

# Oracle® Fusion Middleware

## Installing and Configuring Oracle Identity and Access Management



12c (12.2.1.3.0)

E95501-05

July 2020

The Oracle logo, consisting of the word "ORACLE" in white, uppercase letters, centered within a solid red square.

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Oracle Fusion Middleware Installing and Configuring Oracle Identity and Access Management, 12c  
(12.2.1.3.0)

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# Preface

This document describes how to install and configure Oracle Identity and Access Management.

- [Audience](#)
- [Documentation Accessibility](#)
- [Related Documents](#)
- [Conventions](#)  
Learn about the conventions used in this document.

## Audience

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

## Documentation Accessibility

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

### Access to Oracle Support

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

## Related Documents

For more information, see the following documents in the 12c (12.2.1.3.0) documentation set:

- For installation information, see Fusion Middleware Installation Documentation.
- For upgrade information, see Fusion Middleware Upgrade Documentation.
- For administration-related information, see Fusion Middleware Administration Documentation.
- For release-related information, see Fusion Middleware Release Notes.

## Conventions

Learn about the conventions used in this document.

This document uses the following text conventions:

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Convention	Meaning
<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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# 1

## About the Oracle Identity and Access Management Installation

The standard installation for Oracle Identity and Access Management described in this guide, using which you can install and configure Oracle Access Management and Oracle Identity Governance products.

Oracle Identity and Access Management 12c (12.2.1.3.0) suite has two components: Oracle Access Management (OAM) and Oracle Identity Governance (OIG).

### Note:

The product Oracle Identity Manager is referred to as Oracle Identity Manager (OIM) and Oracle Identity Governance (OIG) interchangeably in the guide.

- [About Supported Installation Methods](#)  
Oracle Identity and Access Management supports two methods of installation — Simplified and Traditional.
- [Using the Standard Installation Topology as a Starting Point](#)  
The standard installation topology is a flexible topology that you can use as a starting point in production environments.

## About Supported Installation Methods

Oracle Identity and Access Management supports two methods of installation — Simplified and Traditional.

- **Simplified method:** by using an quick start installer to install all the products in one go.

### Note:

Oracle Access Management does not support simplified method.

- **Traditional method:** by individually installing the required products.

The following table shows the supported methods for installing and configuring the components of Oracle Identity and Access Management:

**Table 1-1 Methods of Installation for Oracle Identity and Access Management**

Component	Simplified Install Method	Traditional Install Method
N/A	Supported?	Supported?

**Table 1-1 (Cont.) Methods of Installation for Oracle Identity and Access Management**

Component	Simplified Install Method	Traditional Install Method
Oracle Access Management	No	Yes
Oracle Identity Governance	Yes	Yes

## Using the Standard Installation Topology as a Starting Point

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

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

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

- [About the Oracle Identity and Access Management Standard Installation Topology](#)  
This topology represents a standard WebLogic Server domain that contains an Administration Server and one or more clusters containing one or more Managed Servers.
- [About Elements in the Standard Installation Topology Illustration](#)  
The standard installation topology typically includes common elements.

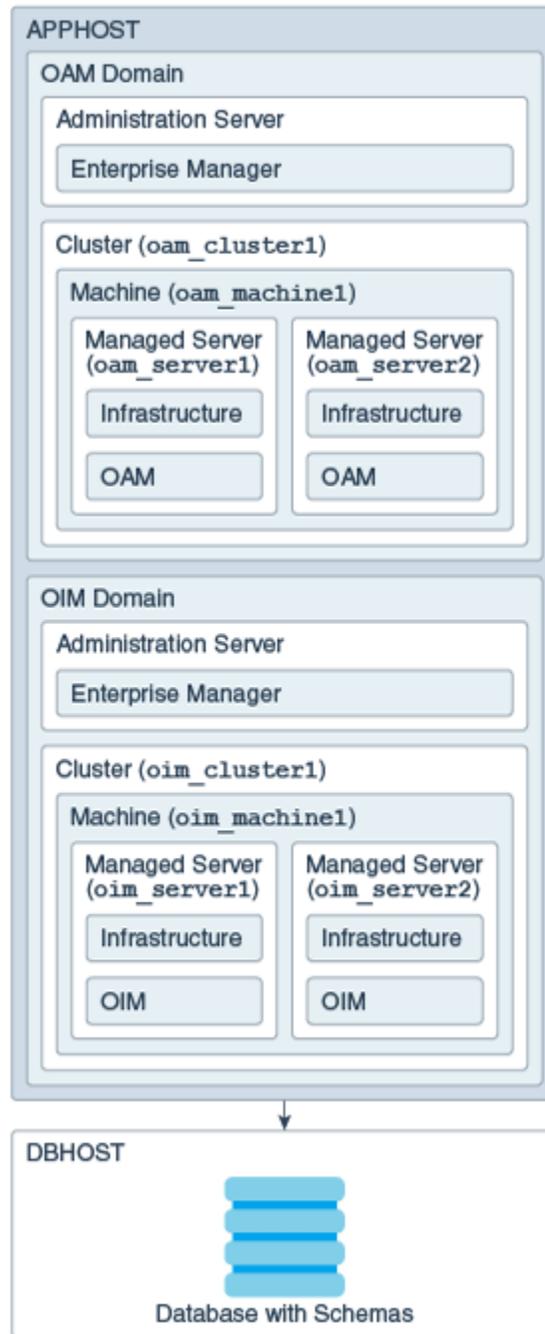
## About the Oracle Identity and Access Management Standard Installation Topology

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

The following figure shows the standard installation topology for Oracle Identity and Access Management.

See [Table 1-2](#) for information on elements of this topology.

Figure 1-1 Standard Topology for Oracle Identity and Access Management



For Oracle Access Management configuration instructions, see [Configuring the Oracle Access Management Domain](#).

For Oracle Identity Governance configuration instructions, see [Configuring the Oracle Identity Governance Domain](#).

## About Elements in the Standard Installation Topology Illustration

The standard installation topology typically includes common elements.

The following table describes all elements of the topology illustration:

**Table 1-2 Description of Elements in Standard Installation Topologies**

Element	Description and Links to Related Documentation
APPHOST	A standard term used in Oracle documentation to refer to the machine that hosts the application tier.
DBHOST	A standard term used in Oracle documentation to refer to the machine that hosts the database.
WebLogic Domain	A logically related group of Java components (in this case, the Administration Server, Managed Servers, and other related software components). See <i>What Is an Oracle WebLogic Server Domain?</i> in <i>Oracle Fusion Middleware Understanding Oracle Fusion Middleware</i> .
Administration Server	Central control entity of a WebLogic domain. It maintains configuration objects for that domain and distributes configuration changes to Managed Servers. See <i>What Is the Administration Server?</i> in <i>Oracle Fusion Middleware Understanding Oracle Fusion Middleware</i> .
Enterprise Manager	The Oracle Enterprise Manager Fusion Middleware Control is a primary tool used to manage a domain. See <i>Oracle Enterprise Manager Fusion Middleware Control</i> in <i>Oracle Fusion Middleware Understanding Oracle Fusion Middleware</i> .
Cluster	A collection of multiple WebLogic Server instances running simultaneously and working together. See <i>Overview of Managed Servers and Managed Server Clusters</i> in <i>Oracle Fusion Middleware Understanding Oracle Fusion Middleware</i> .
Machine	A logical representation of the computer that hosts one or more WebLogic Server instances (servers). Machines are also the logical glue between the Managed Servers and the Node Manager. In order to start or stop the Managed Servers using the Node Manager, associate the Managed Servers with a machine.
Managed Server	A host for your applications, application components, web services, and their associated resources. See <i>Overview of Managed Servers and Managed Server Clusters</i> in <i>Oracle Fusion Middleware Understanding Oracle Fusion Middleware</i> .

**Table 1-2 (Cont.) Description of Elements in Standard Installation Topologies**

Element	Description and Links to Related Documentation
Infrastructure	<p>A collection of services that include the following:</p> <ul style="list-style-type: none"><li data-bbox="857 369 1438 537">• Metadata repository (MDS) contains the metadata for Oracle Fusion Middleware components, such as the Oracle Application Developer Framework. See <i>What Is the Metadata Repository?</i> in <i>Oracle Fusion Middleware Understanding Oracle Fusion Middleware</i>.</li><li data-bbox="857 548 1438 600">• Oracle Application Developer Framework (Oracle ADF).</li><li data-bbox="857 611 1438 634">• Oracle Web Services Manager (OWSM).</li></ul>

# 2

## Preparing to Install and Configure Oracle Identity and Access Management

To prepare for your Oracle Identity and Access Management installation, verify that your system meets the basic requirements, then obtain the correct installation software.

 **Note:**

The product Oracle Identity Manager is referred to as Oracle Identity Manager (OIM) and Oracle Identity Governance (OIG) interchangeably in the guide.

- [Roadmap for Installing and Configuring a Standard Installation Topology](#)  
This roadmap provides the steps required to install and configure Oracle Access Management and Oracle Identity Governance.
- [Roadmap for Verifying Your System Environment](#)  
Before you begin the installation and configuration process, you must verify your system environment.
- [Obtaining the Product Distribution](#)  
You can obtain the Oracle Fusion Middleware Infrastructure and Oracle Identity and Access Management distribution on *Technical Resources from Oracle*.

### Roadmap for Installing and Configuring a Standard Installation Topology

This roadmap provides the steps required to install and configure Oracle Access Management and Oracle Identity Governance.

[Table 2-1](#) provides the high-level steps required for installing a standard installation topology.

**Table 2-1 Standard 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> .

**Table 2-1 (Cont.) Standard Installation Roadmap**

Task	Description	Documentation
Check for any mandatory patches that are required before the installation.	Review the Oracle Fusion Middleware Infrastructure release notes to see if there are any mandatory patches required for the software products that you are installing.	See <i>Install and Configure in Oracle Fusion Middleware Release Notes for Oracle Fusion Middleware Infrastructure</i> .
Obtain the appropriate distributions.	<p>For Oracle Access Management (OAM), obtain the following distributions:</p> <ul style="list-style-type: none"> <li>fmw_12.2.1.3.0_infrastructure.jar</li> <li>fmw_12.2.1.3.0_idm.jar</li> </ul> <p>For Oracle Identity Governance (OIG):</p> <p>If you choose to install all the software in one go, obtain the following distributions:</p> <ul style="list-style-type: none"> <li>fmw_12.2.1.3.0_idmquickstart.jar</li> <li>fmw_12.2.1.3.0_idmquickstart2.jar</li> </ul> <p>If you choose to individually install each product, obtain the following distributions:</p> <ul style="list-style-type: none"> <li>fmw_12.2.1.3.0_infrastructure.jar</li> <li>fmw_12.2.1.3.0_soa.jar</li> <li>fmw_12.2.1.3.0_idm.jar</li> </ul>	<p>See <a href="#">Obtaining the Product Distribution</a>.</p> <p><b>Note:</b> After downloading the required .zip file, unzip the .zip file to obtain the .jar distributions.</p> <p>For information about supported installation methods for Oracle Identity and Access Management, see <a href="#">About Supported Installation Methods</a>.</p>
Determine your installation directories.	Verify that the installer can access or create the required installer directories. Also, verify that the directories exist on systems that meet the minimum requirements.	See <i>What Are the Key Oracle Fusion Middleware Directories?</i> in <i>Oracle Fusion Middleware Understanding Oracle Fusion Middleware</i> .
Install prerequisite software.	<p>If you are configuring OAM 12.2.1.3.0, you must install Oracle Fusion Middleware Infrastructure 12.2.1.3.0.</p> <p>If you are configuring OIG:</p> <ul style="list-style-type: none"> <li>Simplified method: No prerequisites</li> <li>Traditional method: You must first install Oracle Fusion Middleware Infrastructure 12.2.1.3.0 and then install Oracle SOA Suite 12.2.1.3.0.</li> </ul>	<p>See <i>Installing the Infrastructure Software in Oracle Fusion Middleware Installing and Configuring the Oracle Fusion Middleware Infrastructure</i>.</p> <p>See <i>Installing the Oracle SOA Suite and Oracle Business Process Management Software in Oracle Fusion Middleware Installing and Configuring Oracle SOA Suite and Business Process Management</i>.</p>

**Table 2-1 (Cont.) Standard Installation Roadmap**

Task	Description	Documentation
Install the software.	Run the Oracle Identity and Access Management installer to install the OAM and OIG binaries. <b>Note:</b> If you are using both Oracle Identity Governance and OIG then you must install them in separate <i>ORACLE_HOMES</i> .  Installing the software transfers the software to your system and creates the Oracle home directory.	For OAM, see <a href="#">Installing the Oracle Access Management Software</a> . For OIG, see <a href="#">Installing the Oracle Identity Governance Software</a> . For an OAM and OIG integrated environment, see <a href="#">Integrating Oracle Identity Governance and Oracle Access Manager Using LDAP Connectors in Integration Guide for Oracle Identity Management Suite</a> .
Select a database profile and review any required custom variables.	Before you install the required schemas in the database, review the information about any custom variables you need to set for the Oracle Identity and Access Management schemas.	See <a href="#">About Database Requirements for an Oracle Fusion Middleware Installation</a> .
Create the schemas.	Run the Repository Creation Utility to create the schemas required for configuration.	For OAM, see <a href="#">Creating the Database Schemas</a> . For OIG, see <a href="#">Creating the Database Schemas</a> .
Create a WebLogic domain.	Use the Configuration Wizard/Assistant to create and configure the WebLogic domain. <b>Note:</b> Configure OAM and OIG in two different <i>DOMAIN_HOMES</i> .	For OAM, see <a href="#">Configuring the Oracle Access Management Domain</a> . For OIG, see <a href="#">Configuring the Oracle Identity Governance 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 Domain</a> .

## Roadmap for Verifying Your System Environment

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

[Table 2-2](#) identifies important tasks and checks to perform to ensure that your environment is prepared to install and configure Oracle Identity and Access Management.

**Table 2-2 Roadmap for Verifying Your System Environment**

Task	Description	Documentation
Verify certification and system requirements.	Verify that your operating system is certified and configured for installation and configuration.	See <a href="#">Verifying Certification, System, and Interoperability Requirements</a> .
Identify a proper installation user.	Verify that the installation user has the required permissions to install and configure the software.	See <a href="#">Selecting an Installation User</a> .

**Table 2-2 (Cont.) Roadmap for Verifying Your System Environment**

Task	Description	Documentation
Select the installation and configuration directories on your system.	Verify that you can create the necessary directories to install and configure the software, according to the recommended directory structure.	See <a href="#">About the Directories for Installation and Configuration</a> .
Install a certified JDK.	The installation program for the distribution requires a certified JDK present on your system.	See <a href="#">About JDK Requirements for an Oracle Fusion Middleware Installation</a> .
Install and configure a database for mid-tier schemas.	To configure your WebLogic domain, you must have access to a certified database that is configured for the schemas required by Oracle Identity and Access Management.	See <a href="#">About Database Requirements for an Oracle Fusion Middleware Installation</a> .

- [Verifying Certification, System, and Interoperability Requirements](#)  
Oracle recommends that you use the certification matrix and system requirements documents with each other to verify that your environment meets the requirements for installation.
- [Selecting an Installation User](#)  
The user who installs and configures your system must have the required permissions and privileges.
- [About the Directories for Installation and Configuration](#)  
During the installation and domain configuration process, you must plan on providing the locations for these directories: Oracle home, Domain home, and the Application home.
- [About JDK Requirements for an Oracle Fusion Middleware Installation](#)  
Most Fusion Middleware products are in .jar file format. These distributions do not include a JDK. To run a .jar distribution installer, you must have a certified JDK installed on your system.
- [About Database Requirements for an Oracle Fusion Middleware Installation](#)  
Many Oracle Fusion Middleware products require database schemas prior to configuration. If you do not already have a database where you can install these schemas, you must install and configure a certified database.

## Verifying Certification, System, and Interoperability Requirements

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

### 1. Verifying that your environment meets certification requirements:

Make sure that you install your product on a supported hardware and software configuration. See the certification document for your release on the *Oracle Fusion Middleware Supported System Configurations* page.

Oracle has tested and verified the performance of your product on all certified systems and environments. Whenever new certifications are released, they are added to the certification document right away. New certifications can be

released at any time. Therefore, the certification documents are kept outside the documentation libraries and are available on Oracle Technology Network.

## 2. Using the system requirements document to verify certification:

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

## 3. Verifying interoperability among multiple products:

While Oracle Access Management (OAM) and Oracle Identity Governance (OIG) are interoperable, they must be installed in separate Oracle homes and must be configured in separate Oracle WebLogic Server domains. For more information about OIG and OAM interoperability, and for details on installing or configuring OIG or OAM with mixed releases of the same product or with other Fusion Middleware products from the same release, see *Oracle Fusion Middleware Interoperability and Compatibility in Oracle Fusion Middleware Understanding Interoperability and Compatibility*.

## Selecting an Installation User

The user who installs and configures your system must have the required permissions and privileges.

- [About User Permissions](#)  
The user who installs a Fusion Middleware product owns the files and has certain permissions on the files.
- [About Non-Default User Permissions on UNIX Operating Systems](#)  
Changing the default permission setting reduces the security of the installation and your system. Oracle does not recommend that change the default permission settings.
- [Verifying that the Installation User has Administrator Privileges on Windows Operating Systems](#)  
To update the Windows Registry, you must have administrator privileges.

