen contains the detailed configuration information for the domain you are about to create. Review the details of each item on the screen and verify that the information is correct.

You can go back to any previous screen if you need to make any changes, either by using the **Back** button or by selecting the screen in the navigation pane.

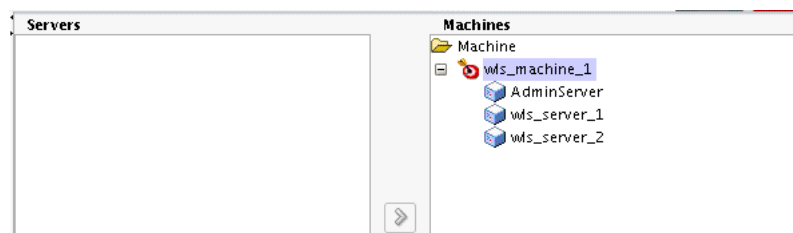Domain creation will not begin until you click **Create**.

> **Tip:** More information about the options on this screen can be found in Configuration Summary in *Creating Domains Using the Configuration Wizard*.

Task 15 Writing Down Your Domain Home and Administration Server URL

The Configuration Success screen will show the following items about the domain you just configured:

- Domain Location
- Administration Server URL

You must make a note of both items as you will need them to start the servers and access the Administration Server.

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

3.2 Starting the Servers

After configuration is complete, in order to access the tools with which you can manage your domain, Oracle recommends that you take the following steps:

- Section 3.2.1, "Starting the Node Manager"
- Section 3.2.2, "Starting the Administration Server"
- Section 3.2.3, "Starting the Managed Servers"

3.2.1 Starting the Node Manager

To start your per-domain Node Manager, go to the `DOMAIN_HOME`/bin directory.

On UNIX operating systems, start Node Manager as shown below, using `nohup` and `nm.out` as an example output file:

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

On Windows operating systems, run:

```
startNodeManager.cmd
```

> **Note:** If you use Windows, Oracle recommends that you install Node Manager to run as a startup service. This allows Node Manager to start up automatically each time the system is restarted. (Node Manager is not required to start servers, Oracle recommends it over other methods.)
>
> For more information, see "Running Node Manager as a Startup Service" in *Administering Node Manager for Oracle WebLogic Server*.

3.2.2 Starting the Administration Server

To start the Administration Server, go the `DOMAIN_HOME`/bin directory.

On UNIX operating systems, run:

```
./startWebLogic.sh
```

On Windows operating systems, run:

```
startWebLogic.cmd
```

If you selected **Production Mode** on the Domain Mode and JDK screen in Task 4, you will be prompted for the login credentials of the Administrator user as provided on the Administrator Account screen in Task 3.

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

3.2.3 Starting the Managed Servers

To start the Managed Servers, go the `DOMAIN_HOME`/bin directory and run the following command:

On UNIX operating systems:

```
./startManagedWebLogic.sh managed_server_name admin_server_url
```

On Windows operating systems:

```
startManagedWebLogic.cmd managed_server_name admin_server_url
```

Replace `managed_server_name` with the names of the Managed Server you want to start. For this topology, the Managed Server names are `wls_server_1` and `wls_server_2`, as defined on the Managed Server screen in Task 8. You need to run this command twice; once for each Managed Server.

Replace `admin_server_url` with the full URL of the Administration Server, as provided on the Configuration Success screen in Task 14.

Below are sample commands used to start `wls_server_1` and `wls_server_2` on UNIX operating systems:

```
./startManagedWebLogic.sh wls_server_1 t3:\\examplehost.exampledomain.com:7001 &
./startManagedWebLogic.sh wls_server_2 t3:\\examplehost.exampledomain.com:7001 &
```

> **Tip:** For more information about starting Managed Servers, see "Starting and Stopping Servers" in *Administering Server Startup and Shutdown for Oracle WebLogic Server*.

3.3 Verifying the Configuration

To verify that your domain is configured properly, see Section 4.1. You should familiarize yourself with the tasks described in this section and perform them to verify that your domain is properly configured.

4

Next Steps After Configuring the WebLogic Server Domain

This chapter describes common tasks you might want to perform on the newly created WebLogic Server domain.

The following sections are included:

- Section 4.1, "Performing Basic Administrative Tasks"
- Section 4.2, "Performing Additional Domain Configuration Tasks"
- Section 4.3, "Preparing Your Environment For High Availability"

4.1 Performing Basic Administrative Tasks

Table 4–1 lists some common administration tasks you will likely want to perform on your newly created domain.

