

## **Oracle® Fusion Middleware**

Installing and Configuring the Oracle Fusion Middleware  
Infrastructure

12c (12.2.1)

**E57896-03**

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Documentation for installers and system administrators that describes how to install and configure Oracle Fusion Middleware Infrastructure for Oracle Application Development Framework.

Oracle Fusion Middleware Installing and Configuring the Oracle Fusion Middleware Infrastructure, 12c (12.2.1)

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# Preface

This document describes how to use the Oracle Fusion Middleware Infrastructure installation program to install and configure a WebLogic domain.

[Audience](#)

[Documentation Accessibility](#)

[Related Documents](#)

[Conventions](#)

## Audience

This document is for system administrators or application developers who will install Oracle Fusion Middleware Infrastructure for Oracle Application Development Framework (ADF). You should be 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>.

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## Related Documents

For important information about Oracle Fusion Middleware products, see:

- *Planning an Installation of Oracle Fusion Middleware*  
Contains information you should read before installing any Oracle Fusion Middleware product.
- *Understanding Oracle Fusion Middleware*  
Introduces common terms and concepts in an Oracle Fusion Middleware environment.

- *Administering Oracle Fusion Middleware*

Contains information for managing your Oracle Fusion Middleware environment after you complete installation and configuration.

## Conventions

This document uses the following text conventions:

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

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# Planning the Oracle Fusion Middleware Infrastructure Installation

There are a few steps you must take to prepare for an Oracle Fusion Middleware Infrastructure installation.

Review this section thoroughly to ensure that you don't encounter any problems during or after product installation and domain configuration.

## [Using This Document](#)

There are certain scenarios that you want to use this guide for, and other sources of information.

## [About the Infrastructure Standard Installation Topology](#)

The standard installation topology for Oracle Fusion Middleware Infrastructure has a standard WebLogic Server domain that contains an Administration Server and a cluster containing two Managed Servers.

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

There are a series of steps to install and configure a standard Oracle Fusion Middleware Infrastructure installation topology.

## [Roadmap for Verifying Your System Environment](#)

This topic has important information that you must read and understand before you begin installation and configuration steps.

## [Obtaining the Infrastructure Distribution](#)

## [About Installing Oracle User Messaging Service \(UMS\)](#)

Oracle User Messaging Service (UMS) enables two-way communication between users and applications. UMS is part of the Oracle Fusion Middleware Infrastructure distribution and installs as part of the Oracle Fusion Middleware Infrastructure standard installation topology.

## 1.1 Using This Document

There are certain scenarios that you want to use this guide for, and other sources of information.

This section contains the following topics:

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

This guide helps you create the standard installation topology for Oracle Fusion Middleware Infrastructure. You can extend this topology to make it highly available and secure so that it is suitable for a production system.

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

Procedures in this guide describe how to create a new domain; you can use the same instructions to extend an *existing* domain.

### [Using this Document in an Upgrade Scenario](#)

If you are installing Oracle Fusion Middleware Infrastructure as part of an upgrade procedure, follow steps in this guide to install the software, but don't run the Configuration Wizard to create a WebLogic domain.

### [About Installing a Development Environment](#)

This guide describes how to use the Oracle Fusion Middleware Infrastructure distribution to install and configure a standard installation topology as a starting point for a *production* environment.

## 1.1.1 Using the Standard Installation Topology as a Starting Point

This guide helps you create the standard installation topology for Oracle Fusion Middleware Infrastructure. You can extend this topology to make it highly available and secure so that it is suitable for a production system.

The standard installation topology is a *sample* topology for this product; it is not the only topology that Oracle supports. See Understanding the Standard Installation Topology in *Planning an Installation of Oracle Fusion Middleware*.

## 1.1.2 Using this Document to Extend an Existing Domain

Procedures in this guide describe how to create a new domain; you can use the same instructions to extend an *existing* domain.

If you do this, see "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 don't match instructions in the procedure, be sure to make your selections accordingly and see supporting documentation for additional details.

## 1.1.3 Using this Document in an Upgrade Scenario

If you are installing Oracle Fusion Middleware Infrastructure as part of an upgrade procedure, follow steps in this guide to install the software, but don't run the Configuration Wizard to create a WebLogic domain.

After you install the software, see *Upgrading Oracle WebLogic Server*.

## 1.1.4 About Installing a Development Environment

This guide describes how to use the Oracle Fusion Middleware Infrastructure distribution to install and configure a standard installation topology as a starting point for a *production* environment.

To install an Oracle Fusion Middleware Infrastructure *development* environment, Oracle recommends that you download and install Oracle JDeveloper, which provides an integrated development environment (IDE), preconfigured with the design-time software develop Java and Oracle Application Development (Oracle ADF) applications.

With Oracle JDeveloper, you can test your applications from within JDeveloper, using the integrated Oracle WebLogic Server.

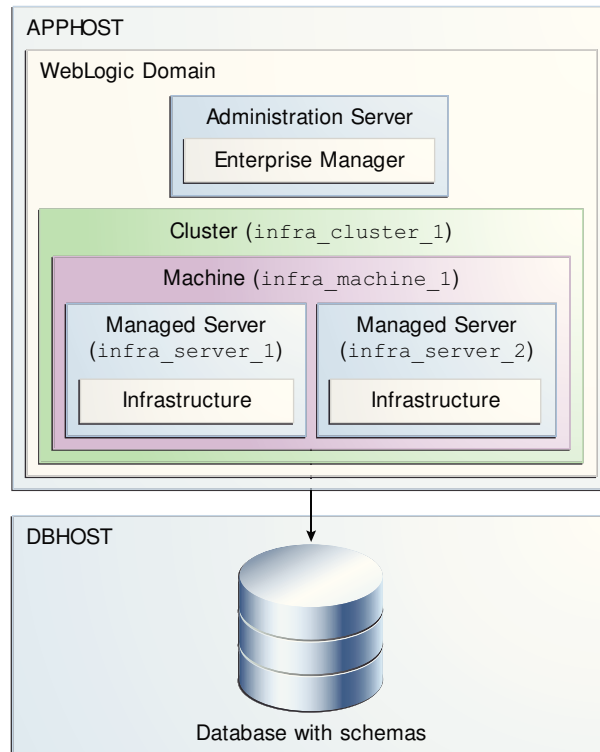


Alternatively, you can use this guide to configure an Oracle Fusion Middleware Infrastructure domain to use as a runtime environment for your Java and Oracle ADF applications. You can then deploy your applications directly from JDeveloper to the Infrastructure domain. See *Installing Oracle JDeveloper*.

## 1.2 About the Infrastructure Standard Installation Topology

The standard installation topology for Oracle Fusion Middleware Infrastructure has a standard WebLogic Server domain that contains an Administration Server and a cluster containing two Managed Servers.

**Figure 1-1 Oracle Fusion Middleware Infrastructure Standard Installation Topology**



This topology also includes:

- Libraries and other software required to deploy and manage Oracle ADF applications are installed and available on the Managed Servers.
- The domain is configured on one host. The domain requires a supported database where required Fusion Middleware schemas are installed. See [About Certified Oracle Database and the Standard Installation Topology](#).

Continue to these topics on the standard installation topology:

### [About Certified Oracle Database and the Standard Installation Topology](#)

For 12c (12.2.1.2), you must use a certified Oracle database for the Oracle Fusion Middleware Infrastructure standard installation topology.

### [Oracle Fusion Middleware Infrastructure Standard Installation Topology Elements](#)

A standard installation topology includes a set of elements.

### Options after You Have a Standard Installation Topology

Use the standard installation topology (SIT) as a starting point for other documents.

## 1.2.1 About Certified Oracle Database and the Standard Installation Topology

For 12c (12.2.1.2), you must use a certified Oracle database for the Oracle Fusion Middleware Infrastructure standard installation topology.

This database (in [About the Infrastructure Standard Installation Topology](#)) is the Infrastructure database, which Fusion Middleware products access. Do not confuse the *Infrastructure database* with the *internal application database*, which applications that you deploy in your environment use. For examples, see the "Additional DB" tab in the certification document for your release on the *Oracle Fusion Middleware Supported System Configurations* page.

## 1.2.2 Oracle Fusion Middleware Infrastructure Standard Installation Topology Elements

A standard installation topology includes a set of elements.

The table describes elements in the topology figure ([Understanding the Infrastructure Standard Installation Topology](#)). See [Roadmap for Installing and Configuring the Standard Installation Topology](#) for a roadmap describing steps to create this topology.