## About User Permissions

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

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

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

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

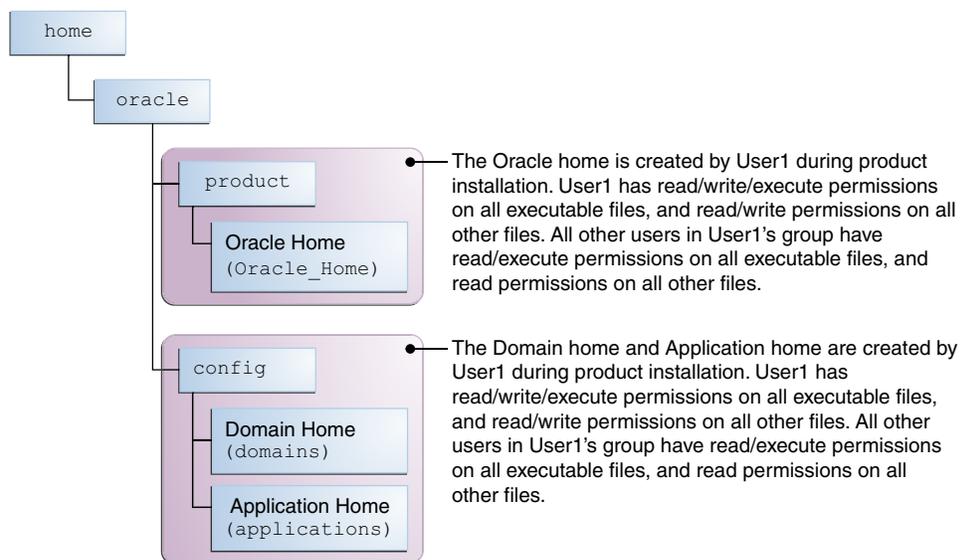
Consider the following examples:

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

This example explains the file permissions where the same user installs the software and configures the domain.

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

**Figure 2-1 Directory Structure when a Single User Installs the Software and Configures the Domain**

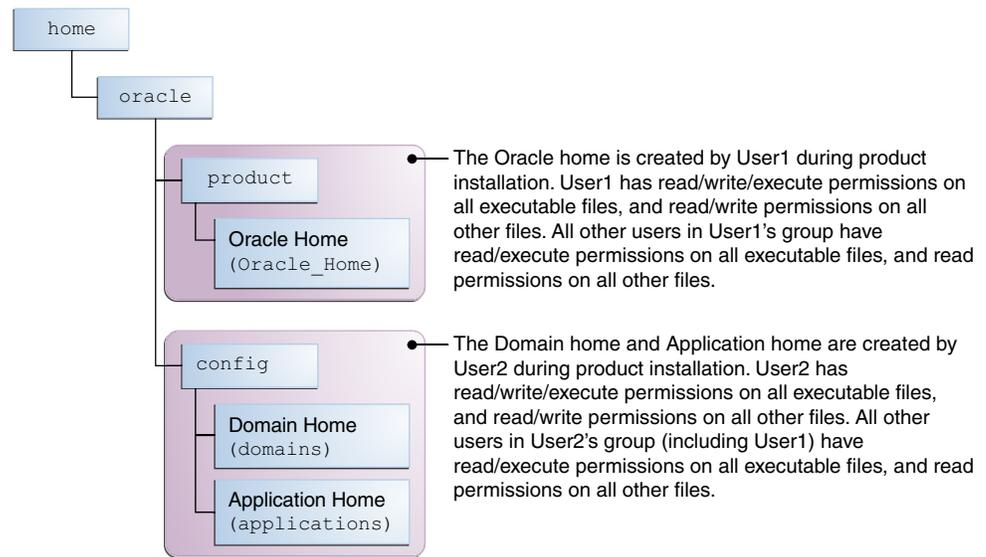


If the user who creates the domain is different than the user who installed the software, then both users must have the same privileges, as shown in the next example.

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

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

**Figure 2-2 Directory Structure when Different Users Install the Software and Configure the Domain**



 **Note:**

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

Consider the following points before you run the installer:

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

```
umask 027
```

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

## About Non-Default User Permissions on UNIX Operating Systems

Changing the default permission setting reduces the security of the installation and your system. Oracle does not recommend that change the default permission settings.

If other users require access to a particular file or executable, use the UNIX `sudo` command or other similar commands to change the file permissions.

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

## Verifying that the Installation User has Administrator Privileges on Windows Operating Systems

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

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

To perform a task with elevated privileges:

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

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

### Note:

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

### Note:

For Oracle Identity and Access Management components, ensure that you have enabled User Account Control (UAC). If you have not done already, enable it using the instructions described in Enabling User Account Control (UAC) in the *Oracle Fusion Middleware System Requirements and Specifications*.

3. Perform the desired task.

For example, to start the product installer:

For a jar file, enter:

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

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

```
distribution_name.exe
```

## About the Directories for Installation and Configuration

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

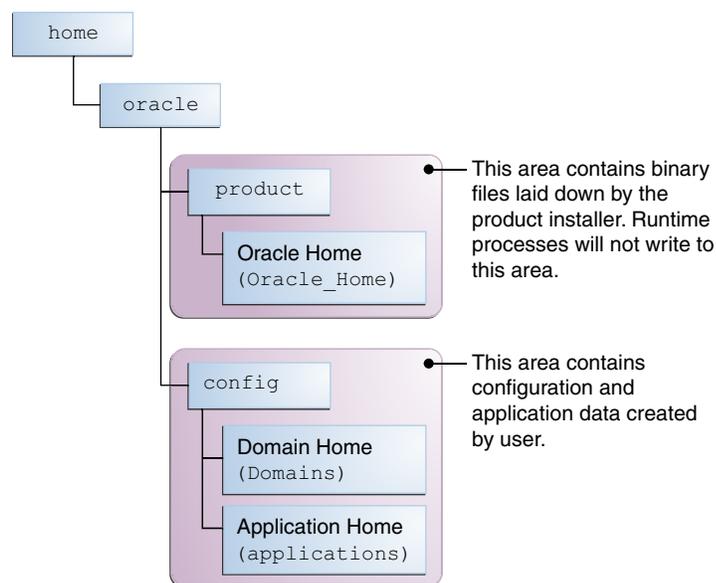
- [About the Recommended Directory Structure](#)  
Oracle recommends specific locations for the Oracle Home, Domain Home, and Application Home.
- [About the Oracle Home Directory](#)  
When you install any Oracle Fusion Middleware product, you must use an Oracle home directory.
- [About the Domain Home Directory](#)  
The Domain home is the directory where domains that you configure are created.
- [About the Application Home Directory](#)  
The Application home is the directory where applications for domains you configure are created.
- [Preparing for Shared Storage](#)  
Oracle Fusion Middleware allows you to configure multiple WebLogic Server domains from a single Oracle home. This allows you to install the Oracle home in a single location on a shared volume and reuse the Oracle home for multiple host installations.

## About the Recommended Directory Structure

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

Oracle recommends a directory structure similar to the one shown in [Figure 2-3](#).

**Figure 2-3 Recommended Oracle Fusion Middleware Directory Structure**



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

Oracle recommends that you do not keep your configuration data in the Oracle home directory; if you upgrade your product to another major release, are required to create a new Oracle home for binaries. You must also make sure that your configuration data exists in a location where the binaries in the Oracle home have access.

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

## About the Oracle Home Directory

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

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

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

### Oracle Home Considerations

Keep the following in mind when you create the Oracle home directory and install Fusion Middleware products:

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

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

### Multiple Home Directories

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

- You prefer to maintain separate development and production environments, with a separate product stack for each. With two directories, you can update your development environment without modifying the production environment until you are ready to do so.
- You want to maintain two different versions of a Fusion Middleware product at the same time. For example, you want to install a new version of a product while keeping your existing version intact. In this case, you must install each product version in its own Oracle home directory.
- You need to install multiple products that are not compatible with each other. See Oracle Fusion Middleware 12c (12.2.1.3.0) Interoperability and Compatibility in *Oracle Fusion Middleware Understanding Interoperability and Compatibility*.

 **Note:**

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

## About the Domain Home Directory

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

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

 **Note:**

Use different *domain\_names* for Oracle Access Management and Oracle Identity Governance.

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

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

## About the Application Home Directory

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

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

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

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

## Preparing for Shared Storage

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

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

## About JDK Requirements for an Oracle Fusion Middleware Installation

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

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

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

Always verify the required JDK version by reviewing the certification information on the *Oracle Fusion Middleware Supported System Configurations* page. For 12c (12.2.1.3.0), the certified JDK is 1.8.0\_131 and later.

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

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

## About Database Requirements for an Oracle Fusion Middleware Installation

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



### Note:

Multi-tenancy feature is supported, that is, Pluggable Database (PDB) and Container Database (CDB) are supported.

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

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

*For Oracle Identity Governance only:*

- For OIG you need to run a few prerequisite `sql` files prior to creating Oracle Identity Management schemas. See Oracle Database requirements when using Oracle Identity Governance in the *System Requirements and Specifications* document.
- Based on your deployment topology and the work load, it is recommended that you refer to the following note on My Oracle Support, and take appropriate actions for your deployment. See [Performance Tuning Guidelines and Diagnostics Collection for Oracle Identity Manager \(OIM\) \(Doc ID 1539554.1\)](#)

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

## Obtaining the Product Distribution

You can obtain the Oracle Fusion Middleware Infrastructure and Oracle Identity and Access Management distribution on *Technical Resources from Oracle*.

To prepare to install Oracle Fusion Middleware Infrastructure and Oracle Identity and Access Management:

1. Enter `java -version` on the command line to verify that a certified JDK is installed on your system. For 12c (12.2.1.3.0), the certified JDK is 1.8.0\_131 and later.  
See [About JDK Requirements for an Oracle Fusion Middleware Installation](#).
2. Locate and download the Oracle Fusion Middleware Infrastructure and Oracle Identity and Access Management software. To configure Oracle Identity Governance in traditional mode, you must download Oracle SOA Suite 12.2.1.3.0.  
See Obtaining Product Distributions in *Oracle Fusion Middleware Planning an Installation of Oracle Fusion Middleware*.

After preparing to install and configure the software:

- For Oracle Access Management, go to [Chapter 3: Installing and Configuring the Oracle Access Management Software](#).
- For Oracle Identity Governance, go to [Chapter 4: Installing and Configuring the Oracle Identity Management Software](#).

# 3

## Installing and Configuring the Oracle Access Management Software

Follow the steps in this section to install and configure the Oracle Access Management software.

- [Installing the Oracle Access Management Software](#)
- [Configuring the Oracle Access Management Domain](#)  
After you have installed Oracle Access Management, you can configure the domain, which you can also extend for high availability.

### Installing the Oracle Access Management Software

Follow the steps in this section to install the Oracle Access Management software. Before beginning the installation, ensure that you have verified the prerequisites and completed all steps covered in [Preparing to Install and Configure](#).

 **Note:**

If you are using both Oracle Access Management and Oracle Identity Governance then you must install them in separate `ORACLE_HOMEs`.

The *only* supported method of installation for Oracle Access Management 12c (12.2.1.3.0) is the traditional method, where you individually install Oracle Fusion Middleware Infrastructure and then install Oracle Access Management.

Dependant Software for Oracle Access Management:

- Oracle Fusion Middleware Infrastructure 12c (12.2.1.3.0)

For information about installing Oracle Fusion Middleware Infrastructure 12c (12.2.1.3.0), see *Installing the Infrastructure Software in Oracle Fusion Middleware Installing and Configuring the Oracle Fusion Middleware Infrastructure*.

For information about supported installation methods, see *About Supported Installation Methods*.

- [Verifying the Installation and Configuration Checklist](#)  
The installation and configuration process requires specific information.
- [Starting the Installation Program](#)  
Before running the installation program, you must verify the JDK and prerequisite software is installed.
- [Navigating the Installation Screens](#)  
The installer shows a series of screens where you verify or enter information.

- [Verifying the Installation](#)  
After you complete the installation, verify whether it was successful by completing a series of tasks.

## Verifying the Installation and Configuration Checklist

The installation and configuration process requires specific information.

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

**Table 3-1 Installation and Configuration Checklist**

Information	Example Value	Description
JAVA_HOME	/home/Oracle/Java/ jdk1.8.0_131	Environment variable that points to the Java JDK home directory.
Database host	examplehost.exampledomain	Name and domain of the host where the database is running.
Database port	1521	Port number that the database listens on. The default Oracle database listen port is 1521.
Database service name	orcl.exampledomain	Oracle databases require a unique service name. The default service name is orcl.
DBA username	SYS	Name of user with database administration privileges. The default DBA user on Oracle databases is SYS.
DBA password	myDBApw957	Password of the user with database administration privileges.
ORACLE_HOME	/home/Oracle/product/ ORACLE_HOME	Directory in which you will install your software.  This directory will include Oracle Fusion Middleware Infrastructure and Oracle Access Management, as needed.
WebLogic Server hostname	examplehost.exampledomain	Host name for Oracle WebLogic Server and Oracle Access Management consoles.
Console port	7001	Port for Oracle WebLogic Server and Oracle Access Management consoles.
DOMAIN_HOME	/home/Oracle/config/ domains/idm_domain	Location in which your domain data is stored.
APPLICATION_HOME	/home/Oracle/config/ applications/idm_domain	Location in which your application data is stored.

**Table 3-1 (Cont.) Installation and Configuration Checklist**

Information	Example Value	Description
Administrator user name for your WebLogic domain	weblogic	Name of the user with Oracle WebLogic Server administration privileges. The default administrator user is weblogic.
Administrator user password	myADMpw902	Password of the user with Oracle WebLogic Server administration privileges.
RCU	ORACLE_HOME/ oracle_common/bin	Path to the Repository Creation Utility (RCU).
RCU schema prefix	oam	Prefix for names of database schemas used by Oracle Access Management.
RCU schema password	myRCUpw674	Password for the database schemas used by Oracle Access Management.
Configuration utility	ORACLE_HOME/ oracle_common/ common/bin	Path to the Configuration Wizard for domain creation and configuration.

## Starting the Installation Program

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

To start the installation program:

1. Sign in to the host system.
2. Change to the directory where you downloaded the installation program.
3. You must have installed the Oracle Fusion Middleware Infrastructure 12c (12.2.1.3.0). For instructions, see *Installing the Infrastructure Software in Oracle Fusion Middleware Installing and Configuring the Oracle Fusion Middleware Infrastructure*.
4. Start the installation program by running the `java` executable from the JDK directory. For example:
  - (UNIX) `/home/Oracle/Java/jdk1.8.0_131/bin/java -jar fmw_12.2.1.3.0_idm.jar`
  - (Windows) `C:\home\Oracle\Java\jdk1.8.0_131\bin\java -jar fmw_12.2.1.3.0_idm.jar`

 **Note:**

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

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

## Navigating the Installation Screens

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

The following table lists the order in which installer screens appear. If you need additional help with an installation screen, click **Help**.

**Table 3-2 Install Screens**

Screen	Description
Installation Inventory Setup	<p>On Linux or UNIX operating systems, this screen opens if this is the first time you are installing any Oracle product on this host. Specify the location where you want to create your central inventory. Make sure that the operating system group name selected on this screen has write permissions to the central inventory location.</p> <p>See <i>About the Oracle Central Inventory</i> in <i>Oracle Fusion Middleware Installing Software with the Oracle Universal Installer</i>.</p> <p>This screen does not appear on Windows operating systems.</p>
Welcome	<p>Review the information to make sure that you have met all the prerequisites, then click <b>Next</b>.</p>
Auto Updates	<p>Select to skip automatic updates, select patches, or search for the latest software updates, including important security updates, through your My Oracle Support account.</p>
Installation Location	<p>Specify your Oracle home directory location.</p> <p>This Oracle home must include Oracle Fusion Middleware Infrastructure 12c (12.2.1.3.0).</p> <p>You can click <b>View</b> to verify and ensure that you are installing in the correct Oracle home.</p>
<div data-bbox="766 1591 898 1629" data-label="Section-Header"> <b>Note:</b></div> <div data-bbox="812 1648 1286 1709" data-label="Text"> <p>Ensure that the Oracle Home path does not contain space.</p> </div>	
Installation Type	<p>Use the <b>Collocated</b> Installation Type.</p> <p>Collocated mode is a type of installation that is managed through WebLogic Server. To install in collocated mode, you must have installed the required dependant softwares.</p>

**Table 3-2 (Cont.) Install Screens**

Screen	Description
Prerequisite Checks	This screen verifies that your system meets the minimum necessary requirements.  To view the list of tasks that gets verified, select <b>View Successful Tasks</b> . To view log details, select <b>View Log</b> . If any prerequisite check fails, then an error message appears at the bottom of the screen. Fix the error and click <b>Rerun</b> to try again. To ignore the error or the warning message and continue with the installation, click <b>Skip</b> (not recommended).
Installation Summary	Use this screen to verify installation options you selected. If you want to save these options to a response file, click <b>Save Response File</b> and enter the response file location and name. The response file collects and stores all the information that you have entered, and enables you to perform a silent installation (from the command line) at a later time.  Click <b>Install</b> to begin the installation.
Installation Progress	This screen shows the installation progress.  When the progress bar reaches 100% complete, click <b>Finish</b> to dismiss the installer, or click <b>Next</b> to see a summary.
Installation Complete	This screen displays the Installation Location and the Feature Sets that are installed. Review this information and click <b>Finish</b> to close the installer.

## Verifying the Installation

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

- [Reviewing the Installation Log Files](#)  
Review the contents of the installation log files to make sure that the installer did not encounter any problems.
- [Checking the Directory Structure](#)  
The contents of your installation vary based on the options that you selected during the installation.
- [Viewing the Contents of the Oracle Home](#)  
You can view the contents of the Oracle home directory by using the `viewInventory` script.