Table 4–1 Basic Administration Tasks for a New Domain

Task	Description	More Information
Getting familiar with Fusion Middleware administration tools	Get familiar with the various tools available which you can use to manage your environment.	"System Administration" in *Understanding Oracle WebLogic Server*.
Starting and stopping products and servers	Learn how to start and stop Oracle Fusion Middleware, including the Administration Server, Managed Servers, and components.	"Starting and Stopping Servers" in *Administering Server Startup and Shutdown for Oracle WebLogic Server*.
Configuring Secure Sockets Layer (SSL)	Learn how to set up secure communications among Oracle Fusion Middleware components using SSL.	"Overview of Configuring SSL in WebLogic Server" in *Administering Security for Oracle WebLogic Server*.
Understanding diagnostic and troubleshooting procedures	Learn the recommended diagnostic and troubleshooting procedures for Oracle Fusion Middleware.	"Monitoring, Diagnosing, and Troubleshooting" in *Understanding Oracle WebLogic Server*.

4.2 Performing Additional Domain Configuration Tasks

Table 4–2 lists some additional tasks you will likely want to perform on your newly created domain.

Table 4–2   Additional Domain Configuration Tasks

Task	Description	More Information
Deploying applications	Learn how to deploy your applications to WebLogic Server.	Deploying Applications in WebLogic Server in *Understanding Oracle WebLogic Server*.
Adding a Web Tier front-end to your WebLogic domain	Oracle Web Tier hosts Web pages (static and dynamic), provides security and high performance along with built-in clustering, load balancing, and failover features. In particular, the Web Tier contains Oracle HTTP Server.	Follow the instructions to install and configure a standalone Oracle HTTP Server in *Installing and Configuring Oracle HTTP Server*. Also refer to "Installing Multiple Products in the Same Domain" in *Planning an Installation of Oracle Fusion Middleware* for important information.
Tuning and configuring Coherence for your topology.	The standard installation topology includes a Coherence cluster that contains storage-enabled Managed Coherence Servers. This configuration is a good starting point for using Coherence, but depending upon your specific requirements, consider tuning and reconfiguring Coherence to improve performance in a production environment.	For information about Coherence clusters, see "Configuring and Managing Coherence Clusters" in *Administering Clusters for Oracle WebLogic Server*. For information about tuning Coherence, see *Administering Oracle Coherence*. For information about storing HTTP session data in Coherence, see "Using Coherence Web with WebLogic Server" in *Administering HTTP Session Management with Oracle Coherence*Web*. For more information about creating and deploying Coherence applications, see *Developing Oracle Coherence Applications for Oracle WebLogic Server*.

4.3 Preparing Your Environment For High Availability

Table 4–3 provides a list of tasks to perform if you want to scale out your standard installation environment for high availability.

Table 4–3   Tasks Required to Prepare Your Environment for High Availability

Task	Description	More Information
Configuring Node Manager	Node Manager enables you to start, shut down, and restart the Administration Server and Managed Server instances from a remote location, making this an essential utility for any high availability environment.	*Administering Node Manager for Oracle WebLogic Server*.

Table 4–3   (Cont.) Tasks Required to Prepare Your Environment for High Availability

Task	Description	More Information
Enabling failover and replication	To enable high availability, it is important to provide failover capabilities to another host computer. That way, if one computer goes down, your environment can continue to serve the consumers of your deployed applications.	"WebLogic Server Clustering" in the *Understanding Oracle WebLogic Server*.
Configuring high availability for your Web Tier components	If you have added a Web Tier front-end, then you must configure the Web Tier for high availability, as well as the WebLogic Server software.	"Configuring High Availability for Web Tier Components" in *High Availability Guide*.
Setting up a front-end load balancer	You can use a load balancer to distribute requests across servers more evenly.	"Load Balancing HTTP Sessions with an External Load Balancer" in 4*Administering Clusters for Oracle WebLogic Server*.

5

Deinstalling Oracle WebLogic Server and Coherence

This chapter describes how to deinstall and reinstall Oracle WebLogic Server and Coherence.

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 chapter will ensure that the software is properly removed.