**Table 1-1 Oracle Fusion Middleware Infrastructure Standard Installation Topology Elements**

Element	Description and Links to Additional Documentation
APPHOST	Standard term in Oracle documentation for the machine that hosts the application tier.
DBHOST	Standard term in Oracle documentation that refers to the machine that hosts the database.
WebLogic Domain	A logically related group of Java components. In this case, the Administration Server, Managed Servers, and other related software components. See <i>What is an Oracle WebLogic Server Domain?</i> in <i>Understanding Oracle Fusion Middleware</i> .
Administration Server	Central control entity of a domain which maintains the domain's configuration objects and distributes configuration changes to Managed Servers. See <i>What is the Administration Server?</i> in <i>Understanding Oracle Fusion Middleware</i> .
Enterprise Manager	Oracle Enterprise Manager Fusion Middleware Control, the main tool that you can use to manage your domain. See <i>Oracle Enterprise Manager Fusion Middleware Control</i> in <i>Understanding Oracle Fusion Middleware</i> .
Cluster	A collection of multiple WebLogic Server instances running simultaneously and working together. See <i>Understanding Managed Servers and Managed Server Clusters</i> in <i>Understanding Oracle Fusion Middleware</i> .

**Table 1-1 (Cont.) Oracle Fusion Middleware Infrastructure Standard Installation Topology Elements**

Element	Description and Links to Additional Documentation
Machine	Logical representation of the computer that hosts one or more WebLogic Server instances (servers). Machines are also the logical glue between Managed Servers and Node Manager; 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 resources. See Understanding Managed Servers and Managed Server Clusters in <i>Understanding Oracle Fusion Middleware</i> .
Infrastructure	Collection of services that includes: <ul style="list-style-type: none"> <li>• Metadata repository (MDS) Contains metadata for Oracle Fusion Middleware components, such as Oracle Application Developer Framework. See What is the Metadata Repository in <i>Understanding Oracle Fusion Middleware</i>.</li> <li>• Oracle Application Developer Framework (Oracle ADF)</li> <li>• Oracle Web Services Manager (OWSM)</li> </ul>

### 1.2.3 Options after You Have a Standard Installation Topology

Use the standard installation topology (SIT) as a starting point for other documents.

- The *Installing and Configuring Oracle HTTP Server* guide extends the SIT domain to include Oracle HTTP Server.
- The *High Availability Guide* uses the Oracle HTTP Server and Infrastructure as a starting point for configuring the SIT for high availability.
- For more information about the documentation roadmap and related high availability topologies, see Planning for a Production Environment in *Planning an Installation of Oracle Fusion Middleware*.

## 1.3 Roadmap for Installing and Configuring the Standard Installation Topology

There are a series of steps to install and configure a standard Oracle Fusion Middleware Infrastructure installation topology.

This document has all steps you need to install and configure the product. Within the steps, this guide refers to additional information to create a modified version of this topology.

The following table shows steps required to install and configure the topology.

**Table 1-2 Oracle Fusion Middleware Infrastructure Installation Roadmap**

Task	Description	Documentation
Verify your system environment	Before you begin the installation, verify that the minimum system and network requirements are met.	See <a href="#">Roadmap for Verifying Your System Environment</a> .
Obtain the appropriate distribution	To create the topology described in this guide, obtain the Oracle Fusion Middleware Infrastructure distribution.	See <a href="#">Obtaining the Infrastructure Distribution</a> .
Determine your installation directories	Verify that the installer can create or access the installer directories that need to be created. Also, verify that the directories exist on systems that meet the minimum requirements.	See <a href="#">What are the Key Oracle Fusion Middleware Directories?</a> in <i>Understanding Oracle Fusion Middleware</i> .
Install the software	Run the installation program to install the software. This transfers software to your system and creates the Oracle home directory.	See <a href="#">Installing the Infrastructure Software</a> .
Create a WebLogic domain	Use the configuration wizard to create and configure the WebLogic domain.	See <a href="#">Configuring the Oracle Fusion Middleware Infrastructure Domain</a> .
Administer and prepare your domain for high availability	Discover additional tools and resources to administer your domain and configure your domain to be highly available.	See <a href="#">Next Steps After Configuring the Infrastructure Domain</a> .

## 1.4 Roadmap for Verifying Your System Environment

This topic has important information that you must read and understand before you begin installation and configuration steps.

It identifies important tasks and checks to make sure that your environment is ready for installing and configuring Oracle Fusion Middleware Infrastructure.

**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 Infrastructure installation and configuration.	See <a href="#">Verifying Certification and System Requirements</a> in <i>Planning an Installation of Oracle Fusion Middleware</i> .
Identify a proper installation user.	Verify that the installation user has the proper permissions to install and configure the software.	See <a href="#">Selecting an Installation User</a> in <i>Planning an Installation of Oracle Fusion Middleware</i> .

**Table 1-3 (Cont.) Roadmap for Verifying Your System Environment**

Task	Description	Documentation
Select installation and configuration directories on your system.	Verify that you can create required directories for installation and configuration, according to the recommended directory structure.	See Selecting Directories for Installation and Configuration in <i>Planning an Installation of Oracle Fusion Middleware</i> .
Install a certified JDK.	The installation program requires a certified JDK present on your system.	See Installing a JDK in <i>Planning an Installation of Oracle Fusion Middleware</i> .
Install and configure an Oracle database.	To configure a WebLogic domain, you must have access to a certified database that is properly configured for schemas that Oracle Fusion Middleware Infrastructure requires.  12c (12.2.1.2) requires a certified Oracle database.	See Installing and Configuring a Certified Database in <i>Planning an Installation of Oracle Fusion Middleware</i> .

## 1.5 Obtaining the Infrastructure Distribution

Before you obtain product distributions and run installers, verify that you have a certified JDK installed on your system. See "Installing a JDK" in *Planning an Installation of Oracle Fusion Middleware*.

To obtain Oracle Fusion Middleware Infrastructure:

1. Go to <http://www.oracle.com/technetwork/developer-tools/adf/downloads/index.html>. In the Oracle ADF Downloads section, select **12.2.1.0** from the Application Development Runtime field. Click **Download File**.
2. When your browser asks if you want to download the file `fmw_12.2.1.0.0_infrastructure_Disk1_1of1.zip`, download this file onto your system.
3. Extract the `.zip` file contents onto your system. The extracted file `fmw_12.2.1.0.0_infrastructure_generic.jar` runs the product installer and installs the software onto your system. See [Installing the Infrastructure Software](#)

To obtain Oracle Fusion Middleware software, see "Understanding and Obtaining Product Distributions" in *Planning an Installation of Oracle Fusion Middleware*.

To locate and download Oracle Fusion Middleware products, see *Oracle Fusion Middleware Download, Installation, and Configuration Readme Files* on OTN.

## 1.6 About Installing Oracle User Messaging Service (UMS)

Oracle User Messaging Service (UMS) enables two-way communication between users and applications. UMS is part of the Oracle Fusion Middleware Infrastructure distribution and installs as part of the Oracle Fusion Middleware Infrastructure standard installation topology.

UMS runtime components include a Configuration Wizard template and an Oracle Fusion Middleware schema, which installs into a database using Repository Creation Utility. See "Introduction to Oracle User Messaging Service" in *Administering Oracle User Messaging Service*

You can install and use Oracle JDeveloper 12c to develop applications that can leverage UMS features. See *Installing Oracle JDeveloper*.

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# Installing the Infrastructure Software

This section describes how to install Oracle Fusion Middleware Infrastructure software.

This section contains the following topics:

## [Starting the Installation Program](#)

### [Navigating the Installation Screens](#)

The installation program shows a series of screens.

### [Verifying the Installation](#)

After you complete the installation, verify it by completing the following tasks.

## 2.1 Starting the Installation Program

To start the installation program, run the following steps.

1. Log in to the target system.
2. Verify that a certified JDK is on your system; the installer requires a certified JDK. See the certification document for 12c (12.2.1) on the *Oracle Fusion Middleware Supported System Configurations* page.
3. Go to the directory where you downloaded the installation program.
4. Launch the installation program by invoking the `java` executable from the JDK directory on your system, as examples below show. Replace the JDK location in the examples with the actual JDK location on your system.

On UNIX operating systems:

```
/home/Oracle/jdk/jdk1.8.0_40/bin/java -jar  
fmw_12.2.1.0.0_infrastructure_generic.jar
```

On Windows operating systems:

```
C:\Program Files\Java\jdk1.8.0_40\bin\java -jar  
fmw_12.2.1.0.0_infrastructure_generic.jar
```

When the installation program opens, you can begin installation. [Navigating the Installation Screens](#) describes each screen.

## 2.2 Navigating the Installation Screens

The installation program shows a series of screens.

The following table describes installation program screens in the order in which they appear.

If you need more help with any installation screen, click the screen name.