## Reviewing the Installation Log Files

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

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

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

## Checking the Directory Structure

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

See *What Are the Key Oracle Fusion Middleware Directories?* in *Oracle Fusion Middleware Understanding Oracle Fusion Middleware*.

## Viewing the Contents of the Oracle Home

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

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

# Configuring the Oracle Access Management Domain

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

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

- [Preparing to Install and Configure](#)
- [Installing the Oracle Access Management Software](#)

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

- [Creating the Database Schemas](#)  
Before you can configure a domain, you must install required schemas on a certified database for use with this release of Oracle Fusion Middleware.
- [Configuring the Domain](#)  
Use the Configuration Wizard to create and configure a domain.
- [Starting the Servers](#)  
After a successful configuration, start all processes and servers, including the Administration Server and any Managed Servers.
- [Verifying the Configuration](#)  
After completing all configuration steps, you can perform additional steps to verify that your domain is properly configured.
- [Setting the Memory Parameters for OAM Domain \(Optional\)](#)  
If the initial startup parameter in Oracle Access Management domain, which defines the memory usage, is insufficient, you can increase the value of this parameter.
- [Updating the `java.security` File \(Optional\)](#)  
If you wish to integrate Oracle Access Management 12c (12.2.1.3.0) with Oracle Adaptive Access Manager (OAAM) 11g Release 2 (11.1.2.3.0), you must update `java.security` file with the following changes, post upgrade:

- [Troubleshooting](#)  
This section lists the common issues encountered while configuring Oracle Access Management and their workarounds.

## Creating the Database Schemas

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

- [Installing and Configuring a Certified Database](#)  
Before you create the database schemas, you must install and configure a certified database, and verify that the database is up and running.
- [Starting the Repository Creation Utility](#)  
Start the Repository Creation Utility (RCU) after you verify that a certified JDK is installed on your system.
- [Navigating the Repository Creation Utility Screens to Create Schemas](#)  
Enter required information in the RCU screens to create the database schemas.

## Installing and Configuring a Certified Database

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

See [About Database Requirements for an Oracle Fusion Middleware Installation](#).

## Starting the Repository Creation Utility

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

To start the RCU:

1. Verify that a certified JDK already exists on your system by running `java -version` from the command line. For 12c (12.2.1.3.0), the certified JDK is 1.8.0\_131 and later.

See [About JDK Requirements for an Oracle Fusion Middleware Installation](#).

2. Ensure that the `JAVA_HOME` environment variable is set to the location of the certified JDK. For example:
  - (UNIX) `setenv JAVA_HOME /home/Oracle/Java/jdk1.8.0_131`
  - (Windows) `set JAVA_HOME=C:\home\Oracle\Java\jdk1.8.0_131`
3. Change to the following directory:
  - (UNIX) `ORACLE_HOME/oracle_common/bin`
  - (Windows) `ORACLE_HOME\oracle_common\bin`
4. Enter the following command:
  - (UNIX) `./rcu`
  - (Windows) `rcu.bat`

## Navigating the Repository Creation Utility Screens to Create Schemas

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

- [Introducing the RCU](#)  
The Welcome screen is the first screen that appears when you start the RCU.
- [Selecting a Method of Schema Creation](#)  
Use the Create Repository screen to select a method to create and load component schemas into the database.
- [Providing Database Connection Details](#)  
On the Database Connection Details screen, provide the database connection details for the RCU to connect to your database.
- [Specifying a Custom Prefix and Selecting Schemas](#)
- [Specifying Schema Passwords](#)  
On the Schema Passwords screen, specify how you want to set the schema passwords on your database, then enter and confirm your passwords.
- [Completing Schema Creation](#)  
Navigate through the remaining RCU screens to complete schema creation.

### Introducing the RCU

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

Click **Next**.

### Selecting a Method of Schema Creation

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

On the Create Repository screen:

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

## Providing Database Connection Details

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

 **Note:**

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

For example:

Database Type: Oracle Database

Connection String Format: Either one of the format one can select

- If you choose connection parameter, fill the following details:

Host Name: `examplehost.exampledomain.com`

Port: 1521

Service Name: `Orcl.exampledomain.com`

User Name: `sys`

Password: `*****`

Role: `SYSDBA`

- If you choose connection string, fill the following details:

Connection String:

`examplehost.exampledomain.com:1521:Orcl.exampledomain.com`

User Name: `sys`

Password: `*****`

Role: `SYSDBA`

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

## Specifying a Custom Prefix and Selecting Schemas

Select **Create new prefix**, specify a custom prefix, then expand **IDM Schemas** and select the **Oracle Access Manager** schema. This action automatically selects the following schemas as dependencies:

- Common Infrastructure Services (STB)
- Oracle Platform Security Services (OPSS)
- Audit Services (IAU)
- Audit Services Append (IAU\_Append)
- Audit Services Viewer (IAU\_Viewer)

- Metadata Services (MDS)
- WebLogic Services (WLS)

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

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

 **Tip:**

For more information about custom prefixes, see "Understanding Custom Prefixes" in *Oracle Fusion Middleware Creating Schemas with the Repository Creation Utility*.

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

 **Tip:**

You must make a note of the custom prefix you choose to enter here; you will need this later on during the domain creation process.

Click **Next** to proceed, then click **OK** on the dialog window confirming that prerequisite checking for schema creation was successful.

## Specifying Schema Passwords

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

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

Click **Next**.

## Completing Schema Creation

Navigate through the remaining RCU screens to complete schema creation.

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

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

## Configuring the Domain

Use the Configuration Wizard to create and configure a domain.

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

- [Starting the Configuration Wizard](#)  
Start the Configuration Wizard to begin configuring a domain.
- [Navigating the Configuration Wizard Screens to Create and Configure the Domain](#)  
Enter required information in the Configuration Wizard screens to create and configure the domain for the topology.
- [Updating the System Properties for SSL Enabled Servers](#)  
For SSL enabled servers, you must set the required properties in the `setDomainEnv` file in the domain home.

## Starting the Configuration Wizard

Start the Configuration Wizard to begin configuring a domain.

To start the Configuration Wizard:

1. Change to the following directory:

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

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

where `ORACLE_HOME` is your 12c (12.2.1.3.0) Oracle home.

2. Enter the following command:

(UNIX) `./config.sh`

(Windows) `config.cmd`

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

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

### Note:

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

- [Selecting the Domain Type and Domain Home Location](#)  
Use the Configuration Type screen to select a Domain home directory location, optimally outside the Oracle home directory.

- [Selecting the Configuration Templates for Oracle Access Management](#)
- [Selecting the Application Home Location](#)  
Use the Application Location screen to select the location to store applications associated with your domain, also known as the *Application home* directory.
- [Configuring the Administrator Account](#)  
Use the Administrator Account screen to specify the user name and password for the default WebLogic Administrator account for the domain.
- [Specifying the Domain Mode and JDK](#)  
Use the Domain Mode and JDK screen to specify the domain mode and Java Development Kit (JDK).
- [Specifying the Database Configuration Type](#)  
Use the Database Configuration type screen to specify details about the database and database schema.
- [Specifying JDBC Component Schema Information](#)  
Use the JDBC Component Schema screen to verify or specify details about the database schemas.
- [Testing the JDBC Connections](#)  
Use the JDBC Component Schema Test screen to test the data source connections.
- [Selecting Advanced Configuration](#)  
Use the Advanced Configuration screen to complete the domain configuration.
- [Configuring the Administration Server Listen Address](#)  
Use the Administration Server screen to select the IP address of the host.
- [Configuring Node Manager](#)  
Use the Node Manager screen to select the type of Node Manager you want to configure, along with the Node Manager credentials.
- [Configuring Managed Servers for Oracle Access Management](#)
- [Configuring a Cluster for Oracle Access Management](#)  
Use the Clusters screen to create a new cluster.
- [Defining Server Templates](#)  
If you are creating dynamic clusters for a high availability setup, use the Server Templates screen to define one or more server templates for domain.
- [Configuring Dynamic Servers](#)  
You can skip this screen for Oracle Access Management configuration.
- [Assigning Oracle Access Management Managed Servers to the Cluster](#)  
If you are configuring a non-clustered setup, click **Next** and go to next screen. Use the Assign Servers to Clusters screen to assign Managed Servers to a new *configured cluster*. A configured cluster is a cluster you configure manually. You do not use this screen if you are configuring a *dynamic cluster*, a cluster that contains one or more generated server instances that are based on a server template.
- [Configuring Coherence Clusters](#)  
Use the Coherence Clusters screen to configure the Coherence cluster.
- [Creating a New Oracle Access Management Machine](#)  
Use the Machines screen to create new machines in the domain. A machine is required so that Node Manager can start and stop servers.

- [Assigning Servers to Oracle Access Management Machines](#)  
Use the Assign Servers to Machines screen to assign the Administration Server and Managed Servers to the new machine you just created.
- [Virtual Targets](#)  
You can skip this screen for Oracle Access Management configuration.
- [Partitions](#)  
The Partitions screen is used to configure partitions for virtual targets in WebLogic Server Multitenant (MT) environments. Select **Next** without selecting any options.
- [Configuring Domain Frontend Host](#)  
The Domain Frontend Host screen can be used to configure the frontend host for the domain.
- [Targeting the Deployments](#)  
The Deployments Targeting screen can be used to target the available deployments to the servers.
- [Targeting the Services](#)  
The Services Targeting screen can be used to target the available services to the Servers.
- [Reviewing Your Configuration Specifications and Configuring the Domain](#)  
The Configuration Summary screen shows detailed configuration information for the domain you are about to create.
- [Writing Down Your Domain Home and Administration Server URL](#)  
The End of Configuration screen shows information about the domain you just configured.

## Selecting the Domain Type and Domain Home Location

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

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

### Note:

Use different *domain\_homes* for Oracle Access Management and Oracle Identity Governance.

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.

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

## Selecting the Configuration Templates for Oracle Access Management

On the Templates screen, make sure **Create Domain Using Product Templates** is selected, then select the template **Oracle Access Management Suite - 12.2.1.3.0 [idm]**.

Selecting this template automatically selects the following as dependencies:

- Oracle Enterprise Manager - 12.2.1.3.0 [em]
- Oracle JRF - 12.2.1.3.0 [oracle\_common]
- WebLogic Coherence Cluster Extension - 12.2.1.3.0 [wlserver]



### Note:

The basic WebLogic domain is pre-selected.

More information about the options on this screen can be found in Templates in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

## Selecting the Application Home Location

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

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

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

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

## Configuring the Administrator Account

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

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

For more information about this screen, see Administrator Account in *Creating WebLogic Domains Using the Configuration Wizard*.

## Specifying the Domain Mode and JDK

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

On the Domain Mode and JDK screen:

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

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

## Specifying the Database Configuration Type

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

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

### Note:

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

After selecting **RCU Data**, specify details in the following fields:

Field	Description
DBMS/Service	Enter the database DBMS name, or service name if you selected a service type driver. Example: orcl.exampledomain.com
Host Name	Enter the name of the server hosting the database. Example: examplehost.exampledomain.com
Port	Enter the port number on which the database listens. Example: 1521
Schema Owner Schema Password	Enter the username and password for connecting to the database's Service Table schema. This is the schema username and password entered for the Service Table component on the Schema Passwords screen in the RCU (see <a href="#">Specifying Schema Passwords</a> ). The default username is <i>prefix_STB</i> , where <i>prefix</i> is the custom prefix that you defined in the RCU.

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

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

Successfully Done.
```

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

See Database Configuration Type in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard* .

## Specifying JDBC Component Schema Information

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

Verify that the values populated on the JDBC Component Schema screen are correct for all schemas. If you selected **RCU Data** on the previous screen, the schema table should already be populated appropriately. If you selected **Manual configuration** on the Database Configuration screen, you must configure the schemas listed in the table manually, before you proceed.

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

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

See JDBC Component Schema in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard* for more details about this screen.

## Testing the JDBC Connections

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

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

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

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

## Selecting Advanced Configuration

Use the Advanced Configuration screen to complete the domain configuration.

On the Advanced Configuration screen, select:

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

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

## Configuring the Administration Server Listen Address

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

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

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

## Configuring Node Manager

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

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

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

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

## Configuring Managed Servers for Oracle Access Management

On the Managed Servers screen, the new Managed Servers named `oam_server_1` and `oam_policy_mgr1` are displayed:

1. In the Listen Address drop-down list, select the IP address of the host on which the Managed Server will reside or use the system name or DNS name that maps to a single IP address. Do not use "All Local Addresses."
2. In the Server Groups drop-down list, select the server group for your managed server. By default, **OAM-MGD-SVRS** is selected for `oam_server1` and **OAM-POLICY-MANAGED-SERVER** is selected for `oam_policy_mgr1`.

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

3. 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.

Click **Clone** and repeat this process to create a second Managed Server named `oam_policy_mgr2`.

 **Note:**

If you wish to configure additional Managed Servers, use the **Clone** option and add the Managed Server. For example, if we want to configure `oam_server2`, click **Clone** and select `oam_server1` to clone this server. Do not use the **add** option to add a new Managed Server.

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 *Oracle Fusion Middleware High Availability Guide*.

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

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

 **Tip:**

More information about the options on this screen can be found in Managed Servers in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

## Configuring a Cluster for Oracle Access Management

Use the Clusters screen to create a new cluster.

 **Note:**

If you are configuring a non-clustered setup on a single node, skip this screen.

On the Clusters screen:

1. Click **Add**.
2. Specify `oam_cluster_1` in the Cluster Name field for `oam_server`. For `oam_policy_mgr` server, you must create another cluster, for example, `oam_policy_cluster`.
3. For the Cluster Address field, specify the `ipaddress/hostname:port`. For example:  
`ip_address_machine1:portnumber, ip_address_machine2:portnumber`

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

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

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

## Defining Server Templates

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

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

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

## Configuring Dynamic Servers

You can skip this screen for Oracle Access Management configuration.

Click **Next** and proceed.

## Assigning Oracle Access Management Managed Servers to the Cluster

If you are configuring a non-clustered setup, click **Next** and go to next screen. Use the Assign Servers to Clusters screen to assign Managed Servers to a new *configured cluster*. A configured cluster is a cluster you configure manually. You do not use this screen if you are configuring a *dynamic cluster*, a cluster that contains one or more generated server instances that are based on a server template.

For more on configured cluster and dynamic cluster terms, see *About Dynamic Clusters in Oracle Fusion Middleware Understanding Oracle WebLogic Server*.

On the Assign Servers to Clusters screen:

1. In the Clusters pane, select the cluster to which you want to assign the Managed Servers; in this case, `oam_cluster_1`.
2. In the Servers pane, assign `oam_server_1` to `oam_cluster_1` by doing one of the following:
  - Click once on `oam_server_1` to select it, then click the right arrow to move it beneath the selected cluster (`oam_cluster_1`) in the Clusters pane.
  - Double-click on `oam_server_1` to move it beneath the selected cluster (`oam_cluster_1`) in the Clusters pane.
3. Repeat to assign `oam_policy_mgr` to `oam_policy_cluster`.

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

## Configuring Coherence Clusters

Use the Coherence Clusters screen to configure the Coherence cluster.

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

 **Note:**

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

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

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

## Creating a New Oracle Access Management Machine

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

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

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

1. Select the Machine tab (for Windows) or the UNIX Machine tab (for UNIX), then click **Add** to create a new machine.
2. In the Name field, specify a machine name, such as `oam_machine_1`.
3. In the Node Manager Listen Address field, select the IP address of the machine in which the Managed Servers are being configured.

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

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

 **Note:**

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

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

## Assigning Servers to Oracle Access Management Machines

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

On the Assign Servers to Machines screen:

1. In the Machines pane, select the machine to which you want to assign the servers; in this case, `oam_machine_1`.
2. In the Servers pane, assign `AdminServer` to `oam_machine_1` by doing one of the following:
  - Click once on `AdminServer` to select it, then click the right arrow to move it beneath the selected machine (`oam_machine_1`) in the Machines pane.
  - Double-click on `AdminServer` to move it beneath the selected machine (`oam_machine_1`) in the Machines pane.
3. Repeat these steps to assign all Managed Servers to their respective machines.

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

## Virtual Targets

You can skip this screen for Oracle Access Management configuration.

Click **Next** and proceed.

## Partitions

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

For details about options on this screen, see *Partitions* in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

## Configuring Domain Frontend Host

The Domain Frontend Host screen can be used to configure the frontend host for the domain.

Select **Plain** or **SSL** and specify the respective host value.

Click **Next**.

## Targeting the Deployments

The Deployments Targeting screen can be used to target the available deployments to the servers.

Make the required modifications, and click **Next**.

## Targeting the Services

The Services Targeting screen can be used to target the available services to the Servers.

Make necessary modifications, and click **Next**.

## Reviewing Your Configuration Specifications and Configuring the Domain

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

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

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

## Writing Down Your Domain Home and Administration Server URL

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

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

- Domain Location
- Administration Server URL

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

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

## Updating the System Properties for SSL Enabled Servers

For SSL enabled servers, you must set the required properties in the `setDomainEnv` file in the domain home.

Set the following properties in the `DOMAIN_HOME/bin/setDomainEnv.sh` (for UNIX) or `DOMAIN_HOME\bin\setDomainEnv.cmd` (for Windows) file before you start the servers:

- `-Dweblogic.security.SSL.ignoreHostnameVerification=true`
- `-Dweblogic.security.TrustKeyStore=DemoTrust`

## Starting the Servers

After a successful configuration, start all processes and servers, including the Administration Server and any Managed Servers.

The components may be dependent on each other so they must be started in the correct order.

 **Note:**

The procedures in this section describe how to start servers and process using the WLST command line or a script. You can also use the Oracle Fusion Middleware Control and the Oracle WebLogic Server Administration Console. See Starting and Stopping Administration and Managed Servers and Node Manager in *Administering Oracle Fusion Middleware*.

To start your Fusion Middleware environment, follow the steps below.

### Step 1: Start Node Manager

To start Node Manager, use the `startNodeManager` script:

- (UNIX) `EXISTING_DOMAIN_HOME/bin/startNodeManager.sh`
- (Windows) `EXISTING_DOMAIN_HOME\bin\startNodeManager.cmd`

### Step 2: Start the Administration Server

When you start the Administration Server, you also start the processes running in the Administration Server, including the WebLogic Server Administration Console and Fusion Middleware Control.

To start the Administration Server, use the `startWebLogic` script:

- (UNIX) `EXISTING_DOMAIN_HOME/bin/startWebLogic.sh`
- (Windows) `EXISTING_DOMAIN_HOME\bin\startWebLogic.cmd`

When you created the domain, if you selected **Production Mode** on the **Domain Mode and JDK** screen, a prompt for the Administrator user login credentials is displayed. Provide the same credentials that you provided on the **Administrator Account** screen.

### Step 3: Start the Managed Servers

- If Node Manager is *not* configured, start the Managed Servers using the following instructions:

To start a WebLogic Server Managed Server, use the `startManagedWebLogic` script:

- (UNIX) `EXISTING_DOMAIN_HOME/bin/startManagedWebLogic.sh`  
`managed_server_name admin_url`
- (Windows) `EXISTING_DOMAIN_HOME\bin\startManagedWebLogic.cmd`  
`managed_server_name admin_url`

When prompted, enter your user name and password. This is the same user name and password which you provided in administrator account screen when creating the domain.

 **Note:**

The startup of a Managed Server will typically start the applications that are deployed to it. Therefore, it should not be necessary to manually start applications after the Managed Server startup.

- If Node Manager is configured, start the Managed Servers using the following instructions:
  1. Launch the Administration Console:
    - a. Using a web browser, open the following URL:  