This chapter includes the following sections:

- Section 5.1, "Understanding Product Deinstallation"
- Section 5.2, "Stopping Oracle Fusion Middleware"
- Section 5.3, "Deinstalling the Software"
- Section 5.4, "Removing the Oracle Home Directory Manually"
- Section 5.5, "Removing the Program Shortcuts on Windows Operating Systems"
- Section 5.6, "Removing Your Domain and Application Data"
- Section 5.7, "Reinstalling Your Software"

5.1 Understanding Product Deinstallation

The Oracle Fusion Middleware deinstaller removes software from the Oracle home directory from which it is started. Table 5–1 summarizes the procedure and provides links to supporting documentation.

Table 5–1   Roadmap for Deinstalling Oracle Fusion Middleware Infrastructure

Task	Description and Documentation	Documentation
Stop Oracle Fusion Middeware.	All servers and processes in your domain should be stopped before running the deinstaller.	See Section 5.2.

Table 5–1   (Cont.) Roadmap for Deinstalling Oracle Fusion Middleware Infrastructure

Task	Description and Documentation	Documentation
Remove the software.	Run the product deinstaller to remove Oracle WebLogic Server and Coherence.	See Section 5.3.
Remove the Oracle home directory.	The deinstaller does not remove all files and folders from the Oracle home directory. After the deinstaller is finished, you must manually remove the Oracle home to complete your product removal.	See Section 5.4.
Remove your domain and application data.	The deinstaller does not remove data contained in your Domain home or Application home directories, even if they are located inside the Oracle home. You must remove these directories manually.	See Section 5.6.

Not all files and directories in the Oracle home are removed by the deinstaller

The deinstaller does not remove the JDK or any user-created data such as WebLogic domains or custom application data. Only the components that were installed by the installation program are removed by the deinstaller.

5.2 Stopping Oracle Fusion Middleware

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

For more information, see "Starting and Stopping Servers" in *Administering Server Startup and Shutdown for Oracle WebLogic Server*.

5.3 Deinstalling the Software

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

- Section 5.3.1, "Starting the Deinstallation Program"
- Section 5.3.2, "Navigating the Deinstallation Screens"

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

5.3.1 Starting the Deinstallation Program

To start the deinstaller on a Windows operating system, do one of the following:

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

- From the command line, go to the *ORACLE_HOME*\oui\bin and enter the following command:

  deinstall.cmd

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

To start the deinstaller on a UNIX operating system, go to the *ORACLE_HOME*/oui/bin directory and enter the following command:

  ./deinstall.sh

5.3.2 Navigating the Deinstallation Screens

The deinstallation program displays a series of screens, in the order listed in Table 5–2.

If you need additional help with any of the deinstallation screens, click the help button on the screen.

Table 5–2   Deinstallation Screens and Descriptions

Screen	Description
Welcome	This screen introduces you to the product deinstaller.
Deinstallation Summary	This screen shows the Oracle home directory and its contents that will be deinstalled. Verify that this is the correct directory.
	Click **Deinstall** to begin removing the software.
Deinstallation Progress	This screen shows the progress of the deinstallation.
Deinstallation Complete	This screen appears when the deinstallation is complete. Review the information on this screen, then click **Finish** to dismiss the deinstaller.

5.4 Removing the Oracle Home Directory Manually

After the deinstaller is finished, you must manually remove your Oracle home directory and any existing sub-directories that were not removed by the deinstaller. For example, if your Oracle home directory was `/home/Oracle/products/Oracle_Home` on a UNIX operating system:

```
> cd /home/Oracle/products
> rm -rf Oracle_Home
```

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

5.5 Removing the Program Shortcuts on Windows Operating Systems

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

Go to the `C:\Program Data\Microsoft\Windows\Start Menu\Programs\Oracle\`*`Oracle Home\`*`Product` directory. If you only have one product installed in your Oracle home, you can remove the *`Oracle Home`* directory. If you have multiple products installed in your Oracle home, you must remove all products before removing the *`Oracle Home`*.

5.6 Removing Your Domain and Application Data

If you will no longer use the domain and application data or if you do not plan to reconfigure a domain for a new WebLogic Server installation, Oracle recommends that you remove the domain and application data.

To remove your domain and application data:

1. Manually remove your Domain home directory.

For example, if your Domain home directory was
/home/Oracle/config/domains/infra_domain on a UNIX operating
system:

```
> cd /home/Oracle/config/domains
> rm -rf infra_domain
```

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

2. Manually remove your Application home directory.

   For example, if your Application home directory was
   /home/Oracle/config/applications/infra_domain on a UNIX operating
   system:

   ```
   > cd /home/Oracle/config/applications
   > rm -rf infra_domain
   ```

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

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

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

   Save and exit the file when you are finished.