**Table 2-1 Oracle Fusion Middleware Infrastructure Install Screens**

Screen	Description
Installation Inventory Setup	<p>On UNIX operating systems, this screen opens if this is the first time you are installing any Oracle product on this host.</p> <p>Specify the location where you want to create your central inventory. Make sure that the operating system group name selected has write permissions to the central inventory location. See "Understanding the Oracle Central Inventory" in <i>Installing Software with the Oracle Universal Installer</i>.</p> <p>This screen does not appear on Windows operating systems.</p>
Auto Updates	<p>If you enable Auto Updates, the installer checks for new software.</p> <p>Keep the default setting <b>Skip Auto Updates</b> if you do not want your system to check for software updates.</p> <p><b>Select patches from directory.</b> If you have software updates available locally, you can specify the location by using this option.</p> <p><b>Search My Oracle Support for Updates.</b> If you have a My Oracle Support account, you can specify your account name and password to have the installer automatically download applicable software updates from My Oracle Support. If you need to configure a proxy server for the installer to access My Oracle Support, click <b>Proxy Settings</b>.</p>
Welcome	<p>This screen introduces you to the product installer.</p>
Installation Location	<p>Use this screen to specify your Oracle home directory location. For more on the directory structure, see "Selecting Directories for Installation and Configuration" in <i>Planning an Installation of Oracle Fusion Middleware</i>.</p>
Installation Type	<p>Use to select installation type, products, and feature sets to install.</p> <p>For this topology, select <b>Fusion Middleware Infrastructure</b>.</p> <p><b>NOTE:</b> The topology in this document does <i>not</i> include server examples. Oracle strongly recommends that you do not install examples into a production environment.</p>
Prerequisite Checks	<p>Verifies that your system meets minimum requirements.</p> <p>If a warning or error message appears, see one of the documents in <a href="#">Roadmap for Verifying Your System Environment</a>.</p>
Specify Security Updates	<p>If you have an Oracle Support account, use this screen to indicate how you want to receive security updates.</p> <p>If you do not have an account and are sure you want to skip this step, clear the check box and verify your selection in the follow-up dialog box.</p>



**Table 2-1 (Cont.) Oracle Fusion Middleware Infrastructure Install Screens**

Screen	Description
Installation Summary	Use this screen to verify installation options you chose. Optional: To save the options to a response file, click <b>Save</b> and enter a location and file name. You can use response files later for silent installations.  Silent installation does not include configuration (there is no silent configuration feature). For more on silent or command line installation, see <i>Using the Oracle Universal Installer in Silent Mode</i> in <i>Installing Software with the Oracle Universal Installer</i> .
Installation Progress	Shows the installation progress.
Installation Complete	Opens when installation is complete. Review this screen then click <b>Finish</b> to dismiss the installer.

## 2.3 Verifying the Installation

After you complete the installation, verify it by completing the following tasks.

### Reviewing Installation Log Files

Review contents of the installation log files to verify the installer did not encounter problems.

### Checking the Directory Structure

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

### Viewing Your Oracle Home Contents

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

### 2.3.1 Reviewing Installation Log Files

Review contents of the installation log files to verify the installer did not encounter problems.

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

### 2.3.2 Checking the Directory Structure

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

For more information on the directory structure that you should see after installation, see *What are the Key Oracle Fusion Middleware Directories?* in *Understanding Oracle Fusion Middleware*.

### 2.3.3 Viewing Your Oracle Home Contents

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

See *Viewing the Contents of an Oracle Home* in *Installing Software with the Oracle Universal Installer*.



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# Configuring the Oracle Fusion Middleware Infrastructure Domain

Use the steps in the following order to create and configure the WebLogic Server domain for Oracle Fusion Middleware Infrastructure.

This section contains the following topics:

## [Creating Database Schemas](#)

Before you configure a Fusion Middleware Infrastructure domain, you must install the following schemas on a certified database to use them with this Oracle Fusion Middleware release.

## [Configuring Your WebLogic Domain](#)

This topic describes how to create a WebLogic domain using the Configuration Wizard.

## [Starting the Servers](#)

When you finish configuration, take the following steps to access tools to manage your domain.

## [Verifying Your Configuration](#)

Oracle recommends that you verify that your domain is configured properly.

## 3.1 Creating Database Schemas

Before you configure a Fusion Middleware Infrastructure domain, you must install the following schemas on a certified database to use them with this Oracle Fusion Middleware release.

- Metadata Services (MDS)
- Audit Services (IAU)
- Audit Services Append (IAU\_APPEND)
- Audit Services Viewer (IAU\_VIEWER)
- Oracle Platform Security Services (OPSS)
- User Messaging Service (UMS)
- WebLogic Services (WLS)
- Service Table (STB)

Follow the instructions in this topic to create database schemas:

### [Installing and Configuring a Certified Database](#)

Verify that you installed and configured a certified database and that it is up and running.

### [Starting the Repository Creation Utility \(RCU\)](#)

You start RCU from the `/oracle_common/bin` directory.

### [Navigating RCU Screens to Create Schemas](#)

Follow this series of steps to create schemas for the Oracle Fusion Middleware Infrastructure domain.

## 3.1.1 Installing and Configuring a Certified Database

Verify that you installed and configured a certified database and that it is up and running.

For more information, see Installing a Database and Database Schemas in *Planning an Installation of Oracle Fusion Middleware*.

## 3.1.2 Starting the Repository Creation Utility (RCU)

You start RCU from the `/oracle_common/bin` directory.

To start the Repository Creation Utility:

1. Navigate to the `ORACLE_HOME/oracle_common/bin` directory.
2. Start RCU:

On UNIX operating systems:

```
./rcu
```

On Microsoft Windows operating systems:

```
rcu.bat
```

## 3.1.3 Navigating RCU Screens to Create Schemas

Follow this series of steps to create schemas for the Oracle Fusion Middleware Infrastructure domain.

### [Introducing RCU](#)

### [Selecting a Schema Creation Method](#)

If you have the permission and privileges to perform DBA actions on your database, select **System Load and Product Load** on the Create Repository screen.

### [Providing Database Credentials](#)

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

### [Specifying a Custom Prefix and Selecting Schemas](#)

On the Select Components screen, enter a custom prefix you want to use for your schemas, then select **AS Common Schemas**.

### [Specifying Schema Passwords](#)

Specify how you want to set the schema passwords on your database, then specify and confirm your passwords.

### Completing Schema Creation

Navigate through the remaining RCU screens to complete schema creation. When you reach the Completion Summary screen, click **Close** to dismiss RCU.

#### 3.1.3.1 Introducing RCU

Click **Next** on the Welcome to Repository Creation Utility screen.

#### 3.1.3.2 Selecting a Schema Creation Method

If you have the permission and privileges to perform DBA actions on your database, select **System Load and Product Load** on the Create Repository screen.

(The procedure in this document assumes that you have the necessary privileges.)

If you do *not* have the necessary permission or privileges to perform DBA actions, you must select **Prepare Scripts for System Load**. This option generates a SQL script that you can give to your database administrator. See Understanding System Load and Product Load in *Creating Schemas with the Repository Creation Utility*.

**Tip:**

For more about options on this screen, see Create repository in *Creating Schemas with the Repository Creation Utility*.

#### 3.1.3.3 Providing Database Credentials

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

Click **Next** then click **OK** on the dialog window to confirm a successful database connection.

For more information about options on this screen, see Database Connection Details in *Creating Schemas with the Repository Creation Utility*.

#### 3.1.3.4 Specifying a Custom Prefix and Selecting Schemas

On the Select Components screen, enter a custom prefix you want to use for your schemas, then select **AS Common Schemas**.

All schemas in this section are automatically selected. The custom prefix logically groups these schemas together for this domain.

**Tip:**

For more on custom prefixes, see Understanding Custom Prefixes in *Creating Schemas with the Repository Creation Utility*.

For more on how to organize schemas in a multi-domain environment, see Planning Your Schema Creation in *Creating Schemas with the Repository Creation Utility*.

Make a note of the custom prefix that you enter; you need the prefix when you create a domain.

Click **Next** then click **OK** on the dialog window to confirm that prerequisite checking for schema creation is successful.

### 3.1.3.5 Specifying Schema Passwords

Specify how you want to set the schema passwords on your database, then specify and confirm your passwords.

You must make a note of passwords you set on this screen; you need them when you create a domain.

### 3.1.3.6 Completing Schema Creation

Navigate through the remaining RCU screens to complete schema creation. When you reach the Completion Summary screen, click **Close** to dismiss RCU.

For more information about RCU and its features and concepts, see About Repository Creation Utility.

## 3.2 Configuring Your WebLogic Domain

This topic describes how to create a WebLogic domain using the Configuration Wizard.

There are other ways to create a domain; see Additional Tools for Creating, Extending, and Managing WebLogic Domains in *Creating WebLogic Domains Using the Configuration Wizard*.

To configure a WebLogic domain, follow these steps:

#### Starting the Configuration Wizard

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

#### Navigating Configuration Wizard Screens to Configure the Domain

In addition to creating and configuring a domain, you can use this procedure to extend an existing domain. If your settings don't match those in the procedure, change your selections as you need to or see supporting documentation for more details.