```
http://hostname:port/console
```

Where:

      - *hostname* is the administration server host.
      - *port* is the administration server port on which the host server is listening for requests (7001 by default)
    - b. When the login page appears, enter the user name and password you used to start the Administration Server.
  2. Start Managed Servers from the Administration Console. For instructions, see [Start Managed Servers from the Administration Console](#).

## Verifying the Configuration

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

You can start using the functionality of Oracle Access Management after you successfully configure it. See [Getting Started with Oracle Access Management in Administering Oracle Access Management](#).

For information about integrating Oracle Access Management with other Identity Management components, see [Introduction to IdM Suite Components Integration in Integration Guide for Oracle Identity Management Suite](#).

For more information about performing additional domain configuration tasks, see [Performing Additional Domain Configuration Tasks](#).

## Setting the Memory Parameters for OAM Domain (Optional)

If the initial startup parameter in Oracle Access Management domain, which defines the memory usage, is insufficient, you can increase the value of this parameter.

To change the memory allocation setting, do the following:

1. Edit the `Domain_home/bin/setUserOverrides.sh` file to add the following line:

```
MEM_ARGS="-Xms1024m -Xmx3072m"
```

2. Save and close the file.

3. Change the following memory allocation by updating the Java maximum memory allocation pool (Xmx) to 3072m and initial memory allocation pool (Xms) to 1024m. For example, change the following line to be:

```
WLS_MEM_ARGS_64BIT="-Xms1024m -Xmx3072m"
```

4. Save and close the file.

## Updating the java.security File (Optional)

If you wish to integrate Oracle Access Management 12c (12.2.1.3.0) with Oracle Adaptive Access Manager (OAAM) 11g Release 2 (11.1.2.3.0), you must update `java.security` file with the following changes, post upgrade:

To do this:

1. Open the `java.security` file located at `JAVA_HOME/jre/lib/security/` in an editor.
2. Remove `TLSv1`, `TLSv1.1`, `MD5withRSA` from the following key:

```
key - jdk.tls.disabledAlgorithms
```

3. Remove `MD5` from the following key:

```
key - jdk.certpath.disabledAlgorithms
```

## Troubleshooting

This section lists the common issues encountered while configuring Oracle Access Management and their workarounds.

### Topics

- [MDS ReadOnlyStoreException in OAM Policy Manager Diagnostic log](#)  
After you configure Oracle Access Management (OAM)12c (12.2.1.3.0), when you start the servers, the following exception is seen in the Administration Server and OAM Policy Manager diagnostic logs:
- [Ignorable Warnings in the Administration Server Logs](#)  
After you configure Oracle Access Management 12c (12.2.1.3.0), when you start the Administration Server, the following warning are seen in the Administration Server logs:

## MDS ReadOnlyStoreException in OAM Policy Manager Diagnostic log

After you configure Oracle Access Management (OAM)12c (12.2.1.3.0), when you start the servers, the following exception is seen in the Administration Server and OAM Policy Manager diagnostic logs:

```
oracle.mds.exception.ReadOnlyStoreException: MDS-01273:  
The operation on the resource /oracle/oam/ui/adfm/DataBindings.cpx  
failed because source metadata store mapped to the namespace / DEFAULT  
is read only.
```

This exception does not impact the Administration Console functionality and hence can be safely ignore.

## Ignorable Warnings in the Administration Server Logs

After you configure Oracle Access Management 12c (12.2.1.3.0), when you start the Administration Server, the following warning are seen in the Administration Server logs:

```
<Warning>
<oracle.adfinternal.view.faces.renderkit.rich.NavigationPaneRenderer>
<adc2140146> <AdminServer> <[ACTIVE] ExecuteThread: '42' for queue:
'weblogic.kernel.Default (self-tuning)'\> <weblogic> <>
<b6ba191d-9c3f-44ce-ad9d-64bd7123baf5-000000e3>
<1502889425767> <[severity-value: 16] [rid: 0] [partition-id: 0]
[partition-name: DOMAIN] >
<BEA-000000> <Warning: There are no items to render for this level>
####<Aug 16, 2017 6:17:06,241 AM PDT> <Warning>
<org.apache.myfaces.trinidad.component.UIXFacesBeanImpl>
```

This has no impact on the functionality, and therefore you can ignore it.

After installing Oracle Access Management, go to [Chapter 5: Next Steps After Configuring the Domain](#).

# 4

## Installing and Configuring the Oracle Identity Governance Software

Follow the steps in this section to install and configure the Oracle Identity Governance software.

 **Note:**

The product Oracle Identity Manager is referred to as Oracle Identity Manager (OIM) and Oracle Identity Governance (OIG) interchangeably in the guide.

- [Installing the Oracle Identity Governance Software](#)
- [Configuring the Oracle Identity Governance Domain](#)  
After you have installed Oracle Identity Governance, you can configure the domain, which you can also extend for high availability.

### Installing the Oracle Identity Governance Software

Follow the steps in this section to install the Oracle Identity Governance software. Before beginning the installation, ensure that you have verified the prerequisites and completed all steps covered in [Preparing to Install and Configure](#).

 **Note:**

If you are using both Oracle Identity Governance and Oracle Access Management then you must install them in separate `ORACLE_HOMEs`.

Oracle Identity Governance 12c (12.2.1.3.0) can be installed by using any of the following methods:

- **Method 1:** Simplified method - by using a quick start installer to install all the products in one go. See [Method 1: Simplified Method](#).
- **Method 2:** Traditional Method - by individually installing the required products. See [Method 2: Traditional Method](#).

For information about supported installation methods, see [About Supported Installation Methods](#).

- [Verifying the Installation and Configuration Checklist](#)  
The installation and configuration process requires specific information.

- [Verifying the Memory Settings](#)  
To avoid the memory issues for Oracle Identity Manager, ensure that the memory settings are updated as per the requirements.
- [Method 1: Simplified Method](#)
- [Method 2: Traditional Method](#)
- [Verifying the Installation](#)  
After you complete the installation, verify whether it was successful by completing a series of tasks.

## Verifying the Installation and Configuration Checklist

The installation and configuration process requires specific information.

[Table 4-1](#) lists important items that you must know before, or decide during, Oracle Identity Governance installation and configuration.

**Table 4-1 Installation and Configuration Checklist**

Information	Example Value	Description
JAVA_HOME	/home/Oracle/Java/ jdk1.8.0_131	Environment variable that points to the Java JDK home directory.
Database host	examplehost.exampledomain	Name and domain of the host where the database is running.
Database port	1521	Port number that the database listens on. The default Oracle database listen port is 1521.
Database service name	orcl.exampledomain	Oracle databases require a unique service name. The default service name is orcl.
DBA username	SYS	Name of user with database administration privileges. The default DBA user on Oracle databases is SYS.
DBA password	myDBApw957	Password of the user with database administration privileges.
ORACLE_HOME	/home/Oracle/product/ ORACLE_HOME	Directory in which you will install your software.  This directory will include Oracle Fusion Middleware Infrastructure, Oracle SOA Suite, and Oracle Identity Governance, as needed.
WebLogic Server hostname	examplehost.exampledomain	Host name for Oracle WebLogic Server and Oracle Identity Governance consoles.
Console port	7001	Port for Oracle WebLogic Server and Oracle Identity Governance consoles.

**Table 4-1 (Cont.) Installation and Configuration Checklist**

Information	Example Value	Description
<i>DOMAIN_HOME</i>	/home/Oracle/config/ domains/idm_domain	Location in which your domain data is stored.
<i>APPLICATION_HOME</i>	/home/Oracle/config/ applications/idm_domain	Location in which your application data is stored.
Administrator user name for your WebLogic domain	weblogic	Name of the user with Oracle WebLogic Server administration privileges. The default administrator user is weblogic.
Administrator user password	myADMpw902	Password of the user with Oracle WebLogic Server administration privileges.
RCU	<i>ORACLE_HOME</i> / oracle_common/bin	Path to the Repository Creation Utility (RCU).
RCU schema prefix	oim	Prefix for names of database schemas used by Oracle Identity Governance.
RCU schema password	myRCUpw674	Password for the database schemas used by Oracle Identity Governance.
Configuration utility	<i>ORACLE_HOME</i> / oracle_common/ common/bin	Path to the Configuration Wizard for domain creation and configuration.

## Verifying the Memory Settings

To avoid the memory issues for Oracle Identity Manager, ensure that the memory settings are updated as per the requirements.

On Linux, do the following:

1. Ensure that you set the following parameters in the `/etc/security/limits.conf` file, to the specified values:
  - `FUSION_USER_ACCOUNT soft nofile 32767`
  - `FUSION_USER_ACCOUNT hard nofile 327679`
2. Ensure that you set `UsePAM` to `Yes` in the `/etc/ssh/sshd_config` file.
3. Restart `sshd`.
4. Log out (or reboot) and log in to the system again.

**Note:**

Before you start the Oracle Identity Governance 12c Server, post configuration, run the following command to increase the limit of open files, so that you do not run into memory issues:

```
limit maxproc 16384
```

## Method 1: Simplified Method

You can install the Oracle Identity Governance software by using a quickstart installer. For Oracle Identity Governance a quickstart installer is available, which installs Infrastructure, Oracle SOA Suite, and Oracle Identity Governance 12c (12.2.1.3.0) in one go. You do not have to install these softwares using separate installers.

- [Roadmap for Installing and Configuring Oracle Identity Governance Using Simplified Installation](#)  
Use the roadmap provided in this section to install and configure Oracle Identity Governance (OIG) using the simplified installation process.
- [Installing Oracle Identity Governance Using Quickstart Installer](#)  
Complete the instructions in this section to install Oracle Identity Governance.

### Roadmap for Installing and Configuring Oracle Identity Governance Using Simplified Installation

Use the roadmap provided in this section to install and configure Oracle Identity Governance (OIG) using the simplified installation process.

This table provides the high-level steps for installing and configuring Oracle Identity Governance.

**Table 4-2 Task Roadmap for Installing and Configuring Oracle Identity Governance Using Simplified Installation**

Task	Description
Verify if your system meets the minimum hardware and software requirements.	See <a href="#">Roadmap for Verifying Your System Environment</a>
Install Oracle Fusion Middleware Infrastructure, Oracle SOA Suite, and Oracle Identity Governance 12.2.1.3.0 using the quickstart installer. This task involves obtaining the quickstart installer, starting the installation program, and navigating the installer screens.	See <a href="#">Installing Oracle Identity Governance Using Quickstart Installer</a>
Create the database schemas using Repository Creation Utility (RCU).	See <a href="#">Creating the Database Schemas</a>
Configure and update the Oracle Identity Governance domain.	See <a href="#">Configuring and updating the OIG domain</a>
Perform the necessary post-configuration tasks.	See <a href="#">Performing Post-Configuration Tasks</a>

**Table 4-2 (Cont.) Task Roadmap for Installing and Configuring Oracle Identity Governance Using Simplified Installation**

Task	Description
Start the Node Manager, Administration Server, Oracle SOA Suite Managed Server, and the OIG Managed Server.	See <a href="#">Starting the Servers</a>
Integrate Oracle Identity Governance with Oracle SOA Suite.	See <a href="#">Integrating Oracle Identity Governance with Oracle SOA Suite</a>
Verify the configuration.	See <a href="#">Verifying the Configuration</a>
Refer to the bootstrap report for the configuration details and for any issues or warnings thrown during the installation process.	See <a href="#">Analyzing the Bootstrap Report</a>
Access the Oracle Identity Governance Design Console, if required.	See <a href="#">Installing and Accessing the Oracle Identity Governance Design Console</a>

## Installing Oracle Identity Governance Using Quickstart Installer

Complete the instructions in this section to install Oracle Identity Governance.

### Topics:

- [Obtaining the Quickstart Installer](#)  
Obtain the quickstart installer distribution on *Technical Resources from Oracle*.
- [Starting the Quickstart Installation Program](#)  
Start the quickstart installation program by running the java executable from the JDK directory.
- [Navigating the Quickstart Installation Screens](#)  
The quickstart installer shows a series of screens where you verify or enter information.

## Obtaining the Quickstart Installer

Obtain the quickstart installer distribution on *Technical Resources from Oracle*.

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

After downloading the required .zip file, unzip the .zip file to obtain the .jar distributions.

### Note:

No prerequisite software is required for `qstart`.

## Starting the Quickstart Installation Program

Start the quickstart installation program by running the java executable from the JDK directory.



### Note:

Before running the quickstart installation program, you must verify the supported JDK version is installed.

Run the following command from the JDK directory:

- On UNIX:

```
$JAVA_HOME/bin/java -jar fmw_12.2.1.3.0_idmquickstart.jar
```

- On Windows:

```
$JAVA_HOME\bin\java -jar fmw_12.2.1.3.0_idmquickstart.jar
```

## Navigating the Quickstart Installation Screens

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

The following table lists the order in which installer screens appear. If you need additional help with an installation screen, click **Help**.

**Table 4-3 Oracle Identity Governance Quickstart Install Screens**

Screen	Description
Installation Inventory Setup	On Linux or UNIX operating systems, this screen opens if this is the first time you are installing any Oracle product on this host. Specify the location where you want to create your central inventory. Make sure that the operating system group name selected on this screen has write permissions to the central inventory location.  See About the Oracle Central Inventory in <i>Oracle Fusion Middleware Installing Software with the Oracle Universal Installer</i> .  This screen does not appear on Windows operating systems.
Welcome	Review the information to make sure that you have met all the prerequisites, then click <b>Next</b> .
Auto Updates	Select to skip automatic updates, select patches, or search for the latest software updates, including important security updates, through your My Oracle Support account.
Installation Location	Specify your Oracle home directory location.  You can click <b>View</b> to verify and ensure that you are installing the products in the correct Oracle home.

**Table 4-3 (Cont.) Oracle Identity Governance Quickstart Install Screens**

Screen	Description
Prerequisite Checks	This screen verifies that your system meets the minimum necessary requirements.  To view the list of tasks that gets verified, select <b>View Successful Tasks</b> . To view log details, select <b>View Log</b> . If any prerequisite check fails, then an error message appears at the bottom of the screen. Fix the error and click <b>Rerun</b> to try again. To ignore the error or the warning message and continue with the installation, click <b>Skip</b> (not recommended).
Installation Summary	Use this screen to verify installation options you selected. If you want to save these options to a response file, click <b>Save Response File</b> and enter the response file location and name. The response file collects and stores all the information that you have entered, and enables you to perform a silent installation (from the command line) at a later time.  Click <b>Install</b> to begin the installation.
Installation Progress	This screen shows the installation progress.  When the progress bar reaches 100% complete, click <b>Finish</b> to dismiss the installer, or click <b>Next</b> to see a summary.
Installation Complete	This screen displays the Installation Location and the Feature Sets that are installed. Review this information and click <b>Finish</b> to close the installer.

After completing installation by using the simplified method, proceed to complete the following:

1. [Verifying the Installation](#)
2. [Configuring the Oracle Identity Governance Domain](#)

## Method 2: Traditional Method

You can install the Oracle Identity Governance software in traditional method, by individually installing required products.  
Dependant Softwares for installing Oracle Identity Governance in traditional method:

 **Note:**

Install products in the specified order.

1. Oracle Fusion Middleware Infrastructure 12c (12.2.1.3.0)
2. Oracle SOA Suite 12c (12.2.1.3.0)

For information about installing Oracle Fusion Middleware Infrastructure 12c (12.2.1.3.0), see *Installing the Infrastructure Software in Oracle Fusion Middleware Installing and Configuring the Oracle Fusion Middleware Infrastructure*.

For information about installing Oracle SOA Suite 12c (12.2.1.3.0), see *Installing the Oracle SOA Suite and Oracle Business Process Management Software in Oracle Fusion Middleware Installing and Configuring Oracle SOA Suite and Business Process Management*.

- [Starting the Installation Program](#)  
Before running the installation program, you must verify the JDK and prerequisite software is installed.
- [Navigating the Installation Screens](#)  
The installer shows a series of screens where you verify or enter information.

## Starting the Installation Program

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

To start the installation program:

1. Sign in to the host system.
2. Change to the directory where you downloaded the installation program.
3. You must have installed the Oracle Fusion Middleware Infrastructure 12c (12.2.1.3.0). For instructions, see *Installing the Infrastructure Software in Oracle Fusion Middleware Installing and Configuring the Oracle Fusion Middleware Infrastructure*.
4. You must have installed the Oracle SOA Suite 12c (12.2.1.3.0). For instructions, see *Installing the Oracle SOA Suite and Oracle Business Process Management Software in Oracle Fusion Middleware Installing and Configuring Oracle SOA Suite and Business Process Management*.

### Note:

When installing Oracle SOA Suite 12c (12.2.1.3.0), in the Installation Type screen, select the **SOA Suite** option.

5. Start the installation program by running the `java` executable from the JDK directory. For example:
  - (UNIX) `/home/Oracle/Java/jdk1.8.0_131/bin/java -jar fmw_12.2.1.3.0_idm.jar`
  - (Windows) `C:\home\Oracle\Java\jdk1.8.0_131\bin\java -jar fmw_12.2.1.3.0_idm.jar`

### Note:

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

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

## Navigating the Installation Screens

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

The following table lists the order in which installer screens appear. If you need additional help with an installation screen, click **Help**.

**Table 4-4 Install Screens**

Screen	Description
Installation Inventory Setup	<p>On Linux or UNIX operating systems, this screen opens if this is the first time you are installing any Oracle product on this host. Specify the location where you want to create your central inventory. Make sure that the operating system group name selected on this screen has write permissions to the central inventory location.</p> <p>See About the Oracle Central Inventory in <i>Oracle Fusion Middleware Installing Software with the Oracle Universal Installer</i>.</p> <p>This screen does not appear on Windows operating systems.</p>
Welcome	Review the information to make sure that you have met all the prerequisites, then click <b>Next</b> .
Auto Updates	Select to skip automatic updates, select patches, or search for the latest software updates, including important security updates, through your My Oracle Support account.
Installation Location	<p>Specify your Oracle home directory location.</p> <p>This Oracle home must include Oracle Fusion Middleware Infrastructure 12c (12.2.1.3.0).</p> <p>You can click <b>View</b> to verify and ensure that you are installing in the correct Oracle home.</p>
<div style="border-left: 2px solid #0070C0; border-right: 2px solid #0070C0; border-bottom: 2px solid #0070C0; padding: 10px; background-color: #E6F2FF;"> <p> <b>Note:</b></p> <p>Ensure that the Oracle Home path does not contain space.</p> </div>	
Installation Type	<p>Use the <b>Collocated</b> Installation Type.</p> <p>Collocated mode is a type of installation that is managed through WebLogic Server. To install in collocated mode, you must have installed the required dependant softwares.</p>
Prerequisite Checks	<p>This screen verifies that your system meets the minimum necessary requirements.</p> <p>To view the list of tasks that gets verified, select <b>View Successful Tasks</b>. To view log details, select <b>View Log</b>. If any prerequisite check fails, then an error message appears at the bottom of the screen. Fix the error and click <b>Rerun</b> to try again. To ignore the error or the warning message and continue with the installation, click <b>Skip</b> (not recommended).</p>

**Table 4-4 (Cont.) Install Screens**

Screen	Description
Installation Summary	Use this screen to verify installation options you selected. If you want to save these options to a response file, click <b>Save Response File</b> and enter the response file location and name. The response file collects and stores all the information that you have entered, and enables you to perform a silent installation (from the command line) at a later time.  Click <b>Install</b> to begin the installation.
Installation Progress	This screen shows the installation progress.  When the progress bar reaches 100% complete, click <b>Finish</b> to dismiss the installer, or click <b>Next</b> to see a summary.
Installation Complete	This screen displays the Installation Location and the Feature Sets that are installed. Review this information and click <b>Finish</b> to close the installer.

## Verifying the Installation

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

- [Reviewing the Installation Log Files](#)  
Review the contents of the installation log files to make sure that the installer did not encounter any problems.
- [Checking the Directory Structure](#)  
The contents of your installation vary based on the options that you selected during the installation.
- [Viewing the Contents of the Oracle Home](#)  
You can view the contents of the Oracle home directory by using the `viewInventory` script.

## Reviewing the Installation Log Files

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

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

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

## Checking the Directory Structure

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

See *What Are the Key Oracle Fusion Middleware Directories?* in *Oracle Fusion Middleware Understanding Oracle Fusion Middleware*.

## Viewing the Contents of the Oracle Home

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

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

## Configuring the Oracle Identity Governance Domain

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

### Note:

In this document, the variable `OIM_HOME` is used for `ORACLE_HOME/idm` (Unix) and `ORACLE_HOME\idm` (Windows).

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

- [Creating the Database Schemas](#)  
Before you can configure an Oracle Identity Governance domain, you must install required schemas on a certified database for use with this release of Oracle Fusion Middleware.
- [Configuring the Domain](#)  
Use the Configuration Wizard to create and configure a domain.
- [Performing Post-Configuration Tasks](#)  
After you configure the Oracle Identity Governance domain, perform the necessary post-configuration tasks.
- [Starting the Servers](#)  
After a successful configuration, start all processes and servers, including the Administration Server and any Managed Servers.
- [Integrating Oracle Identity Governance with Oracle SOA Suite](#)  
If you wish to integrate Oracle Identity Governance with Oracle SOA Suite, use the Enterprise Manager console to do the same.
- [Verifying the Configuration](#)  
After completing all configuration steps, you can perform additional steps to verify that your domain is properly configured.
- [Analyzing the Bootstrap Report](#)  
When you start the Oracle Identity Governance server, the bootstrap report is generated at `DOMAIN_HOME/servers/oim_server1/logs/BootStrapReportPreStart.html`.
- [Installing and Accessing the Oracle Identity Governance Design Console](#)  
If you wish to set up only the Oracle Identity Governance Design Console in a machine where OIG server is not configured, then you must install Oracle Identity Governance 12c (12.2.1.3.0) in standalone mode, and then invoke the Design Console.

- [Troubleshooting](#)  
This section lists the common issues encountered while configuring Oracle Identity Governance and their workarounds.

## Creating the Database Schemas

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

- [Installing and Configuring a Certified Database](#)  
Before you create the database schemas, you must install and configure a certified database, and verify that the database is up and running.
- [Starting the Repository Creation Utility](#)  
Start the Repository Creation Utility (RCU) after you verify that a certified JDK is installed on your system.
- [Navigating the Repository Creation Utility Screens to Create Schemas](#)  
Enter required information in the RCU screens to create the database schemas.

## Installing and Configuring a Certified Database

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

See [About Database Requirements for an Oracle Fusion Middleware Installation](#).

## Starting the Repository Creation Utility

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

To start the RCU:

1. Verify that a certified JDK already exists on your system by running `java -version` from the command line. For 12c (12.2.1.3.0), the certified JDK is 1.8.0\_131 and later.

See [About JDK Requirements for an Oracle Fusion Middleware Installation](#).

2. Ensure that the `JAVA_HOME` environment variable is set to the location of the certified JDK. For example:
  - (UNIX) `setenv JAVA_HOME /home/Oracle/Java/jdk1.8.0_131`
  - (Windows) `set JAVA_HOME=C:\home\Oracle\Java\jdk1.8.0_131`
3. Change to the following directory:
  - (UNIX) `ORACLE_HOME/oracle_common/bin`
  - (Windows) `ORACLE_HOME\oracle_common\bin`
4. Enter the following command:
  - (UNIX) `./rcu`
  - (Windows) `rcu.bat`

## Navigating the Repository Creation Utility Screens to Create Schemas

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

- [Introducing the RCU](#)  
The Welcome screen is the first screen that appears when you start the RCU.
- [Selecting a Method of Schema Creation](#)  
Use the Create Repository screen to select a method to create and load component schemas into the database.
- [Providing Database Connection Details](#)  
On the Database Connection Details screen, provide the database connection details for the RCU to connect to your database.
- [Specifying a Custom Prefix and Selecting Schemas](#)
- [Specifying Schema Passwords](#)  
On the Schema Passwords screen, specify how you want to set the schema passwords on your database, then enter and confirm your passwords.
- [Specifying Custom Variables](#)
- [Completing Schema Creation](#)  
Navigate through the remaining RCU screens to complete schema creation.

### Introducing the RCU

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

Click **Next**.

### Selecting a Method of Schema Creation

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

On the Create Repository screen:

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

## Providing Database Connection Details

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



### Note:

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

For example:

Database Type: Oracle Database

Connection String Format: Either one of the format one can select

- If you choose connection parameter, fill the following details:

Host Name: `examplehost.exampledomain.com`

Port: 1521

Service Name: `Orcl.exampledomain.com`

User Name: `sys`

Password: `*****`

Role: `SYSDBA`

- If you choose connection string, fill the following details:

Connection String:

`examplehost.exampledomain.com:1521:Orcl.exampledomain.com`

User Name: `sys`

Password: `*****`

Role: `SYSDBA`

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

## Specifying a Custom Prefix and Selecting Schemas

Select **Create new prefix**, specify a custom prefix, then expand **IDM Schemas** and select the **Oracle Identity Manager** schema. This action automatically selects the following schemas as dependencies:

- User Messaging Service (UMS)
- Metadata Services (MDS)
- Oracle Platform Security Services (OPSS)
- Audit Services (IAU)
- Audit Services Append (IAU\_Append)

- Audit Services Viewer (IAU\_Viewer)
- WebLogic Services (WLS)
- Common Infrastructure Services (STB)
- SOA Infrastructure (SOAINFRA)

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

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

 **Tip:**

For more information about custom prefixes, see "Understanding Custom Prefixes" in *Oracle Fusion Middleware Creating Schemas with the Repository Creation Utility*.

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

 **Tip:**

You must make a note of the custom prefix you choose to enter here; you will need this later on during the domain creation process.

Click **Next** to proceed, then click **OK** on the dialog window confirming that prerequisite checking for schema creation was successful.

## Specifying Schema Passwords

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

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

Click **Next**.

## Specifying Custom Variables

On the Custom Variables screen, accept the default values and click **Next**.



**Tip:**

For more information about options on this screen, see Custom Variables in *Oracle Fusion Middleware Creating Schemas with the Repository Creation Utility*.

## Completing Schema Creation

Navigate through the remaining RCU screens to complete schema creation.

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

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

## Configuring the Domain

Use the Configuration Wizard to create and configure a domain.

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

- [Starting the Configuration Wizard](#)  
Start the Configuration Wizard to begin configuring a domain.
- [Navigating the Configuration Wizard Screens to Create and Configure the Domain](#)  
Enter required information in the Configuration Wizard screens to create and configure the domain for the topology.

## Starting the Configuration Wizard

Start the Configuration Wizard to begin configuring a domain.

To start the Configuration Wizard:

1. Change to the following directory:  
(UNIX) `ORACLE_HOME/oracle_common/common/bin`  
(Windows) `ORACLE_HOME\oracle_common\common\bin`  
where `ORACLE_HOME` is your 12c (12.2.1.3.0) Oracle home.
2. Enter the following command:  
(UNIX) `./config.sh`  
(Windows) `config.cmd`

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

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

 **Note:**

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

- [Selecting the Domain Type and Domain Home Location](#)  
Use the Configuration Type screen to select a Domain home directory location, optimally outside the Oracle home directory.
- [Selecting the Configuration Templates for Oracle Identity Manager](#)
- [Configuring High Availability Options](#)  
If you are not using a high availability setup, accept the default values on this screen and then click **Next** to proceed to the next screen. Use this screen to configure service migration and persistence settings that affect high availability.
- [Selecting the Application Home Location](#)  
Use the Application Location screen to select the location to store applications associated with your domain, also known as the *Application home* directory.
- [Configuring the Administrator Account](#)  
Use the Administrator Account screen to specify the user name and password for the default WebLogic Administrator account for the domain.
- [Specifying the Domain Mode and JDK](#)  
Use the Domain Mode and JDK screen to specify the domain mode and Java Development Kit (JDK).
- [Specifying the Database Configuration Type](#)  
Use the Database Configuration type screen to specify details about the database and database schema.
- [Specifying JDBC Component Schema Information](#)  
Use the JDBC Component Schema screen to verify or specify details about the database schemas.
- [Testing the JDBC Connections](#)  
Use the JDBC Component Schema Test screen to test the data source connections.
- [Entering Credentials](#)  
Use the Credentials screen to set credentials for each key in the domain.
- [Specifying the Path to the Keystore Certificate or Key](#)
- [Selecting Advanced Configuration](#)  
Use the Advanced Configuration screen to complete the domain configuration.
- [Configuring the Administration Server Listen Address](#)  
Use the Administration Server screen to select the IP address of the host.

- [Configuring Node Manager](#)  
Use the Node Manager screen to select the type of Node Manager you want to configure, along with the Node Manager credentials.
- [Configuring Managed Servers for Oracle Identity Manager](#)
- [Configuring a Cluster for Oracle Identity Manager](#)  
Use the Clusters screen to create a new cluster. This is required in for an Oracle Identity Governance high availability setup.
- [Defining Server Templates](#)  
If you are creating dynamic clusters for a high availability setup, use the Server Templates screen to define one or more server templates for domain.
- [Configuring Dynamic Servers](#)  
If you are creating dynamic clusters for a high availability setup, use the Dynamic Servers screen to configure the dynamic servers.
- [Assigning Oracle Identity Manager Managed Servers to the Cluster](#)  
If you are configuring a single-node non-clustered setup, click **Next** and go to next screen. Use the Assign Servers to Clusters screen to assign Managed Servers to a new *configured cluster*. A configured cluster is a cluster you configure manually. You do not use this screen if you are configuring a *dynamic cluster*, a cluster that contains one or more generated server instances that are based on a server template.
- [Configuring Coherence Clusters](#)  
Use the Coherence Clusters screen to configure the Coherence cluster.
- [Creating a New Oracle Identity Manager Machine](#)  
Use the Machines screen to create new machines in the domain. A machine is required so that Node Manager can start and stop servers.
- [Assigning Servers to Oracle Identity Manager Machines](#)  
Use the Assign Servers to Machines screen to assign the Administration Server and Managed Servers to the new machine you just created.
- [Virtual Targets](#)  
If you have a WebLogic Server Multitenant (MT) environment, you use the Virtual Targets screen to add or delete virtual targets. For this installation (not a WebLogic Server MT environment), you do not enter any values; just select **Next**.
- [Partitions](#)  
The Partitions screen is used to configure partitions for virtual targets in WebLogic Server Multitenant (MT) environments. Select **Next** without selecting any options.
- [Configuring Domain Frontend Host](#)  
The Domain Frontend Host screen can be used to configure the frontend host for the domain.
- [Targeting the Deployments](#)  
The Deployments Targeting screen can be used to target the available deployments to the servers.
- [Targeting the Services](#)  
The Services Targeting screen can be used to target the available services to the Servers.
- [File Stores](#)  
The File Stores screen lists the available file stores.

- [Reviewing Your Configuration Specifications and Configuring the Domain](#)  
The Configuration Summary screen shows detailed configuration information for the domain you are about to create.
- [Writing Down Your Domain Home and Administration Server URL](#)  
The End of Configuration screen shows information about the domain you just configured.

## Selecting the Domain Type and Domain Home Location

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

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

### Note:

Use different *domain\_homes* for Oracle Access Management and Oracle Identity Governance.

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.

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

## Selecting the Configuration Templates for Oracle Identity Manager

On the Templates screen, make sure **Create Domain Using Product Templates** is selected, then select the **Oracle Identity Manager — 12.2.1.3.0 [idm]** template, along with the following dependencies:

- Basic WebLogic Server Domain
- Oracle SOA Suite — 12.2.1.3.0
- Oracle Enterprise Manager — 12.2.1.3.0 [em]
- Oracle WSM Policy Manager — 12.2.1.3 [oracle\_common]
- Oracle JRF — 12.2.1.3.0 [oracle\_common]
- WebLogic Coherence Cluster Extension — 12.2.1.3.0

More information about the options on this screen can be found in Templates in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

## Configuring High Availability Options

If you are not using a high availability setup, accept the default values on this screen and then click **Next** to proceed to the next screen. Use this screen to configure service migration and persistence settings that affect high availability.

This screen appears for the first time when you create a cluster that uses automatic service migration, persistent stores, or both, and all subsequent clusters that are added to the domain by using the Configuration Wizard, automatically apply the selected HA options.

### Enable Automatic Service Migration

Select **Enable Automatic Service Migration** to enable pinned services to migrate automatically to a healthy Managed Server for failover. It configures migratable target definitions that are required for automatic service migration and the cluster leasing. Choose one of these cluster leasing options:

- Database Leasing - Managed Servers use a table on a valid JDBC System Resource for leasing. Requires that the Automatic Migration data source have a valid JDBC System Resource. If you select this option, the Migration Basis is configured to Database and the Data Source for Automatic Migration is also automatically configured by the Configuration Wizard. If you have a high availability database, such as Oracle RAC, to manage leasing information, configure the database for server migration according to steps in [High-availability Database Leasing](#).
- Consensus Leasing - Managed Servers maintain leasing information in-memory. You use Node Manager to control Managed Servers in a cluster. (All servers that are migratable, or which could host a migratable target, must have a Node Manager associated with them.) If you select this option, the Migration Basis is configured to Consensus by the Configuration Wizard.

See Leasing for more information on leasing.

See Service Migration for more information on Automatic Service Migration.

### JTA Transaction Log Persistence

This section has two options: **Default Persistent Store** and **JDBC TLog Store**.

- Default Persistent Store - Configures the JTA Transaction Log store of the servers in the default file store.
- JDBC TLog Store - Configures the JTA Transaction Log store of the servers in JDBC stores.

Oracle recommends that you select **JDBC TLog Store**. When you complete the configuration, you have a cluster where JDBC persistent stores are set up for Transaction logs.

For more details on persistent and TLOG stores, see the following topics in *Oracle Fusion Middleware Developing JTA Applications for Oracle WebLogic Server*:

- Using the Default Persistent Store
- Using a JDBC TLOG Store

### JMS Server Persistence

A persistent **JMS store** is a physical repository for storing persistent message data and durable subscribers. It can be either a disk-based **file store** or a JDBC-accessible database. You can use a **JMS file store** for paging of messages to disk when memory is exhausted.

- **JMS File Store** - Configures a component to use JMS File Stores. If you select this option, you can choose the **File Store** option in the Advanced Configuration Screen to change the settings, if required. In the File Stores screen, you can set file store names, directories, and synchronous write policies.
- **JMS JDBC Store** - Configures a component to use JDBC stores for all its JMS servers. When you complete the configuration, you have a cluster and JDBC persistent stores are configured for the JMS servers.

This is the recommended option for Oracle Identity Governance 12c (12.2.1.3.0).

### Selecting the Application Home Location

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

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

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

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

### Configuring the Administrator Account

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

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

For more information about this screen, see Administrator Account in *Creating WebLogic Domains Using the Configuration Wizard*.

### Specifying the Domain Mode and JDK

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

On the Domain Mode and JDK screen:

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

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

## Specifying the Database Configuration Type

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

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

### Note:

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

After selecting **RCU Data**, specify details in the following fields:

Field	Description
DBMS/Service	Enter the database DBMS name, or service name if you selected a service type driver. Example: orcl.exampledomain.com
Host Name	Enter the name of the server hosting the database. Example: examplehost.exampledomain.com
Port	Enter the port number on which the database listens. Example: 1521
Schema Owner Schema Password	Enter the username and password for connecting to the database's Service Table schema. This is the schema username and password entered for the Service Table component on the Schema Passwords screen in the RCU (see <a href="#">Specifying Schema Passwords</a> ). The default username is <i>prefix_STB</i> , where <i>prefix</i> is the custom prefix that you defined in the RCU.

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

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

Successfully Done.
```