5.7 Reinstalling Your Software

You can reinstall your software into the same Oracle home as a previous installation
only if you have deinstalled the software according to the instructions in this chapter,
including manually removing the Oracle home directory. When you reinstall, you can
then specify the same Oracle home as your previous installation.

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

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

  The installer will warn you that the Oracle home you specified during the
  installation already contains the same software you are trying to install. Your
  options are to:

  a. Select a different installation type. In this case, only the feature sets that do not
     already exist in the Oracle home directory will be installed.

  b. Select a different Oracle home directory.

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

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

  a. Deinstall your software from the Oracle home as described in this chapter, and
     then remove the Oracle home directory. After this is complete, you can

reinstall and reuse the same Oracle home location, using the instructions in Chapter 2. Any domain or application data that was in the Oracle home will have to be re-created.

b. Select a different Oracle home directory.

A

Understanding the Oracle WebLogic Server and Coherence Distribution

This appendix describes the contents of the Oracle WebLogic Server and Coherence distribution (`fmw_12.1.3.0.0_wls.jar`).

> **Note:** Oracle WebLogic Server is also available with the Oracle Fusion Middleware Infrastructure distribution (`fmw_12.1.3.0.0_infrastructure.jar`). See "Understanding the Oracle Fusion Middleware Infrastructure Distribution" in *Installing and Configuring the Oracle Fusion Middleware Infrastructure*.

Table A–1 describes the products and feature sets included with this distribution.

Table A–1   Oracle Fusion Middleware Infrastructure Products and Feature Sets

Installation Type	Installed Items	Description
WebLogic Server	WebLogic Server	A scalable, enterprise-ready Java Platform, Enterprise Edition (Java EE) application server. The WebLogic Server infrastructure supports the deployment of many types of distributed applications and is an ideal foundation for building applications based on service-oriented architecture (SOA).
	Coherence	Coherence provides replicated and distributed (partitioned) data management and caching services on top of a reliable, highly scalable peer-to-peer clustering protocol. Coherence has no single points of failure; it automatically and transparently fails over and redistributes its clustered data management services when a server becomes inoperative or is disconnected from the network. When a new server is added, or when a failed server is restarted, it automatically joins the cluster and Coherence fails back services to it, transparently redistributing the cluster load. Coherence includes network-level fault tolerance features and transparent soft re-start capability to enable servers to self-heal.
		For more information about Coherence, see *Oracle Coherence Getting Started Guide*.
	WebLogic Server Clients	Thin-client JARs required for connecting to a WebLogic Server instance. Includes the JARs for the web services, JMS, Store and Forward, WebLogic RMI, JMS .NET, and JMX clients.
	Administration Console	A web application hosted by the Administration Server that is used for managing and monitoring an active domain.
	CIE WLS Config	Provides files used by the Oracle Fusion Middleware Configuration Wizard.
	Third-Party JDBC Drivers	Other JDBC drivers bundled with WebLogic Server that can be used to connect a WebLogic Server environment to an external database.
		For more information about this feature set, see "Using JDBC Drivers with WebLogic Server" in *Administering JDBC Data Sources for Oracle WebLogic Server*.
	Third-Party Jackson	Third party open source software for processing JavaScript Object Notation (JSON) data formats.
	Third-Party Jersey	Third party open source software representing the official implementation of the Representational State Transfer (REST) architecture.
		For more information, see *Developing and Securing RESTful Web Services for Oracle WebLogic Server*.
	Third-Party Maven Apache	Maven is a build management tool that is central to project build tasks such as compilation, packaging, and artifact management.
		For more information, see *Developing Applications Using Continuous Integration*.
	OPatch	The OPatch utility is a tool that allows the application and rollback of interim patches to Oracle products

Table A–1   (Cont.) Oracle Fusion Middleware Infrastructure Products and Feature Sets