#### About Server Groups

**Server groups** target Fusion Middleware applications and services to one or more servers by mapping defined application service groups to each defined server group.

### 3.2.1 Starting the Configuration Wizard

To start 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
```

On Windows operating systems, you can also start the Configuration Wizard from the **Start** menu: Select **All Programs**, then **Oracle**, then **OracleHome**. Select **WebLogic Server 12c (12.2.version)**, then **Tools**, then **Configuration Wizard**.

## 3.2.2 Navigating Configuration Wizard Screens to Configure the Domain

In addition to creating and configuring a domain, you can use this procedure to extend an existing domain. If your settings don't match those in the procedure, change your selections as you need to or see supporting documentation for more details.

To configure multiple products in one domain, see *Installing Multiple Products in the Same Domain* in *Planning an Installation of Oracle Fusion Middleware*.

### Selecting the Domain Type and Domain Home Location

You must select a Domain home directory location, optimally outside the Oracle home directory.

### Selecting Configuration Templates

#### Selecting the Application Home Location

On the Application Location screen, select a location to store applications associated with your domain. This location is the **Application home** directory.

#### Configuring the Administrator Account

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

#### Specifying the Domain Mode and JDK

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

#### Specifying the Database Configuration Type

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

#### Specifying JDBC Component Schema Information

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

#### Testing JDBC Connections

Use the JDBC Component Schema Test screen to test datasource connections that you just configured.

#### Selecting Advanced Configuration

##### Configuring the Administration Server Listen Address

Use the Administration Server screen to select the host's IP address.

##### Configuring Node Manager

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

##### Configuring Managed Servers

In this screen, you create Managed Servers.

##### Configuring a Cluster

##### Assigning Managed Servers to the Cluster

##### Configuring Coherence Clusters

### [Creating a New Machine](#)

You create a new machine in the domain using the Machines screen. You assign servers to this machine in the next screen.

### [Assigning Servers to Machines](#)

In this screen, assign the domain servers to the machine you just created.

### [Reviewing Your Configuration and Configuring the Domain](#)

The Configuration Summary screen has detailed configuration information for the domain you are about to create. Review each item to verify it is correct.

### [Writing Down Your Domain Name and Administration Server URL](#)

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

## 3.2.2.1 Selecting the Domain Type and Domain Home Location

You must select a Domain home directory location, optimally outside the Oracle home directory.

To specify the Domain type and Domain home directory:

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

Oracle recommends that you locate your Domain home in accordance with the directory structure in *What are the Key Oracle Fusion Middleware Directories?* in *Understanding Oracle Fusion Middleware*. The Domain home resides *outside* Oracle home directory. This directory structure helps avoid issues when you upgrade or reinstall software.

#### **Tip:**

For more on the Domain home directory, see *Choosing a Domain Home in Planning an Installation of Oracle Fusion Middleware*.

For more about reinstalling the software, see [About Reinstalling the Software](#).

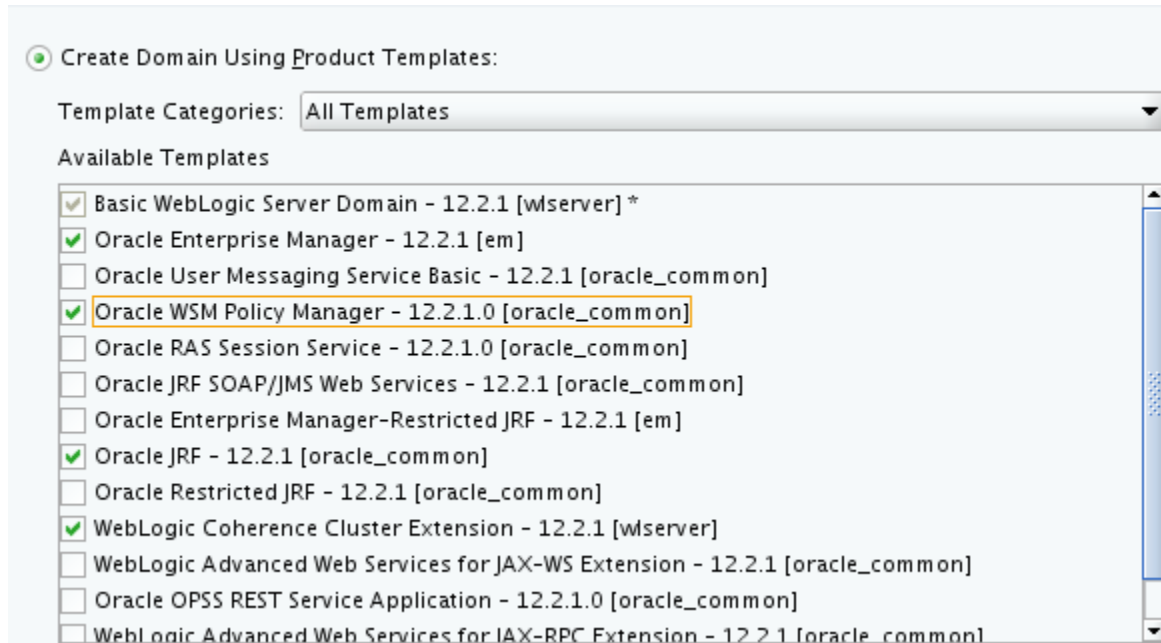
For more about other options on this screen, see "Configuration Type" in *Creating WebLogic Domains Using the Configuration Wizard*.

## 3.2.2.2 Selecting Configuration Templates

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

- Oracle Enterprise Manager - 12.2.1.0 [em]  
Selecting this template automatically selects the following dependencies:
  - Oracle JRF - 12.2.1.0 [oracle\_common]
  - WebLogic Coherence Cluster Extension - 12.2.1.0 [wlserver]
- Oracle WSM Policy Manager - 12.2.1.0 [oracle\_common]



**Tip:**

For more information about options on this screen, see "Templates" in *Creating WebLogic Domains Using the Configuration Wizard*.

**3.2.2.3 Selecting the Application Home Location**

On the Application Location screen, select a location to store applications associated with your domain. This location is the **Application home** directory.

Oracle recommends that you locate your Application home in accordance with the directory structure that "What are the Key Oracle Fusion Middleware Directories?" in *Understanding Oracle Fusion Middleware* describes. Oracle recommends that you locate the Application home outside the Oracle home directory. This directory structure helps avoid issues when you upgrade or reinstall your software.

**Tip:**

For more information about the Application home directory, see "Choosing an Application Home" in *Planning an Installation of Oracle Fusion Middleware*.

For more information about reinstalling the software, see [About Reinstalling the Software](#).

For more information about the options on this screen, see "Application Location" in *Creating WebLogic Domains Using the Configuration Wizard*.

**3.2.2.4 Configuring the Administrator Account**

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

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

### 3.2.2.5 Specifying the Domain Mode and JDK

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

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

Select **Production Mode** to give your environment a higher degree of security. Doing this means that you must enter a user name and password to deploy applications and to start the Administration Server.

**Tip:**

For details about options on this screen, including differences between development mode and production mode, see Domain Mode and JDK in *Creating WebLogic Domains Using the Configuration Wizard*.

In production mode, you can create a boot identity file to bypass the need to enter credentials when you start the Administration Server. See "Creating a Boot Identity File for an Administration Server" in *Administering Server Startup and Shutdown for Oracle WebLogic Server*.

### 3.2.2.6 Specifying the Database Configuration Type

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

Select **RCU Data** to activate fields on this screen. **RCU Data** tells the Configuration Wizard to connect to the database and Service Table (STB) schema to automatically retrieve schema information for schemas required to configure a domain.

---



---

**Note:**

If you select **Manual Configuration** on this screen, you must enter schema parameters manually on the JDBC Component Schema screen.

---



---

Field	Description
DBMS/Service	Enter the database DBMS name, or service name if you selected a service type driver.
Host Name	Enter the name of the server hosting the database.
Port	Enter the port number on which the database listens.
Schema Owner Schema Password	Enter a user name and password to connect to the database's Service Table schema. This is the schema user name and password that you entered for the Service Table component on the "Schema Passwords" screen in RCU (see <a href="#">Creating Database Schemas</a> ).  The default user name is <i>prefix_STB</i> , where <i>prefix</i> is the custom prefix that you defined in RCU.

Specify AutoConfiguration Options Using:

RCU Data    Manual Configuration

Enter the database connection details using the Repository Creation Utility service table (STB) schema credentials. The Wizard uses this connection to automatically configure the datasources required for components in this domain.

Vendor:    Driver:

DBMS/Service:    Host Name:    Port:

Schema Owner:    Schema Password:

---

Connection Result Log

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

Successfully Done.

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

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

Successfully Done.
```

**Tip:**

See "Understanding the Service Table Schema" in *Creating Schemas with the Repository Creation Utility* for information about the **RCU Data** option.