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

See Database Configuration Type in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

## Specifying JDBC Component Schema Information

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

Verify that the values populated on the JDBC Component Schema screen are correct for all schemas. If you selected **RCU Data** on the previous screen, the schema table should already be populated appropriately. If you selected **Manual configuration** on the Database Configuration screen, you must configure the schemas listed in the table manually, before you proceed.

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

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

See JDBC Component Schema in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard* for more details about this screen.

## Testing the JDBC Connections

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

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

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

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

## Entering Credentials

Use the Credentials screen to set credentials for each key in the domain.

The following table lists the key names, and the values that you must specify for their respective username and password.

### Note:

Ensure that you specify `keystore` as the username for the key **Keystore**, and `xelsysadm` as the username for the key **sysadmin**.

**Table 4-5 Values to be Specified on the Credentials Screen**

Key Name	Username	Password	Store Name
<b>Keystore</b>	keystore	Specify the password for keystore.	oim
<b>OIMSchemaPassword</b>	Specify the schema username for OIM operations database.	Specify the schema password of the OIM operations database schema owner.	oim
<b>sysadmin</b>	xelsysadm	Specify the sysadmin password.	oim
<b>WebLogicAdminKey</b>	Specify the username of the WebLogic administrator account for OIM domain.	Specify the password of the WebLogic administrator account for OIM domain.	oim

## Specifying the Path to the Keystore Certificate or Key

Use the Keystore screen to specify either the path to the trusted certificate for each keystore, or the path to each keystore's private key and other private key information.

When you click in the Trusted Certificate, Private Key, or Identity Certificate fields, a browse icon appears to the right of the field. Click this icon to browse to the appropriate file.

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

## Selecting Advanced Configuration

Use the Advanced Configuration screen to complete the domain configuration.

On the Advanced Configuration screen, select:

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

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

## Configuring the Administration Server Listen Address

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

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

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

## Configuring Node Manager

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

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

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

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

## Configuring Managed Servers for Oracle Identity Manager

On the Managed Servers screen, the new Managed Server named `oim_server1` and `soa_server1` are automatically created by default.

To configure Managed Servers for Oracle Identity Governance and Oracle SOA Suite:

1. In the Listen Address drop-down list, select the IP address of the host on which the Managed Server will reside or use the system name or DNS name that maps to a single IP address. Do not use `All Local Addresses`.
2. In the Server Groups drop-down list, make sure that `oim_server1` is associated with `OIM-MGD-SVRS` group and `soa_server1` is associated with `SOA-MGD-SVRS` group. This ensures that the correct service(s) target the Managed Servers you are creating.

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

3. Click **Clone** to create a second Managed Server `oim_server2` of type `oim_server1`. Repeat it to create a second Managed Server `soa_server2` of type `soa_server1`.

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 Oracle Fusion Middleware High Availability Guide*.

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

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

 **Tip:**

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

## Configuring a Cluster for Oracle Identity Manager

Use the Clusters screen to create a new cluster. This is required in for an Oracle Identity Governance high availability setup.

On the Clusters screen:

1. Click **Add**.
2. Specify `oim_cluster_1` in the Cluster Name field.
3. For the Cluster Address field, specify the `ipaddress/hostname:port`. For example:  
`ip_address_machine1:portnumber,ip_address_machine2:portnumber`
4. Repeat the steps to add `soa_cluster1`.

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

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

 **Tip:**

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

## Defining Server Templates

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

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

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

## Configuring Dynamic Servers

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

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

### Note:

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

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

## Assigning Oracle Identity Manager Managed Servers to the Cluster

If you are configuring a single-node non-clustered setup, click **Next** and go to next screen. Use the Assign Servers to Clusters screen to assign Managed Servers to a new *configured cluster*. A configured cluster is a cluster you configure manually. You do not use this screen if you are configuring a *dynamic cluster*, a cluster that contains one or more generated server instances that are based on a server template.

For more on configured cluster and dynamic cluster terms, see About Dynamic Clusters in *Oracle Fusion Middleware Understanding Oracle WebLogic Server*.

On the Assign Servers to Clusters screen:

1. In the Clusters pane, select the cluster to which you want to assign the Managed Servers; in this case, `oim_cluster1`.
2. In the Servers pane, assign `oim_server1` to `oim_cluster1` by doing one of the following:
  - Click once on `oim_server1` to select it, then click the right arrow to move it beneath the selected cluster (`oim_cluster1`) in the Clusters pane.
  - Double-click on `oim_server1` to move it beneath the selected cluster (`oim_cluster1`) in the Clusters pane.
3. Repeat to assign `soa_server1` to `soa_cluster1`.

### Tip:

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

## Configuring Coherence Clusters

Use the Coherence Clusters screen to configure the Coherence cluster.

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

### Note:

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

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

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

## Creating a New Oracle Identity Manager Machine

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

### Tip:

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

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

1. Select the Machine tab (for Windows) or the UNIX Machine tab (for UNIX), then click **Add** to create a new machine.
2. In the Name field, specify a machine name, such as `oim_machine1`.
3. In the Node Manager Listen Address field, select the IP address of the machine in which the Managed Servers are being configured. You can also specify the host name for this field.

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

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

 **Note:**

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

 **Tip:**

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

## Assigning Servers to Oracle Identity Manager Machines

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

On the Assign Servers to Machines screen:

1. In the Machines pane, select the machine to which you want to assign the servers; in this case, `oim_machine_1`.
2. In the Servers pane, assign `AdminServer` to `oim_machine_1` by doing one of the following:
  - Click once on `AdminServer` to select it, then click the right arrow to move it beneath the selected machine (`oim_machine_1`) in the Machines pane.
  - Double-click on `AdminServer` to move it beneath the selected machine (`oim_machine_1`) in the Machines pane.
3. Repeat these steps to assign all Managed Servers to their respective machines.

 **Tip:**

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

## Virtual Targets

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

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

## Partitions

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

For details about options on this screen, see Partitions in *Oracle Fusion Middleware Creating WebLogic Domains Using the Configuration Wizard*.

## Configuring Domain Frontend Host

The Domain Frontend Host screen can be used to configure the frontend host for the domain.

Select **Plain** or **SSL** and specify the respective host value.

Click **Next**.

## Targeting the Deployments

The Deployments Targeting screen can be used to target the available deployments to the servers.

Make the required modifications, and click **Next**.

## Targeting the Services

The Services Targeting screen can be used to target the available services to the Servers.

Make necessary modifications, and click **Next**.

## File Stores

The File Stores screen lists the available file stores.

You can specify the Synchronous Write Policy for each of the file stores. After you make the changes, click **Next**.

## Reviewing Your Configuration Specifications and Configuring the Domain

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

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

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

## Writing Down Your Domain Home and Administration Server URL

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

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

- Domain Location
- Administration Server URL

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

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

## Performing Post-Configuration Tasks

After you configure the Oracle Identity Governance domain, perform the necessary post-configuration tasks.

### Topics

- [Running the Offline Configuration Command](#)  
After you configure the Oracle Identity Governance domain, run the `offlineConfigManager` script to perform post configuration tasks.

## Running the Offline Configuration Command

After you configure the Oracle Identity Governance domain, run the `offlineConfigManager` script to perform post configuration tasks.

Ensure that you run this command before you start any server. To run the `offlineConfigManager` command, do the following:

1. Set the following environment variables to the right values:
  - DOMAIN\_HOME
  - JAVA\_HOME
2. Ensure that you have execute permissions for the file `OIM_HOME/server/bin/offlineConfigManager.sh`.
3. Run the following command from the location `OIM_HOME/server/bin/`:
  - On Unix: `./offlineConfigManager.sh`
  - On Windows: `offlineConfigManager.bat`

### Note:

`OIM_HOME` refers to `ORACLE_HOME/idm`.

## Starting the Servers

After a successful configuration, start all processes and servers, including the Administration Server and any Managed Servers.

The components may be dependent on each other so they must be started in the correct order.

 **Note:**

The procedures in this section describe how to start servers and process using the WLST command line or a script. You can also use the Oracle Fusion Middleware Control and the Oracle WebLogic Server Administration Console. See Starting and Stopping Administration and Managed Servers and Node Manager in *Administering Oracle Fusion Middleware*.

To start your Fusion Middleware environment, follow the steps below.

**Step 1: Start Node Manager**

To start Node Manager, use the `startNodeManager` script:

- (UNIX) `EXISTING_DOMAIN_HOME/bin/startNodeManager.sh`
- (Windows) `EXISTING_DOMAIN_HOME\bin\startNodeManager.cmd`

**Step 2: Start the Administration Server**

When you start the Administration Server, you also start the processes running in the Administration Server, including the WebLogic Server Administration Console and Fusion Middleware Control.

To start the Administration Server, use the `startWebLogic` script:

- (UNIX) `EXISTING_DOMAIN_HOME/bin/startWebLogic.sh`
- (Windows) `EXISTING_DOMAIN_HOME\bin\startWebLogic.cmd`

When you created the domain, if you selected **Production Mode** on the **Domain Mode and JDK** screen, a prompt for the Administrator user login credentials is displayed. Provide the same credentials that you provided on the **Administrator Account** screen.

**Step 3: Start the Managed Servers**

- If Node Manager is *not* configured, start the Managed Servers using the following instructions:  
Start the Oracle SOA Suite Managed Server first and then the Oracle Identity Governance Managed Server.

To start a WebLogic Server Managed Server, use the `startManagedWebLogic` script:

- (UNIX) `EXISTING_DOMAIN_HOME/bin/startManagedWebLogic.sh`  
`managed_server_name admin_url`
- (Windows) `EXISTING_DOMAIN_HOME\bin\startManagedWebLogic.cmd`  
`managed_server_name admin_url`

When prompted, enter your user name and password. This is the same user name and password which you provided in administrator account screen when creating the domain.

 **Note:**

The startup of a Managed Server will typically start the applications that are deployed to it. Therefore, it should not be necessary to manually start applications after the Managed Server startup.

- If Node Manager is configured, start the Managed Servers using the following instructions:
  1. Launch the Administration Console:
    - a. Using a web browser, open the following URL:  

```
http://hostname:port/console
```

Where:

      - *hostname* is the administration server host.
      - *port* is the administration server port on which the host server is listening for requests (7001 by default)
    - b. When the login page appears, enter the user name and password you used to start the Administration Server.
  2. Start Managed Servers from the Administration Console. For instructions, see [Start Managed Servers from the Administration Console](#).

## Integrating Oracle Identity Governance with Oracle SOA Suite

If you wish to integrate Oracle Identity Governance with Oracle SOA Suite, use the Enterprise Manager console to do the same.

To integrate Oracle Identity Governance with Oracle SOA Suite, do the following:

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 End of Configuration screen ([Writing Down Your Domain Home and Administration Server URL](#)). The default Administration Server port number is 7001.

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

2. Click **weblogic\_domain** and then click **System Mbean Browser**.
3. In the search box, enter **OIMSOAIntegrationMBean**, and click Search. The mbean is displayed.

 **Note:**

If Oracle Identity Governance is still starting (coming up) or is just started (RUNNING MODE), the Enterprise Manager does not show any Mbeans defined by OIG. Wait for two minutes for the server to start, and then try searching for the Mbean in **System Mbean Browser** of the Enterprise Manager.

4. Go to the **Operations** tab of mbean, and select **integrateWithSOAServer**.
5. Enter the following required attributes:
  - **Weblogic Administrator User name**
  - **Weblogic Administrator User Password**
  - **OIM Front end URL**
  - **OIM External Front end URL**
6. Click **Invoke**.

## Verifying the Configuration

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

By using a Web browser, go to the URL: `http://HOSTNAME:PORT/identity`

In this URL, *HOSTNAME* represents the name of the computer hosting the application server and *PORT* refers to the port on which the Oracle Identity Governance server is listening.

For information about integrating Oracle Identity Governance with other Identity Management components, see Introduction to IdM Suite Components Integration in *Integration Guide for Oracle Identity Management Suite*.

For more information about performing additional domain configuration tasks, see [Performing Additional Domain Configuration Tasks](#).

## Analyzing the Bootstrap Report

When you start the Oracle Identity Governance server, the bootstrap report is generated at `DOMAIN_HOME/servers/oim_server1/logs/BootStrapReportPreStart.html`.

The bootstrap report `BootStrapReportPreStart.html` is an html file that contains information about the topology that you have deployed, the system level details, the connection details like the URLs to be used, the connectivity check, and the task execution details. You can use this report to check if the system is up, and also to troubleshoot the issues, post-configuration.

Every time you start the Oracle Identity Governance server, the bootstrap report is updated.

### Sections in the Bootstrap Report

- **Topology Details**

This section contains information about your deployment. It shows whether you have configured a cluster setup, SSL enabled, or upgraded an Oracle Identity Manager environment from 11g to 12c.

- **System Level Details**

This section contains information about the JDK version, Database version, JAVA\_HOME, DOMAIN\_HOME, OIM\_HOME, and MIDDLEWARE\_HOME.

- **Connection Details**

This section contains information about the connect details like the Administration URL, OIM Front End URL, SOA URL, and RMI URL.

This also shows whether the Administration Server, Database, and SOA server is up or not.

- **Execution Details**

This section lists the various tasks and their statuses.

## Installing and Accessing the Oracle Identity Governance Design Console

If you wish to set up only the Oracle Identity Governance Design Console in a machine where OIG server is not configured, then you must install Oracle Identity Governance 12c (12.2.1.3.0) in standalone mode, and then invoke the Design Console.

To install the Oracle Identity Governance Design Console, do the following:

1. Start the installation program by running the `java` executable from the JDK directory.

 **Note:**

No prerequisite software is required to install Oracle Identity Governance Design Console.

For example:

- (UNIX) `/home/Oracle/Java/jdk1.8.0_131/bin/java -jar fmw_12.2.1.3.0_idm.jar`
  - (Windows) `C:\home\Oracle\Java\jdk1.8.0_131\bin\java -jar fmw_12.2.1.3.0_idm.jar`
2. The installer shows a series of screens where you verify or enter information.. The following table lists the order in which installer screens appear. If you need additional help with an installation screen, click **Help**.