Installation Type	Installed Items	Description
Coherence	WebLogic Server	A scalable, enterprise-ready Java Platform, Enterprise Edition (Java EE) application server. The WebLogic Server infrastructure supports the deployment of many types of distributed applications and is an ideal foundation for building applications based on service-oriented architecture.
	Coherence	Coherence provides replicated and distributed (partitioned) data management and caching services on top of a reliable, highly scalable peer-to-peer clustering protocol. Coherence has no single points of failure; it automatically and transparently fails over and redistributes its clustered data management services when a server becomes inoperative or is disconnected from the network. When a new server is added, or when a failed server is restarted, it automatically joins the cluster and Coherence fails back services to it, transparently redistributing the cluster load. Coherence includes network-level fault tolerance features and transparent soft re-start capability to enable servers to self-heal.
		For more information about Coherence, see *Oracle Coherence Getting Started Guide*.
	Administration Console	A web application hosted by the Administration Server that is used for managing and monitoring an active domain.
	CIE WLS Config	Provides files used by the Oracle Fusion Middleware Configuration Wizard.
	Third-Party JDBC Drivers	Other JDBC drivers bundled with WebLogic Server that can be used to connect a WebLogic Server environment to an external database.
		For more information about this feature set, see "Using JDBC Drivers with WebLogic Server" in *Administering JDBC Data Sources for Oracle WebLogic Server*.
	Third-Party Jackson	Third party open source software for processing JavaScript Object Notation (JSON) data formats.
	Third-Party Jersey	Third party open source software representing the official implementation of the Representational State Transfer (REST) architecture.
		For more information, see *Developing and Securing RESTful Web Services for Oracle WebLogic Server*.
	Third-Party Maven Apache	Maven is a build management tool that is central to project build tasks such as compilation, packaging, and artifact management.
		For more information, see *Developing Applications Using Continuous Integration*.
	OPatch	The OPatch utility is a tool that allows the application and rollback of interim patches to Oracle products
Complete Installation with Examples	WebLogic Server	A scalable, enterprise-ready Java Platform, Enterprise Edition (Java EE) application server. The WebLogic Server infrastructure supports the deployment of many types of distributed applications and is an ideal foundation for building applications based on service-oriented architecture (SOA).
	Coherence	Coherence provides replicated and distributed (partitioned) data management and caching services on top of a reliable, highly scalable peer-to-peer clustering protocol. Coherence has no single points of failure; it automatically and transparently fails over and redistributes its clustered data management services when a server becomes inoperative or is disconnected from the network. When a new server is added, or when a failed server is restarted, it automatically joins the cluster and Coherence fails back services to it, transparently redistributing the cluster load. Coherence includes network-level fault tolerance features and transparent soft re-start capability to enable servers to self-heal.
		For more information about Coherence, see *Oracle Coherence Getting Started Guide*.

Table A–1 (Cont.) Oracle Fusion Middleware Infrastructure Products and Feature Sets

Installation Type	Installed Items	Description
	WebLogic Server Clients	Thin-client JARs required for connecting to a WebLogic Server instance. Includes the JARs for the web services, JMS, Store and Forward, WebLogic RMI, JMS .NET, and JMX clients.
	Administration Console	A web application hosted by the Administration Server that is used for managing and monitoring an active domain.
	CIE WLS Config	Provides files used by the Oracle Fusion Middleware Configuration Wizard.
	Third-Party JDBC Drivers	Other JDBC drivers bundled with WebLogic Server that can be used to connect a WebLogic Server environment to an external database.
		For more information about this feature set, see "Using JDBC Drivers with WebLogic Server" in *Administering JDBC Data Sources for Oracle WebLogic Server*.
	Apache Derby	Oracle's distribution of the open source Apache Derby Java database, also called Java DB. Derby is a pure Java relational database management system (RDBMS) provided with Oracle WebLogic Server to allow you to run code examples with a functional database server. Derby is for demonstration (that is, non-production) use only
	Third-Party Jackson	Third party open source software for processing JavaScript Object Notation (JSON) data formats.
	Third-Party Jersey	Third party open source software representing the official implementation of the Representational State Transfer (REST) architecture.
		For more information, see *Developing and Securing RESTful Web Services for Oracle WebLogic Server*.
	Third-Party Maven Apache	Maven is a build management tool that is central to project build tasks such as compilation, packaging, and artifact management.
		For more information, see *Developing Applications Using Continuous Integration*.
	WebLogic Server Examples	Server Examples are example applications that demonstrate key features of WebLogic Server.
		For more information, see "Sample Application and Code Examples" in *Understanding Oracle WebLogic Server*.
	Coherence Examples	Coherence Examples demonstrate how to use the features of Coherence in all supported languages (Java, .NET, and C++). The examples are organized collections of code that show how to use one or more features, and provide a single common way (per language) to build and run all examples. Source code for the examples is included.
		Note: Both Server Examples and Coherence Examples are only installed if you select the **Fusion Middleware Infrastructure with Examples** install type.
	OPatch	The OPatch utility is a tool that allows the application and rollback of interim patches to Oracle products.