For more information about other options on this screen, see Datasource Defaults in *Creating WebLogic Domains Using the Configuration Wizard*

### 3.2.2.7 Specifying JDBC Component Schema Information

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

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

**Tip:**

To configure data sources for Oracle RAC databases in high availability environments, see these topics in *High Availability Guide*:

- "Configuring GridLink Data Sources with Oracle RAC"
- "Configuring Multi Data Sources"

More information about other options on this screen is in "JDBC Component Schema" in *Creating WebLogic Domains Using the Configuration Wizard*.

### 3.2.2.8 Testing JDBC Connections

Use the JDBC Component Schema Test screen to test datasource connections that you just configured.

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

**Tip:**

See Test Component Schema in *Creating WebLogic Domains Using the Configuration Wizard* for more information about the other options on this screen.

### 3.2.2.9 Selecting Advanced Configuration

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

- Administration Server
- Node Manager
- Managed Servers, Clusters and Coherence

Required to configure the Managed Servers and cluster, and for configuring the machine and targeting Managed Servers to the machine.

**Tip:**

To configure dynamic clusters, see:

- "Overview of Dynamic Clusters" in *Understanding Oracle WebLogic Server*.
- "Creating Dynamic Clusters" in *Administering Clusters for Oracle WebLogic Server*.

You do not need to select:

- Domain Frontend Host Capture
- Deployments and Services
- JMS File Store

### 3.2.2.10 Configuring the Administration Server Listen Address

Use the Administration Server screen to select the host's IP address.

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**.

### 3.2.2.11 Configuring Node Manager

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

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

**Tip:**

See Node Manager in *Creating WebLogic Domains Using the Configuration Wizard* for details about options on this screen.

See "Node Manager Overview" in *Administering Node Manager for Oracle WebLogic Server* for details about the types of Node Manager.

### 3.2.2.12 Configuring Managed Servers

In this screen, you create Managed Servers.

To create two new Managed Servers:

1. Click the **Add** button to create a new Managed Server.
2. Specify `infra_server_1` in the Server name column.

Installation and configuration procedures use `infra_server_#` for Managed Servers names. If you use different names, substitute `infra_server_#` with them.

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. In the Server Groups drop-down list, select **JRF-MAN-SVR** and **WSMPM-MAN-SVR**. These server groups ensure that Oracle JRF and Oracle Web Services Manager (OWSM) services target Managed Servers you are creating.

See [About Server Groups](#) for more on server groups.

5. Repeat this process to create a second Managed Server named `infra_server_2`.

You must configure a second Managed Server to configure the standard topology for high availability. If you are *not* creating a highly available environment, this step is optional.

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

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

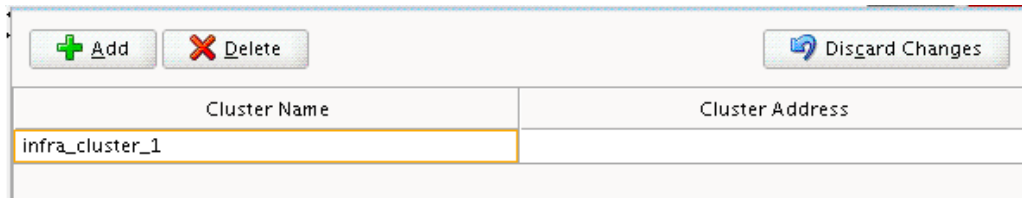
**Tip:**

For details about options on this screen, see Managed Servers in *Creating WebLogic Domains Using the Configuration Wizard*.

### 3.2.2.13 Configuring a Cluster

To create a new cluster:

1. Click the **Add** button.
2. Enter `infra_cluster_1` in the Cluster Name field.
3. Leave the cluster Address field blank.



By default, server instances in a cluster use unicast to communicate with each other. To change your cluster communications to use multicast, see *Considerations for Choosing Unicast or Multicast* in *Administering Clusters for Oracle WebLogic Server*.

You can create new clusters using Fusion Middleware Control and configure cluster communication (unicast or multicast) as you go through cluster creation steps. See *Create and Configure Clusters* in Administration Console Online Help.

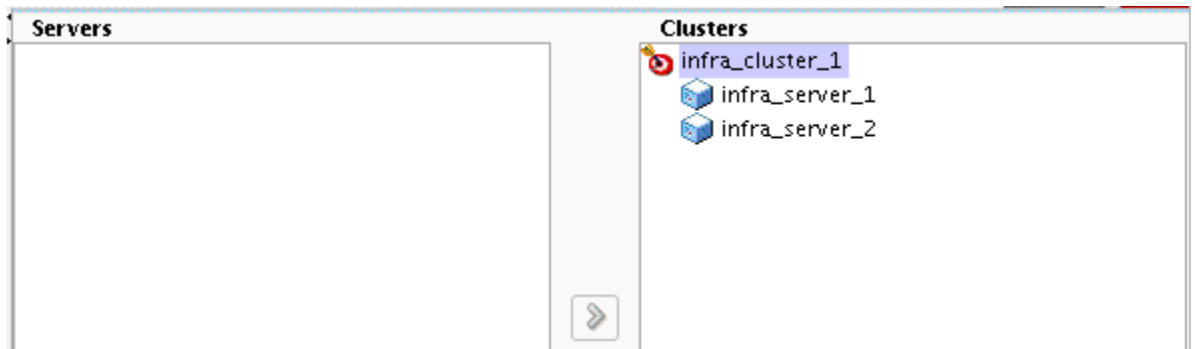
**Tip:**

For more information on options on this screen, see *Clusters* in *Creating WebLogic Domains Using the Configuration Wizard*.

### 3.2.2.14 Assigning Managed Servers to the Cluster

To assign `infra_server_1` and `infra_server_2` to the new cluster `infra_cluster_1`, use the Assign Servers to Clusters screen:

1. In the Clusters pane, select the cluster that you want to assign servers to; in this case, `infra_cluster_1`.
2. In the Servers pane, take one of the following steps to assign `infra_server_1` to `infra_cluster_1`:
  - Click once on `infra_server_1` to select it, then click on the right arrow to move it beneath the selected cluster (`infra_cluster_1`) in the Clusters pane.
  - Double-click on `infra_server_1` to move it beneath the selected cluster (`infra_cluster_1`) in the clusters pane.
3. Repeat to assign `infra_server_2` to `infra_cluster_1`.



**Tip:**

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

### 3.2.2.15 Configuring Coherence Clusters

In the Coherence Clusters screen, configure the Coherence cluster that gets added automatically to the domain. Leave the default port number 0 as the Coherence cluster listen port.

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**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.

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See [Table 4-2](#) for more information and next steps for configuring Coherence. For Coherence licensing information, see "Oracle Coherence" in .

### 3.2.2.16 Creating a New Machine

You create a new machine in the domain using the Machines screen. You assign servers to this machine in the next screen.

**Tip:**

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

To create a new machine in the domain:

1. Click the **Add** button to create a new machine.
2. Specify `infra_machine_1` in the Name field.
3. In the Node Manager Listen Address field, select the IP address of the machine where you are configuring Managed Servers. You must select a specific interface, not "localhost," so that Coherence cluster addresses can calculate dynamically.
4. Verify the port in the Node Manager Listen Port field.

Examples in the procedures may use port number 5556. You must replace this port number with your own port number as needed.

---

---

**Note:**

If you extend an existing domain, you can assign servers to any existing machine. You don't need to create a new machine unless your situation requires it.

---

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**Tip:**

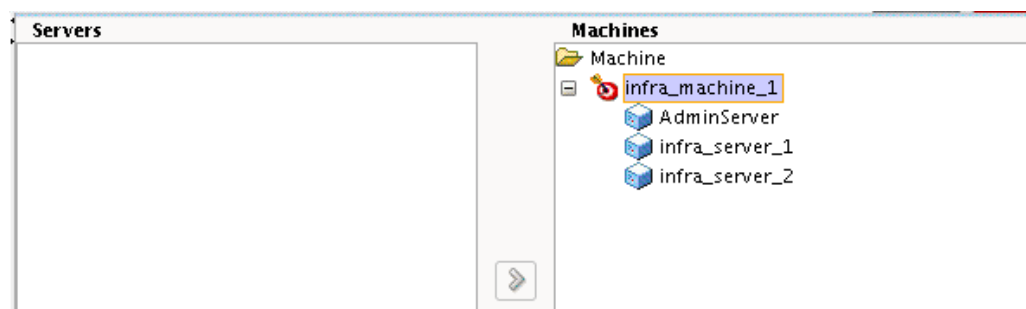
See "Machines" in *Creating WebLogic Domains Using the Configuration Wizard* for more information about these options.

**3.2.2.17 Assigning Servers to Machines**

In this screen, assign the domain servers to the machine you just created.