**Table 4-6 Install Screens**

Screen	Description
Installation Inventory Setup	<p>On Linux or UNIX operating systems, this screen opens if this is the first time you are installing any Oracle product on this host. Specify the location where you want to create your central inventory. Make sure that the operating system group name selected on this screen has write permissions to the central inventory location.</p> <p>See About the Oracle Central Inventory in <i>Oracle Fusion Middleware Installing Software with the Oracle Universal Installer</i>.</p> <p>This screen does not appear on Windows operating systems.</p>
Welcome	Review the information to make sure that you have met all the prerequisites, then click <b>Next</b> .
Auto Updates	Select to skip automatic updates, select patches, or search for the latest software updates, including important security updates, through your My Oracle Support account.
Installation Location	Specify your Oracle home directory location. You can click <b>View</b> to verify and ensure that you are installing in the correct Oracle home.
<div style="border: 1px solid #0070c0; padding: 10px; background-color: #e6f2ff;">  <b>Note:</b> Ensure that the Oracle Home path does not contain space. </div>	
Installation Type	Use the <b>Standalone</b> Installation Type. Standalone mode is a type of installation that is managed independently of WebLogic Server. The only component that you can install using standalone mode is the Oracle Identity Governance Design Console.
Prerequisite Checks	<p>This screen verifies that your system meets the minimum necessary requirements.</p> <p>To view the list of tasks that gets verified, select <b>View Successful Tasks</b>. To view log details, select <b>View Log</b>. If any prerequisite check fails, then an error message appears at the bottom of the screen. Fix the error and click <b>Rerun</b> to try again. To ignore the error or the warning message and continue with the installation, click <b>Skip</b> (not recommended).</p>
Installation Summary	Use this screen to verify installation options you selected. If you want to save these options to a response file, click <b>Save Response File</b> and enter the response file location and name. The response file collects and stores all the information that you have entered, and enables you to perform a silent installation (from the command line) at a later time. Click <b>Install</b> to begin the installation.
Installation Progress	<p>This screen shows the installation progress.</p> <p>When the progress bar reaches 100% complete, click <b>Finish</b> to dismiss the installer, or click <b>Next</b> to see a summary.</p>
Installation Complete	This screen displays the Installation Location and the Feature Sets that are installed. Review this information and click <b>Finish</b> to close the installer.

To access the Oracle Identity Governance Design Console, do the following:

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

- (UNIX) `setenv JAVA_HOME /home/Oracle/Java/jdk1.8.0_131`
  - (Windows) `set JAVA_HOME=C:\home\Oracle\Java\jdk1.8.0_131`
2. Invoke the Design Console by running the following command from the location `ORACLE_HOME\idm\designconsole`:
- (UNIX) `sh xlclient.sh`
  - (Windows) `xlclient.cmd`
- Enter the following details when prompted:
- **Server url:** Enter the Oracle Identity Governance server URL in the format `t3://oim_server_hostname:oimport`.
  - **User ID:** Enter the OIG Administrator user login. For example, `xelsysadm`.
  - **Password:** Enter the OIG Administrator user password. For example, `xelsysadm_password`.

## Troubleshooting

This section lists the common issues encountered while configuring Oracle Identity Governance and their workarounds.

### Topics

- [Description of the Log Codes](#)  
When you encounter any error during the Oracle Identity Governance 12c (12.2.1.3.0) installation, search for the log code in the `DOMAIN_HOME/servers/oim_server/logs/oim-diagnostic.log` file to diagnose the issue.
- [Exception in the Oracle Identity Manager Server Logs After Starting the Servers](#)  
After you configure the Oracle Identity Manager domain, when you start the servers, "Unable to resolve 'TaskQueryService'" exception is seen in the Oracle Identity Manager (OIM) Server logs, which can be ignored.
- [Oracle Identity Manager Bootstrap Fails with Hostname Verification Error](#)  
If the Oracle Identity Manager bootstrap fails with the following SSL hostname verification failing error, use the workaround described in this section:
- [Oracle Identity Manager Server log Shows IOException When IPv6 is Used](#)  
If you are using IPv6 in a cluster setup, the Oracle Identity Manager server logs shows the following error when you start the Oracle Identity Manager Managed Server:
- [Error When Accessing Pending Approvals Page in a Multinode Setup](#)  
In a Oracle Identity Governance multinode setup, the following error is displayed when you access the Pending Approvals page on a remote node:
- [OIM Gridlink Datasources Show Suspended State When 11.2.0.4.0 RAC Database is Used](#)  
When you run the Configuration Wizard to configure Oracle Identity Manager gridlink datasources with 11.2.0.4.0 RAC Database, the following warning is displayed:
- [Server Consoles are Inaccessible in a Clustered Domain](#)  
After you configure the Oracle Identity Governance domain, the Administration Server console and the managed Server consoles are inaccessible.

- [OIM Server Fails to Come up Due to SOA Server not Completely Up](#)  
If the Oracle SOA Server (SOA) is not up completely, the Oracle Identity Manager (OIM) Server fails to start.
- [Oracle Identity Manager Server Throws OutOfMemoryError](#)  
After you configure Oracle Identity Manager 12c, when you start the OIM 12c Server, `OutOfMemoryError` is thrown.
- ['ADFContext leak detected' Message in the OIM Server Logs](#)  
When you start the Oracle Identity Manager (OIM) 12c (12.2.1.3.0) server, the following error is seen in the OIM server logs:
- [ADF Controller Exception in the SOA Server Logs](#)  
After you configure Oracle Identity Governance 12c (12.2.1.3.0), when you start the Oracle SOA Suite (SOA) server, the following exception is shown in the SOA server logs:

## Description of the Log Codes

When you encounter any error during the Oracle Identity Governance 12c (12.2.1.3.0) installation, search for the log code in the `DOMAIN_HOME/servers/oim_server/logs/oim-diagnostic.log` file to diagnose the issue.

The following are log codes and their descriptions for various tasks:

- IAM-3070001 — Error loading configuration required for Bootstrap
- IAM-3070002 — Could not connect to DB using CSF Credentials, Please verify crednetials seeded in CSF under key
- IAM-3070003 — Could not connect to WLS using CSF credentials ,Please verify credentials seeded in CSF for
- IAM-3070004 — Validation for CSF Credentials failed. Exiting OIM\_CONFIG, Please verify and fix CSF Credentials
- IAM-3070005 — Validation for CSF Credentials Successful
- IAM-3070006 — Task Not Found
- IAM-3070007 — Task failed
- IAM-3070008 — BootStrap configuration Failed
- IAM-3070009 — BootStrap configuration Successful
- IAM-3070010 — Successfully completed

## Exception in the Oracle Identity Manager Server Logs After Starting the Servers

After you configure the Oracle Identity Manager domain, when you start the servers, "Unable to resolve 'TaskQueryService'" exception is seen in the Oracle Identity Manager (OIM) Server logs, which can be ignored.

The following exception is displayed in the OIM Server logs:

```
javax.naming.NameNotFoundException: Unable to resolve  
'TaskQueryService'.  
Resolved ''; remaining name 'TaskQueryService'
```

This exception can be ignored.

## Oracle Identity Manager Bootstrap Fails with Hostname Verification Error

If the Oracle Identity Manager bootstrap fails with the following SSL hostname verification failing error, use the workaround described in this section:

```
<Warning> <Security> <BEA-090960> <The servers
SSL configuration is not available. There will potentially be SSL
handshake
failures.>
<Mar 23, 2017 8:04:32 AM PDT> <Warning> <Security> <BEA-090924> <JSSE
has
been selected by default, since the SSLMBean is not available.>
<Mar 23, 2017 8:04:32 AM PDT> <Info> <Security> <BEA-090908> <Using the
default WebLogic SSL Hostname Verifier implementation.>
<Mar 23, 2017 8:04:34 AM PDT> <Notice> <Security> <BEA-090169> <Loading
trusted certificates from the kss keystore file kss://system/trust.>
Mar 23, 2017 8:04:34 AM
oracle.security.opss.internal.runtime.ServiceContextManagerImpl
getContext
WARNING: Bootstrap services are used by OPSS internally and clients
should
never need to directly read/write bootstrap credentials. If required,
use
Wlst or configuration management interfaces.
<Mar 23, 2017 8:04:34 AM PDT> <Notice> <Security> <BEA-090169> <Loading
trusted certificates from the jks keystore file
/host/jdk1.8.0_121/jre/lib/security/cacerts.>
<Mar 23, 2017 8:04:34 AM PDT> <Info> <Management> <BEA-141307> <Unable
to
connect to the Administration Server. Waiting 5 second(s) to retry
(attempt
number 1 of 3).>
```

To resolve this issue, start the Oracle Identity Governance Managed Server using the following command:

- On Unix:  

```
./startManagedWebLogic.sh oim_server_name t3://admin_server_host:port
```
- On Windows:  

```
startManagedWebLogic.cmd oim_server_name t3://admin_server_host:port
```

In this command, you must specify the non-SSL port for *port*.

## Oracle Identity Manager Server log Shows IOException When IPv6 is Used

If you are using IPv6 in a cluster setup, the Oracle Identity Manager server logs shows the following error when you start the Oracle Identity Manager Managed Server:

```
<Error> <org.jgroups.protocols.UDP>
<BEA-000000> <failed sending message to null (58 bytes)
java.lang.Exception: dest=/235.110.223.3:45566 (61 bytes)
```

```
at org.jgroups.protocols.UDP._send(UDP.java:212)
at org.jgroups.protocols.UDP.sendToAllMembers(UDP.java:167)
at org.jgroups.protocols.TP.doSend(TP.java:1102)
at org.jgroups.protocols.TP.send(TP.java:1088)
at org.jgroups.protocols.TP.down(TP.java:907)
at org.jgroups.protocols.PING.sendMcastDiscoveryRequest(PING.java:276)
at org.jgroups.protocols.PING.sendGetMembersRequest(PING.java:256)
at
org.jgroups.protocols.Discovery$PingSenderTask$1.run(Discovery.java:396)

at
java.util.concurrent.Executors$RunnableAdapter.call(Executors.java:511)
at java.util.concurrent.FutureTask.runAndReset(FutureTask.java:308)
at
java.util.concurrent.ScheduledThreadPoolExecutor$ScheduledFutureTask.access$30
1(ScheduledThreadPoolExecutor.java:180)
at
java.util.concurrent.ScheduledThreadPoolExecutor$ScheduledFutureTask.ru
n(Sched
uledThreadPoolExecutor.java:294)
at
java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.jav
a:1142
)
at
java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.ja
va:617
)
at java.lang.Thread.run(Thread.java:745)
Caused By: java.io.IOException: Invalid argument (sendto failed)
at java.net.PlainDatagramSocketImpl.send(Native Method)
```

To resolve this issue, do the following:

1. Log in to the WebLogic Console as `weblogic` user, using the following URL:  
`http://admin_server_host/console`
2. Expand **Environments** and then **Servers**.
3. Click **Lock and Edit**.
4. Click the Managed Server..
5. Go to the **Server Start** tab.
6. Add the following to the **Arguments** field:  
`-Djava.net.preferIPv4Stack=true`
7. Click **Save**.
8. Repeat the steps for the second Managed Server.
9. Restart the Managed Servers.

## Error When Accessing Pending Approvals Page in a Multinode Setup

In a Oracle Identity Governance multinode setup, the following error is displayed when you access the Pending Approvals page on a remote node:

```
[oim_server1] [ERROR] [] [oracle.iam] [tid:
[ACTIVE].ExecuteThread: '0' for queue: 'weblogic.kernel.Default
(self-tuning)'] [userId: xelsysadm] [ecid:
cea9a502-afb8-4d3d-85a4-cb61d2878065-0000276e,0] [APP:
oracle.iam.console.identity.self-service.ear] [partition-name: DOMAIN]
[tenant-name: GLOBAL] [DSID: 0000LfRXW3_7Y7QLIag8yf1OmuCL000004] Unable
to
retrieve User View
Listoracle.bpel.services.workflow.client.WorkflowServiceClientException:

javax.naming.CommunicationException: Failed to initialize JNDI context,
tried
2 time or times totally, the interval of each time is 0ms. [[
t3://host.example.com:1234: Destination 10.10.10.1, 1234
unreachable.; nested exception is:
    java.net.ConnectException: Connection refused; No available
router to
destination.; nested exception is:
        java.rmi.ConnectException: No available router to destination.
[Root
exception is java.net.ConnectException: t3://host.example.com:1234:
Destination 10.10.10.1, 1234 unreachable.; nested exception is:
    java.net.ConnectException: Connection refused; No available
router to
destination.; nested exception is:
        java.rmi.ConnectException: No available router to destination.]
```

To resolve this, you must use the machine name of the second node during the domain creation step, that is, when running the configuration wizard on the first node. After this, you must proceed with the pack and unpack command.

## OIM Gridlink Datasources Show Suspended State When 11.2.0.4.0 RAC Database is Used

When you run the Configuration Wizard to configure Oracle Identity Manager gridlink datasources with 11.2.0.4.0 RAC Database, the following warning is displayed:

```
<May 12, 2017 5:15:31,157 AM MDT> <Warning> <JDBC> <BEA-001129>
<Received
exception while creating connection for pool
"ApplicationDB": Listener refused the connection with the following
error:
ORA-12516, TNS:listener could not find available handler with matching
protocol stack
```

The data source is pushed to suspended state if the connection fails in the retry after waiting for TEST Frequency. To resolve this, you must manually resume the suspended data sources by doing the following:

1. Navigate to the data source that you want to resume:
2. Go to the **Control** tab.
3. On the Control page, select the instances of the data source that you want to resume.

Date source instances are listed by the server on which they are deployed.

4. Click **Resume** and then click **Yes** to confirm the action.

Results are displayed at the top of the page, and the state of the selected data source instances is changed to Running.

## Server Consoles are Inaccessible in a Clustered Domain

After you configure the Oracle Identity Governance domain, the Administration Server console and the managed Server consoles are inaccessible.

To resolve this, either specify the IP address of machine as listen address for machines having multiple interfaces, or disable all other interfaces.

If you wish to enter machine name as listen address in a clustered or non-clustered domain, disable all other interfaces.

## OIM Server Fails to Come up Due to SOA Server not Completely Up

If the Oracle SOA Server (SOA) is not up completely, the Oracle Identity Manager (OIM) Server fails to start.

The following error is displayed when OIM Server fails to start if the SOA Server is not completely up:

```
Could not fetch ServerRuntime mbean for  
soa_server1. Server seems to be down!
```

To resolve this, restart the OIM Server.

## Oracle Identity Manager Server Throws OutOfMemoryError

After you configure Oracle Identity Manager 12c, when you start the OIM 12c Server, `OutOfMemoryError` is thrown.

The following error is seen in the OIM server logs for this issue:

```
[oim_server1] [NOTIFICATION] []  
[oracle.iam.oimdataprovers.impl] [tid: [ACTIVE].ExecuteThread: '9'  
for  
queue: 'weblogic.kernel.Default (self-tuning)'] [userId: xelsysadm]  
[ecid:  
5679ce10-f0df-457f-88f1-6bc04e10aa13-000013b1,0] [APP: oim-runtime]  
[partition-name: DOMAIN] [tenant-name: GLOBAL] [DSID:  
0000Lg0PPYTBd5I_Iptlif1OpGGi00000U] RM_DEBUG_PERF - 2017-03-24  
06:09:51.087 -
```

```

search criteria = arg1 = (usr_key) EQUAL arg2 = (1)[[
  query = Select usr.usr_key, usr.usr_status from usr where usr.usr_key
= ?
  time = 1
]]
[2017-03-24T06:09:52.286-07:00] [oim_server1] [NOTIFICATION] []
[oracle.iam.oimdataproviders.impl] [tid: [ACTIVE].ExecuteThread: '9'
for
queue: 'weblogic.kernel.Default (self-tuning)'] [userId: xelsysadm]
[ecid:
5679ce10-f0df-457f-88f1-6bc04e10aa13-000013b1,0] [APP: oim-runtime]
[partition-name: DOMAIN] [tenant-name: GLOBAL] [DSID:
0000Lg0PPYTbd5I_Iptlif1OpGGi00000U]
oracle.iam.oimdataproviders.impl.OIMUserDataProvider
[2017-03-24T06:11:52.171-07:00] [oim_server1] [ERROR] [ADFC-50018]
[oracle.adfinternal.controller.application.AdfcExceptionHandler] [tid:
[ACTIVE].ExecuteThread: '27' for queue: 'weblogic.kernel.Default
(self-tuning)'] [userId: xelsysadm] [ecid:
5679ce10-f0df-457f-88f1-6bc04e10aa13-000013e0,0] [APP:
oracle.iam.console.identity.self-service.ear] [partition-name: DOMAIN]
[tenant-name: GLOBAL] [DSID: 0000Lg0RtM9Bd5I_Iptlif1OpGGi00000V] ADFc:
No
exception handler was found for an application exception. [[
java.lang.OutOfMemoryError: GC overhead limit exceeded ]

```

To resolve this issue, do the following (on Linux):

1. Ensure that you set the following parameters in the `/etc/security/limits.conf` file, to the specified values:
  - `FUSION_USER_ACCOUNT soft nofile 32767`
  - `FUSION_USER_ACCOUNT hard nofile 327679`
2. Ensure that you set `UsePAM` to `Yes` in the `/etc/ssh/sshd_config` file.
3. Restart `sshd`.
4. Log out (or reboot) and log in to the system again.

Before you start the Oracle Identity Manager 12c Server, run the following command to increase the limit of open files, so that you do not hit into memory issues:

```
limit maxproc 16384
```

## 'ADFCContext leak detected' Message in the OIM Server Logs

When you start the Oracle Identity Manager (OIM) 12c (12.2.1.3.0) server, the following error is seen in the OIM server logs:

```

2b8fd3a0-06e3-4de6-be10-801551745664-000000a5,0] [partition-name:
DOMAIN]
[tenant-name: GLOBAL] ADFContext leak detected. [[
oracle.adf.share.ADFContext.setAsCurrent(ADFCContext.java:1501)
oracle.adf.mbean.share.AdfMBeanInterceptor.resetADFCIfNeeded(AdfMBeanInte
rceptor.java:140)

```

This has no impact on the functionality, and therefore you can ignore this error.