To assign the Administration Server and Managed Servers to the new machine:

1. In the Machines pane, select the machine you want to assign the servers to; in this case, `infra_machine_1`.
2. In the Servers pane, take one of the following steps to assign `AdminServer` to `infra_machine_1`:
  - Click once on `AdminServer` to select it, then click on the right arrow to move it beneath the selected machine (`infra_machine_1`) in the Machines pane.
  - Double-click on `AdminServer` to move it beneath the selected machine (`infra_machine_1`) in the Machines pane.
3. Repeat to assign both `infra_server_1` and `infra_server_2` to `infra_machine_1`. Click **Next**.

**Tip:**

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

**3.2.2.18 Reviewing Your Configuration and Configuring the Domain**

The Configuration Summary screen has detailed configuration information for the domain you are about to create. Review each item to verify it is correct.

You can go back to any previous screen if you need to make changes; use the **Back** button or select the screen in the navigation pane.

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

**Tip:**

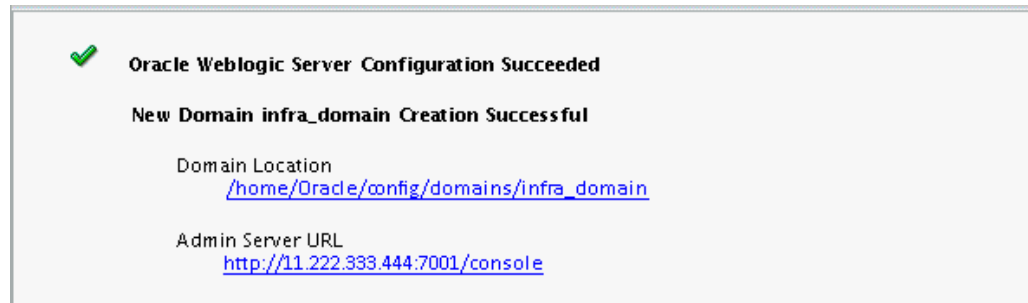
For more information about options on this screen, see *Configuration Summary* in *Creating WebLogic Domains Using the Configuration Wizard*.

**3.2.2.19 Writing Down Your Domain Name and Administration Server URL**

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



- Domain Location
- Administration Server URL



You must make a note of both items because you need them later; you need the **Domain Location** to access scripts that start Node Manager and Administration Server. You need **Admin Server URL** to access the Administration Server.

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

### 3.2.3 About Server Groups

**Server groups** target Fusion Middleware applications and services to one or more servers by mapping defined application service groups to each defined server group.

Any application services that map to a server group automatically target *all* servers assigned to that group. For more information, see Application Service Groups, Server Groups, and Application Service Mappings in *Domain Template Reference*.

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**Note:**

The WSM-CACHE-SVR server group configures Nonce caching for Oracle Web Services automatically, and is suitable for most applications. Nonce is a unique number that can be used only once in a SOAP request and prevents replay attacks. Nonce caching scales with the number of added Managed Servers running Web service applications.

For advanced caching configurations, see Caching the Nonce with Oracle Coherence in *Securing Web Services and Managing Policies with Oracle Web Services Manager*.

---



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## 3.3 Starting the Servers

When you finish configuration, take the following steps to access tools to manage your domain.

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**Note:**

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

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### Starting Node Manager

When you finish configuration, take the following steps to start Node Manager.

### Starting the Administration Server

After you finish configuration, you need to start the Administration Server to manage your domain.

### Starting Managed Servers

You start the Managed Servers from Oracle Fusion Middleware Control.

## 3.3.1 Starting Node Manager

When you finish configuration, take the following steps to start Node Manager.

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

On UNIX operating systems, use `nohup` and `nm.out` as an example output file:

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

On Windows operating systems, run:

```
startNodeManager.cmd
```

On Windows operating systems, Oracle recommends that you configure Node Manager to run as a startup service. This allows Node Manager to start up automatically each time the system restarts. For more information, see "Running Node Manager as a Startup Service" in *Administering Node Manager for Oracle WebLogic Server*.

For more information about additional Node Manager configuration options, see *Administering Node Manager for Oracle WebLogic Server*.

## 3.3.2 Starting the Administration Server

After you finish configuration, you need to start the Administration Server to manage your domain.

To start the Administration Server:

On UNIX operating systems, go the `DOMAIN_HOME/bin` directory and run:

```
./startWebLogic.sh
```

On Windows operating systems, run:

```
startWebLogic.cmd
```

If you chose **Production Mode** on the Domain Mode and JDK screen in [Specifying the Domain Mode and JDK](#), you see a prompt for Administrator user login credentials. You provided these in the Administrator Account screen in [Configuring the Administrator Account](#).

#### Tip:

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

In production mode, you can create a boot identity file to bypass the need to enter credentials when starting the Administration Server. See Creating a Boot Identity File for an Administration Server in *Administering Server Startup and Shutdown for Oracle WebLogic Server*.

To verify that the Administration Server is up and running, open the Administration Server Console. The URL is on the Configuration Success screen in [Writing Down Your Domain Name and Administration Server URL](#).

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**Note:**

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

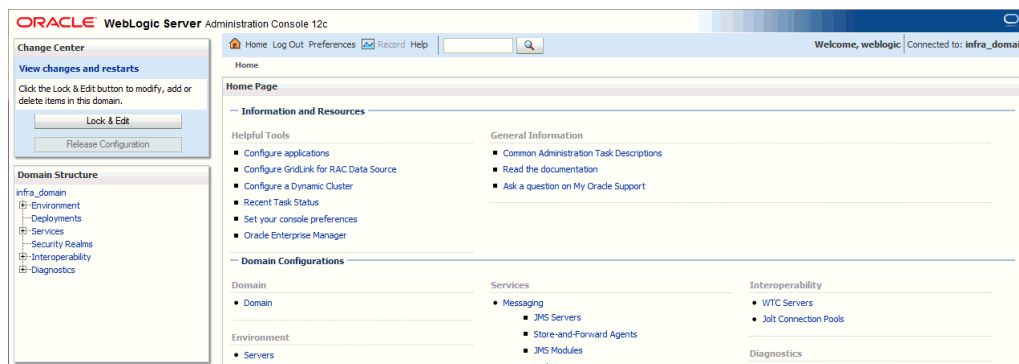
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`http://administration_server_host:administration_server_port/console`

The default Administration Server port number is 7001.



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

### 3.3.3 Starting Managed Servers

You start the Managed Servers from Oracle Fusion Middleware Control.

To start Managed Servers:

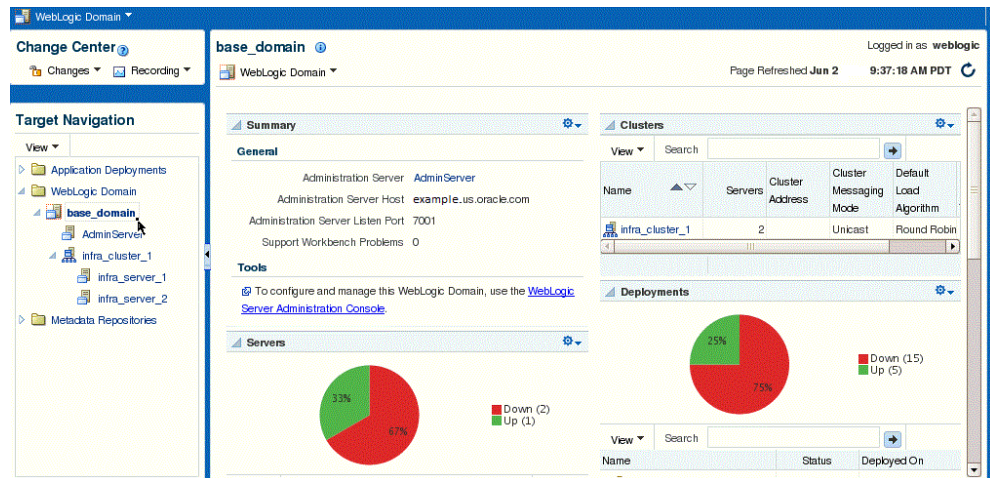
1. Log in to Oracle Fusion Middleware Control:

`http://administration_server_host:administration_server_port/em`

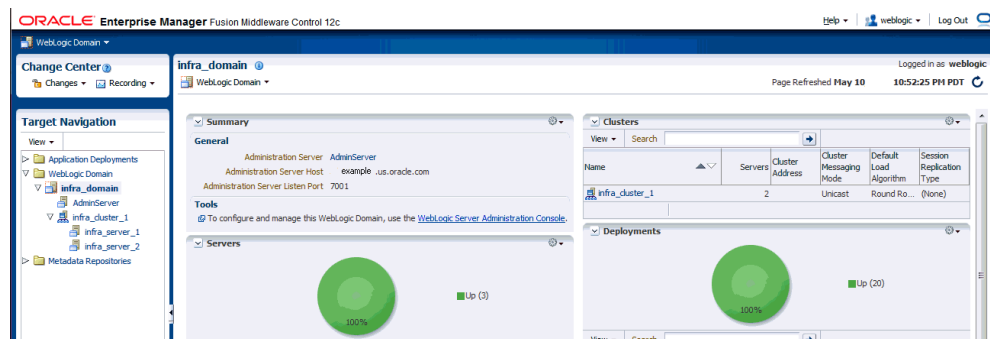
The Administration Server host and port number were in the URL on the Configuration Success screen ([Writing Down Your Domain Name and Administration Server URL](#)). The default Administration Server port number is 7001.

You specified login credentials on the Administrator Account screen ([Specifying a Custom Prefix and Selecting Schemas](#)).

2. From the Target Navigation pane, click the arrows to expand the domain until you see Managed Servers (`infra_server_1` and `infra_server_2`).



3. Select the first Managed Server (`infra_server_1`).
4. Next to the **WebLogic Server** menu, select **Start Up**.
5. Repeat Steps 3 and 4 to start `infra_server_2`.
6. In the Target Navigation page, select your domain name to see that all servers are up and running.



**Tip:**

For more information about managing Oracle Fusion Middleware using Oracle Enterprise Manager Fusion Middleware Control, see *Manage Infrastructure in Administering Oracle Fusion Middleware with Fusion Middleware Control*.

### 3.4 Verifying Your Configuration

Oracle recommends that you verify that your domain is configured properly.

See [Basic Administrative Tasks for a New Domain](#) to verify your configuration. Familiarize yourself with tasks that this topic describes and run them.

## Next Steps After Configuring the Infrastructure Domain

This topic describes common tasks you might want to perform on a newly created Oracle Fusion Middleware Infrastructure domain.

This section includes the following topics:

### Basic Administrative Tasks for a New Domain

There are a series of common administration tasks to perform on your newly created domain.

### Additional Domain Configuration Tasks for a New Domain

The following table lists additional tasks to perform on your newly created domain.

### High Availability Configuration Tasks

If you choose to scale out your standard installation environment for high availability, there is a list of tasks to perform.

## 4.1 Basic Administrative Tasks for a New Domain

There are a series of common administration tasks 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 various tools that you can use to manage your environment.	Overview of Oracle Fusion Middleware Administration Tools in <i>Administering Oracle Fusion Middleware</i> .
Starting and stopping products and servers	Learn how to start and stop Oracle Fusion Middleware, including the Administration Server, Managed Servers, and components.	Starting and Stopping Oracle Fusion Middleware in <i>Administering Oracle Fusion Middleware</i> .
Configuring Secure Sockets Layer (SSL)	Learn how to set up secure communications among Oracle Fusion Middleware components using SSL.	Configuring SSL in Oracle Fusion Middleware in <i>Administering Oracle Fusion Middleware</i> .
Monitoring Oracle Fusion Middleware	Learn how to keep track of the status of Oracle Fusion Middleware components.	Monitoring Oracle Fusion Middleware in <i>Administering Oracle Fusion Middleware</i> .

**Table 4-1 (Cont.) Basic Administration Tasks for a New Domain**

Task	Description	More Information
Understanding Backup and Recovery Procedures	Learn the recommended backup and recovery procedures for Oracle Fusion Middleware.	Introducing Backup and Recovery in <i>Administering Oracle Fusion Middleware</i> .

## 4.2 Additional Domain Configuration Tasks for a New Domain

The following table lists additional tasks 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 Oracle Fusion Middleware.	Deploying Applications part in <i>Administering Oracle Fusion Middleware</i> .
Adding a Web Tier front-end to your domain	Oracle Web Tier hosts Web pages (static and dynamic), provides security and high performance along with built-in clustering, load balancing, and failover features. In particular, the Web Tier contains Oracle HTTP Server.	See the steps to install and configure Oracle HTTP Server in the WebLogic Server domain in <i>Installing and Configuring Oracle HTTP Server</i> . Also refer to Installing Multiple Products in the Same Domain in <i>Planning an Installation of Oracle Fusion Middleware</i> 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 <i>Administering Clusters for Oracle WebLogic Server</i> . For information about tuning Coherence, see Performance Tuning in <i>Administering Oracle Coherence</i> . For information about storing HTTP session data in Coherence, see Using Coherence*Web with WebLogic Server in <i>Administering HTTP Session Management with Oracle Coherence*Web</i> . For more information about creating and deploying Coherence applications, see Creating Coherence Applications for WebLogic Server in <i>Developing Oracle Coherence Applications for Oracle WebLogic Server</i> .

## 4.3 High Availability Configuration Tasks

If you choose to scale out your standard installation environment for high availability, there is a list of tasks to perform.

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

<b>Task</b>	<b>Description</b>	<b>More Information</b>
Configuring Node Manager	Node Manager enables you to start, shut down, and restart the Administration Server and Managed Server instances from a remote location. Node Manager is an essential utility for high availability environments.	Overview of Node Manager Configuration in <i>Administering Node Manager for Oracle WebLogic Server</i> .
Scaling out to multiple host computers	To enable high availability, it is important to provide failover capabilities to another host computer. If one computer goes down, your environment can continue to serve consumers of your deployed applications.	Scaling Out a Topology (Machine Scaleout) in the <i>High Availability Guide</i> .
Configuring high availability for your Web Tier components.	If you added a Web tier front-end, you must configure the Web Tier for high availability, as well as the WebLogic Server software.	Configuring High Availability for Web Tier Components in <i>High Availability Guide</i> .
Setting up a front-end load balancer	You can use a load balancer to distribute requests across servers more evenly.	Server Load Balancing in a High Availability Environment and Configure Load Balancer in <i>High Availability Guide</i> .





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# Deinstalling Oracle Fusion Middleware Infrastructure

This section describes how to deinstall or reinstall Oracle Fusion Middleware Infrastructure. Always use the instructions in this topic to remove the software to verify it uninstalls properly. If you try to remove the software manually, you may experience problems when you try to reinstall the software again at a later time.

This section includes the following topics:

### [Product Deinstallation Roadmap](#)

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

### [About Reinstalling the Software](#)

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

## 5.1 Product Deinstallation Roadmap

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

The following table summarizes the procedure and provides links to supporting documentation.

**Table 5-1 Roadmap for Deinstalling Oracle Fusion Middleware Infrastructure**

Task	Description	Documentation
Stop Oracle Fusion Middleware.	Oracle recommends that you stop all servers and processes in your domain before you run the deinstaller.	See <a href="#">Stopping Oracle Fusion Middleware</a> .
Remove your database schemas.	Run Repository Creation Utility to remove your database schemas.	See <a href="#">Removing Your Database Schemas</a> .
Remove the software.	Run the product deinstaller to remove Oracle Fusion Middleware Infrastructure.	See <a href="#">Deinstalling the Software</a> .
Remove the Oracle home directory.	The deinstaller does not remove all files and folders from the Oracle home directory. After the deinstaller finishes, you must manually remove the Oracle home to complete your product removal.	See <a href="#">Removing the Oracle Home Directory Manually</a> .

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

Task	Description	Documentation
Remove the program shortcuts on Windows operating systems.	The deinstaller does not remove the program shortcuts on your Windows operating system.	See <a href="#">Removing Program Shortcuts on Windows Operating Systems</a> .
Remove your domain and application data.	The deinstaller does not remove data contained in your Domain home nor Application home directories, even if they are located inside the Oracle home. If necessary, you must remove these directories manually.	See <a href="#">Removing Your Domain and Application Data</a> .

### [Stopping Oracle Fusion Middleware](#)

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

### [Removing Your Database Schemas](#)

Before removing the Oracle home, Oracle recommends that you run Repository Creation Utility to remove database schemas associated with a domain.

### [Deinstalling the Software](#)

You can use the deinstaller or perform a silent install.

### [Removing the Oracle Home Directory Manually](#)

After the deinstaller finishes, you must manually remove your Oracle home directory and any existing sub-directories that the deinstaller did not remove.

### [Removing 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.

### [Removing Your Domain and Application Data](#)

If you will no longer use domain and application files, you can remove them.

## 5.1.1 Stopping Oracle Fusion Middleware

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

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

## 5.1.2 Removing Your Database Schemas

Before removing the Oracle home, Oracle recommends that you run Repository Creation Utility to remove database schemas associated with a domain.

Each domain has its own set of schemas that a custom prefix uniquely identifies (see "Understanding Custom Prefixes" in *Creating Schemas with the Repository Creation*

*Utility*). This set of schemas cannot be shared with any other domain (see "Planning Your Schema Creation" in *Creating Schemas with the Repository Creation Utility*).

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

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

### 5.1.3 Deinstalling the Software

You can use the deinstaller or perform a silent install.

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

#### Starting the Deinstallation Program

The method you use to start the deinstallation program depends on your operating system: Windows or UNIX.

#### Navigating the Deinstallation Screens

The deinstallation program shows a series of screens in the order that the following table describes.

#### 5.1.3.1 Starting the Deinstallation Program

The method you use to start the deinstallation program depends on your operating system: Windows or UNIX.

On UNIX operating systems, go to the `ORACLE_HOME/oui/bin` directory and enter command `./deinstall.sh`

On Windows operating systems, use a file manager window to go to the `ORACLE_HOME\oui\bin` directory and double click on `deinstall.cmd`:

#### 5.1.3.2 Navigating the Deinstallation Screens

The deinstallation program shows a series of screens in the order that the following table describes.

If you need additional help with any deinstallation screen, click the screen name.

**Table 5-2 Deinstall Screens and Descriptions**

Screen	Description
Welcome	Introduces you to the product deinstaller.
Deinstallation Summary	Shows the Oracle home directory and its contents that will be deinstalled. Verify that this is the correct directory. Click <b>Deinstall</b> to begin removing the software.
Deinstallation Progress	Shows the progress of the deinstallation.
Deinstallation Complete	Opens when the deinstallation is complete. Review the information on this screen then click <b>Finish</b> to dismiss the deinstaller.

### 5.1.4 Removing the Oracle Home Directory Manually

After the deinstaller finishes, you must manually remove your Oracle home directory and any existing sub-directories that the deinstaller did not remove.

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**.

### 5.1.5 Removing Program Shortcuts on Windows Operating Systems

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

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`.

### 5.1.6 Removing Your Domain and Application Data

If you will no longer use domain and application files, you can remove them.

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.

## 5.2 About Reinstalling the Software

You can reinstall your software into the same Oracle home as a previous installation only if you have deinstalled the software by following the deinstallation instructions, 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:

### Scenario: Installing in an Existing Oracle Home that Contains the Same Feature Sets

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

### Scenario: Installing in an Existing, Non-Empty Oracle Home

Suppose that you have chosen to create your Domain home or Application home somewhere inside your existing Oracle home.

### 5.2.1 Scenario: Installing in an Existing Oracle Home that Contains the Same Feature Sets

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

Your options:

- Select a different installation type. In this case, only feature sets that don't already exist in the Oracle home directory get installed.
- Select a different Oracle home directory.

### 5.2.2 Scenario: Installing in an Existing, Non-Empty Oracle Home

Suppose that you have chosen to create your Domain home or Application home somewhere inside your existing Oracle home.

The deinstallation process doesn't remove this data, so if you attempt to reinstall into the same Oracle home, the installer does not allow it.

Your options:

- Deinstall your software from the Oracle home as this topic describes, 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 [Installing the Infrastructure Software](#). You will need to re-create any domain or application data that was in the Oracle home.
- Select a different Oracle home directory.



# Understanding the Oracle Fusion Middleware Infrastructure Distribution

The Oracle Fusion Middleware Infrastructure distribution includes products and feature sets that you can select for installation.

**Table A-1 Oracle Fusion Middleware Infrastructure Products and Feature Sets**

Product	Feature Set	Description
Core Server	<b>Core Application Server</b>	A complete application server that implements Java Enterprise Edition 6 (Java EE 6) technologies, Web Services, and other leading Internet standards to provide a reliable framework for highly available, scalable, and secure applications and services. Includes the full set of components that comprise the essential WebLogic Server run time with full Java EE 6 support.  This feature set does not include administration tools and add-on technologies, such as the Administration Console, Web Server plug-ins, Beehive run-time framework, JDBC drivers, and so on.
	<b>Coherence Product Files</b>	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.
	<b>Web 2.0 HTTP Pub-Sub Server</b>	A channels based publish-subscribe mechanism for Web-based clients to send and receive asynchronous messages over HTTP. The HTTP Publish-Subscribe server can be used by Web clients to subscribe to channels (a representation in Bayeux for destinations) and publish messages to the channels. Developers are recommended to install the pub-sub sample, available by selecting the <b>Server Examples</b> product component.  If this component is not installed, you will not be able to take advantage of Web 2.0 HTTP Publish-Subscribe functionality.  For more information, see <i>Using the HTTP Publish-Subscribe Server in Developing Web Applications, Servlets, and JSPs for Oracle WebLogic Server</i> .
	<b>WebLogic SCA</b>	This is a Spring container for Java applications that use SCA semantics to expose services and invoke references. The container is included as an optional library in WebLogic Server.
	<b>WebLogic Client Jars</b>	These are client-side WebLogic applications.

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

Product	Feature Set	Description
	<b>Oracle WebLogic Communication Services</b>	Oracle WebLogic Communication Services (OWLCS) is a platform designed to integrate communication services with enterprise services and applications.
<b>Administrative Tools</b>	<b>Administration Console Additional Language Help Files</b>	The WebLogic Server Web application for configuring, administering, and monitoring WebLogic domains. If you don't install the Administration Console, the console will not be available when you start the Administration Server. For information, see About the Administration Console in <i>Understanding Oracle WebLogic Server</i> .
	<b>CIE WLS Config</b>	Provides files used by the Oracle Fusion Middleware Configuration Wizard.
	<b>Enterprise Manager</b>	Oracle Enterprise Manager Fusion Middleware Control is a Web browser-based, graphical user interface that you can use to monitor and administer your domain. For more information, see Getting Started Using Oracle Enterprise Manager Fusion Middleware Control in <i>Administering Oracle Fusion Middleware</i> .
<b>Database Support</b>	<b>Third-Party JDBC Drivers</b>	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 <i>Administering JDBC Data Sources for Oracle WebLogic Server</i> .
	<b>WebLogic Evaluation Database</b>	Installs an evaluation database, which is used by the Server Examples, into the <code>ORACLE_HOME/wlserver/common/derby</code> directory. If you don't choose the <b>Fusion Middleware Infrastructure with Examples</b> install type, this evaluation database is still installed.
<b>Open Source Components</b>	<b>Third Party Jackson</b>	Third party open source software for processing JavaScript Object Notation (JSON) data formats.
	<b>Third Party Jersey</b>	Third party open source software representing the official implementation of the Representational State Transfer (REST) architecture. For more information, see About RESTful Web Service Development in <i>Developing and Securing RESTful Web Services for Oracle WebLogic Server</i> .
	<b>Third Party Maven Apache</b>	Maven is a build management tool that is central to project build tasks such as compilation, packaging, and artifact management. For more information, see Introduction to Continuous Integration in <i>Developing Applications Using Continuous Integration</i> .
<b>Examples</b>	<b>Server Examples</b>	Server Examples are example applications that demonstrate key features of WebLogic Server. For more information, see Sample Application and Code Examples in <i>Understanding Oracle WebLogic Server</i> .



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

Product	Feature Set	Description
	<b>Coherence Examples</b>	<p>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.</p> <p><b>Note:</b> Both Server Examples and Coherence Examples are only installed if you select the <b>Fusion Middleware Infrastructure with Examples</b> install type.</p>
<b>JRF and Enterprise Manager</b>	<b>WLS for FMW</b>	<p>Installing this component creates the <code>oracle_common</code> directory inside the specified Oracle home. This directory contains:</p> <ul style="list-style-type: none"> <li>Repository Creation Utility Location: <code>ORACLE_HOME/oracle_common/bin</code> This is the tool used to create database schemas for Fusion Middleware products. For more information, see <i>Creating Schemas</i> .</li> <li>Configuration Wizard Location: <code>ORACLE_HOME/oracle_common/common/bin</code> The Configuration Wizard guides you through the process of creating a domain for your target environment and selecting configuration options you want to include. To manage this domain and the servers that are created, use the Administration Console or Fusion Middleware Control. <b>Note:</b> The WebLogic Scripting Tool (WLST) has a dependency on the Configuration Wizard. WLST is available only if you select this component for installation. For information about the Configuration Wizard, see <i>Overview of the Configuration Wizard in Creating WebLogic Domains Using the Configuration Wizard</i>.</li> <li>Upgrade Assistant Location: <code>ORACLE_HOME/oracle_common/upgrade/bin</code> The Upgrade Assistant convert a domain configuration from previous WebLogic Server release to the current release. For information about the upgrade tools, see <i>Introduction in Oracle Fusion Middleware Upgrading Oracle WebLogic Server</i>.</li> <li>Oracle Application Development Framework (ADF) This is a Java framework for building enterprise applications, providing visual and declarative approaches to Java EE development.</li> </ul>
<b>Oracle Automatic Diagnostic Repository Feature Set Group</b>	<b>OPatch</b>	The OPatch utility is a tool that allows the application and rollback of interim patches to Oracle products.
	<b>Toplink Developer</b>	Oracle TopLink builds high-performance applications that store persistent object-oriented data in a relational database. It successfully transforms object-oriented data into either relational data or Extensible Markup Language (XML) elements.