## ADF Controller Exception in the SOA Server Logs

After you configure Oracle Identity Governance 12c (12.2.1.3.0), when you start the Oracle SOA Suite (SOA) server, the following exception is shown in the SOA server logs:

```
oracle.adf.controller.ControllerException: ADFC-12013: Controller state  
has not been initialized for the current request.
```

This does not impact the functionality, and therefore it can be ignored.

# 5

## Next Steps After Configuring the Domain

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

- [Performing Basic Administrative Tasks](#)  
Review the administrative tasks you will likely want to perform on a new domain.
- [Performing Additional Domain Configuration Tasks](#)  
Review additional configuration tasks you will likely want to perform on a new domain.
- [Preparing Your Environment for High Availability](#)  
Scaling out for high availability requires additional steps.

### Performing Basic Administrative Tasks

Review the administrative tasks you will likely want to perform on a new domain.

**Table 5-1 Basic Administration Tasks for a New Domain**

Task	Description	More Information
Getting familiar with Fusion Middleware administration tools	Get familiar with various tools that you can use to manage your environment.	See Overview of Oracle Fusion Middleware Administration Tools in <i>Oracle Fusion Middleware Administering Oracle Fusion Middleware</i> .
Starting and stopping products and servers	Learn how to start and stop Oracle Fusion Middleware, including the Administration Server, Managed Servers, and components.	See Starting and Stopping Oracle Fusion Middleware in <i>Oracle Fusion Middleware Administering Oracle Fusion Middleware</i> .
Configuring Secure Sockets Layer (SSL)	Learn how to set up secure communications between Oracle Fusion Middleware components using SSL.	See Configuring SSL in Oracle Fusion Middleware in <i>Oracle Fusion Middleware Administering Oracle Fusion Middleware</i> .
Monitoring Oracle Fusion Middleware	Learn how to keep track of the status of Oracle Fusion Middleware components.	See Monitoring Oracle Fusion Middleware in <i>Oracle Fusion Middleware Administering Oracle Fusion Middleware</i> .
Understanding Backup and Recovery Procedures	Learn the recommended backup and recovery procedures for Oracle Fusion Middleware.	See Introduction to Backup and Recovery in <i>Oracle Fusion Middleware Administering Oracle Fusion Middleware</i> .
Understanding Performance Tuning	Learn how to tune the Oracle Identity and Access Management Suite components to improve performance.	See Oracle Identity and Access Management Performance Tuning in <i>Oracle Fusion Middleware Tuning Performance</i> .

## Performing Additional Domain Configuration Tasks

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

**Table 5-2 Additional Domain Configuration Tasks**

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

## Preparing Your Environment for High Availability

Scaling out for high availability requires additional steps.

[Table 5-3](#) provides a list of tasks to perform if you want to scale out your standard installation environment for high availability.

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

Task	Description	More Information
Scaling out to multiple host computers	To enable high availability, it is important to provide failover capabilities to another host computer. That way, if one computer goes down, your environment can continue to serve the consumers of your deployed applications.	See <i>Scaling Out a Topology (Machine Scale Out)</i> in the <i>Oracle Fusion Middleware High Availability Guide</i> .
Configuring high availability for your Web Tier components.	If you have added a Web tier front-end, then you must configure the Web Tier for high availability, as well as the WebLogic Server software.	See <i>Configuring High Availability for Web Tier Components</i> in <i>Oracle Fusion Middleware High Availability Guide</i> .
Setting up a front-end load balancer	A load balancer can be used to distribute requests across servers more evenly.	See <i>Server Load Balancing in a High Availability Environment and Configuring Load Balancer Virtual Server Names and Ports</i> in <i>Oracle Fusion Middleware High Availability Guide</i> .
Configuring Node Manager	Node Manager enables you to start, shut down, and restart the Administration Server and Managed Server instances from a remote location. This document assumes you have configured a per-domain Node Manager. Review the Node Manager documentation, for information on advanced Node Manager configuration options and features.	See <i>Advanced Node Manager Configuration</i> in <i>Oracle Fusion Middleware Administering Node Manager for Oracle WebLogic Server</i> .

# 6

## Uninstalling or Reinstalling Oracle Identity and Access Management

Follow the instructions in this section to uninstall or reinstall Oracle Identity and Access Management.

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

- [About Product Uninstallation](#)  
The Oracle Fusion Middleware uninstaller removes the software from the Oracle home directory.
- [Stopping Oracle Fusion Middleware](#)  
Before running the Uninstall Wizard, Oracle recommends that you stop all servers and processes associated with the Oracle home you are going to remove.
- [Removing Your Database Schemas](#)  
Before you remove the Oracle home, Oracle recommends that you run the Repository Creation Utility (RCU) to remove database schemas associated with this domain.
- [Uninstalling the Software](#)  
Follow the instructions in this section to start the Uninstall Wizard and remove the software.
- [Removing the Oracle Home Directory Manually](#)  
After you uninstall the software, you must manually remove your Oracle home directory and any existing subdirectories that the Uninstall Wizard did not remove.
- [Removing the Program Shortcuts on Windows Operating Systems](#)  
On Windows operating systems, you must also manually remove the program shortcuts; the Deinstallation Wizard does not remove them for you.
- [Removing the Domain and Application Data](#)  
After you uninstall the software, you must remove the domain and application data.
- [Reinstalling the Software](#)  
You can reinstall your software into the same Oracle home as a previous installation only if you uninstalled the software by following the instructions in this section, including manually removing the Oracle home directory.

### About Product Uninstallation

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

The following table summarizes the tasks to uninstall Fusion Middleware products.

**Table 6-1 Roadmap for Product Uninstallation**

Task	Description	Documentation
Stop Oracle Fusion Middleware	All servers and processes in your domain should be stopped before running the uninstaller.	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 uninstaller to remove Oracle Fusion Middleware Infrastructure.  Note that if your Oracle home contains multiple products, you must run the uninstaller multiple times, once for each product.	See <a href="#">Uninstalling the Software</a> .
Remove the Oracle home directory	The uninstaller does not remove all files and folders from the Oracle home directory. After the uninstaller is finished, you must manually remove the Oracle home to complete your product removal.	See <a href="#">Removing the Oracle Home Directory Manually</a> .
Remove your domain and application data	The uninstaller 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 <a href="#">Removing the Domain and Application Data</a> .

## Stopping Oracle Fusion Middleware

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

See *Stopping an Oracle Fusion Middleware Environment* in *Oracle Fusion Middleware Administering Oracle Fusion Middleware*.

## Removing Your Database Schemas

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

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

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

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

## Uninstalling the Software

Follow the instructions in this section to start the Uninstall Wizard and remove the software.

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

- [Starting the Uninstall Wizard](#)
- [Selecting the Product to Uninstall](#)
- [Navigating the Uninstall Wizard Screens](#)

### Starting the Uninstall Wizard

To start the Uninstall Wizard:

1. Change to the following directory:  
(UNIX) `ORACLE_HOME/oui/bin`  
(Windows) `ORACLE_HOME\oui\bin`
2. Enter the following command:  
(UNIX) `./deinstall.sh`  
(Windows) `deinstall.cmd`

### Selecting the Product to Uninstall

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

After you run the Uninstall Wizard, the Distribution to Uninstall screen opens. From the dropdown menu, select `Oracle Identity and Access Management` and click **Uninstall**. The uninstallation program shows the screens listed in [Navigating the Uninstall Wizard Screens](#).

 **Note:**

You can uninstall Oracle Fusion Middleware Infrastructure after you uninstall Oracle Identity and Access Management software by running the Uninstall Wizard again. Before doing so, make sure that there are no other products using the Infrastructure; those products will no longer function once the Infrastructure is removed. You will not encounter the Distribution to Uninstall screen if no other software depends on Oracle Fusion Middleware Infrastructure. See *Uninstalling Oracle Fusion Middleware Infrastructure in Oracle Fusion Middleware Installing and Configuring the Oracle Fusion Middleware Infrastructure*.

## Navigating the Uninstall Wizard Screens

The Uninstall Wizard shows a series of screens to confirm the removal of the software.

[Table 6-2](#) describes the screens in the Uninstall Wizard. For information, click **Help** on the screen.

**Table 6-2 Uninstall Wizard Screens and Descriptions**

Screen	Description
Welcome	Introduces you to the product Uninstall Wizard.
Uninstall Summary	Shows the Oracle home directory and its contents that are uninstalled. Verify that this is the correct directory.  If you want to save these options to a response file, click <b>Save Response File</b> and enter the response file location and name. You can use the response file later to uninstall the product in silent (command-line) mode. See Running the Oracle Universal Installer for Silent Uninstall in <i>Installing Software with the Oracle Universal Installer</i> .  Click <b>Deinstall</b> , to begin removing the software.
Uninstall Progress	Shows the uninstallation progress.
Uninstall Complete	Appears when the uninstallation is complete. Review the information on this screen, then click <b>Finish</b> to close the Uninstall Wizard.

## Removing the Oracle Home Directory Manually

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

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

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

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

## Removing the Program Shortcuts on Windows Operating Systems

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

To remove the program shortcuts on Windows:

1. Change to the following directory: `C:\ProgramData\Microsoft\Windows\Start Menu\Programs\Oracle\ORACLE_HOME\Product`

2. If you only have one product installed in your Oracle home, delete the `ORACLE_HOME` directory. If you have multiple products installed in your Oracle home, delete all products before you delete the `ORACLE_HOME` directory.

## Removing the Domain and Application Data

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

To remove the domain and application data:

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

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

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

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

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

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

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

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

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

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

Save and exit the file when you are finished.

## Reinstalling the Software

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

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

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

- Installing in an existing Oracle home that contains the same feature sets.  
The installer warns you that the Oracle home that you specified during installation already contains the same software you are trying to install.

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

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

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

# A

## Updating the JDK After Installing and Configuring an Oracle Fusion Middleware Product

Consider that you have a JDK version `jdk1.8.0_121` installed on your machine. When you install and configure an Oracle Fusion Middleware product, the utilities, such as Configuration Wizard (`config.sh|exe`), OPatch, or RCU point to a default JDK, for example, `jdk1.8.0_121`. After some time, Oracle releases a new version of the JDK, say `jdk1.8.0_131` that carries security enhancements and bug fixes. From 12c (12.2.1.3.0) onwards, you can upgrade the existing JDK to a newer version, and can have the complete product stack point to the newer version of the JDK.

You can maintain multiple versions of JDK and switch to the required version on need basis.

- [About Updating the JDK Location After Installing an Oracle Fusion Middleware Product](#)

The binaries and other metadata and utility scripts in the Oracle home and Domain home, such as RCU or Configuration Wizard, use a JDK version that was used while installing the software and continue to refer to the same version of the JDK. The JDK path is stored in a variable called `JAVA_HOME` which is centrally located in `.globalEnv.properties` file inside the `ORACLE_HOME/oui` directory.

## About Updating the JDK Location After Installing an Oracle Fusion Middleware Product

The binaries and other metadata and utility scripts in the Oracle home and Domain home, such as RCU or Configuration Wizard, use a JDK version that was used while installing the software and continue to refer to the same version of the JDK. The JDK path is stored in a variable called `JAVA_HOME` which is centrally located in `.globalEnv.properties` file inside the `ORACLE_HOME/oui` directory.

The utility scripts such as `config.sh|cmd`, `launch.sh`, or `opatch` reside in the `ORACLE_HOME`, and when you invoke them, they refer to the `JAVA_HOME` variable located in `.globalEnv.properties` file. To point these scripts and utilities to the newer version of JDK, you must update the value of the `JAVA_HOME` variable in the `.globalEnv.properties` file by following the directions listed in [Updating the JDK Location in an Existing Oracle Home](#).

To make the scripts and files in your Domain home directory point to the newer version of the JDK, you can follow one of the following approaches:

- Specify the path to the newer JDK on the Domain Mode and JDK screen while running the Configuration Wizard.

For example, consider that you installed Oracle Fusion Middleware Infrastructure with the JDK version `8u121`. So while configuring the WebLogic domain with the Configuration Assistant, you can select the path to the newer JDK on the Domain

Mode and JDK screen of the Configuration Wizard. Example: `/scratch/jdk/jdk1.8.0_131`.

- Manually locate the files that have references to the JDK using `grep` (UNIX) or `findstr` (Windows) commands and update each reference. See [Updating the JDK Location in an Existing Domain Home](#).



#### Note:

If you install the newer version of the JDK in the same location as the existing JDK by overwriting the files, then you don't need to take any action.

When you upgrade Oracle Identity Manager in an integrated environment, you may encounter the OPSS processing error. The following exception is seen when you run `reconfig.sh` command to reconfigure the Oracle Identity Manager domain:

```
SEVERE [93] com.oracle.cie.domain.progress.AbstractProgressGenerator -
Error occurred in
phase {OPSS Processing} execution.
java.lang.IllegalStateException: SecurityContext: Domain Name:
IAMGovernanceDomain
JDBC URL: opss-audit-DBDS:jdbc:oracle:thin:@//<hostname>:<port>/
<service>
JDBC URL: opss-data-source:jdbc:oracle:thin:@//<hostname>:<port>/
<service>
Caused by: java.security.InvalidKeyException: Illegal key size
at javax.crypto.Cipher.checkCryptoPerm(Cipher.java:1039)
at javax.crypto.Cipher.implInit(Cipher.java:805)
at javax.crypto.Cipher.chooseProvider(Cipher.java:864)
at javax.crypto.Cipher.init(Cipher.java:1396)
at javax.crypto.Cipher.init(Cipher.java:1327)
```

To resolve this issue:

1. Install the Java Cryptography Extension (JCE) Unlimited Strength Jurisdiction Policy Files from the following location: [Java Cryptography Extension \(JCE\) Unlimited Strength Jurisdiction Policy Files 8 Download](#).
  2. Copy the `local_policy.jar` and the `US_export_policy.jar` files to the location `JAVA_HOME/jre/lib/security/`. If the files already exist in the destination folder, overwrite them.
- [Updating the JDK Location in an Existing Oracle Home](#)  
The `getProperty.sh|cmd` script displays the value of a variable, such as `JAVA_HOME`, from the `.globalEnv.properties` file. The `setProperty.sh|cmd` script is used to set the value of variables, such as `OLD_JAVA_HOME` or `JAVA_HOME` that contain the locations of old and new JDKs in the `.globalEnv.properties` file.
  - [Updating the JDK Location in an Existing Domain Home](#)  
You must search the references to the current JDK, for example `jdk1.8.0_121` manually, and replace those instances with the location of the new JDK.

## Updating the JDK Location in an Existing Oracle Home

The `getProperty.sh|cmd` script displays the value of a variable, such as `JAVA_HOME`, from the `.globalEnv.properties` file. The `setProperty.sh|cmd` script is used to set the value of variables, such as `OLD_JAVA_HOME` or `JAVA_HOME` that contain the locations of old and new JDKs in the `.globalEnv.properties` file.

The `getProperty.sh|cmd` and `setProperty.sh|cmd` scripts are located in the following location:

(UNIX) `ORACLE_HOME/oui/bin`

(Windows) `ORACLE_HOME\oui\bin`

Where, `ORACLE_HOME` is the directory that contains the products using the current version of the JDK, such as `jdk1.8.0_121`.

To update the JDK location in the `.globalEnv.properties` file:

1. Use the `getProperty.sh|cmd` script to display the path of the current JDK from the `JAVA_HOME` variable. For example:

(UNIX) `ORACLE_HOME/oui/bin/getProperty.sh JAVA_HOME`

(Windows) `ORACLE_HOME\oui\bin\getProperty.cmd JAVA_HOME`

`echo JAVA_HOME`

Where `JAVA_HOME` is the variable in the `.globalEnv.properties` file that contains the location of the JDK.

2. Back up the path of the current JDK to another variable such as `OLD_JAVA_HOME` in the `.globalEnv.properties` file by entering the following commands:

(UNIX) `ORACLE_HOME/oui/bin/setProperty.sh -name OLD_JAVA_HOME -value specify_the_path_of_current_JDK`

(Windows) `ORACLE_HOME\oui\bin\setProperty.cmd -name OLD_JAVA_HOME -value specify_the_path_of_current_JDK`

This command creates a new variable called `OLD_JAVA_HOME` in the `.globalEnv.properties` file, with a value that you have specified.

3. Set the new location of the JDK in the `JAVA_HOME` variable of the `.globalEnv.properties` file, by entering the following commands:

(UNIX) `ORACLE_HOME/oui/bin/setProperty.sh -name JAVA_HOME -value specify_the_location_of_new_JDK`

(Windows) `ORACLE_HOME\oui\bin\setProperty.cmd -name JAVA_HOME -value specify_the_location_of_new_JDK`

After you run this command, the `JAVA_HOME` variable in the `.globalEnv.properties` file now contains the path to the new JDK, such as `jdk1.8.0_131`.

## Updating the JDK Location in an Existing Domain Home

You must search the references to the current JDK, for example `jdk1.8.0_121` manually, and replace those instances with the location of the new JDK.

You can use the `grep` (UNIX) or `findstr` (Windows) commands to search for the jdk-related references.

You'll likely be required to update the location of JDK in the following three files:

(UNIX) *DOMAIN\_HOME*/bin/setNMJavaHome.sh

(Windows) *DOMAIN\_HOME*\bin\setNMJavaHome.cmd

(UNIX) *DOMAIN\_HOME*/nodemanager/nodemanager.properties

(Windows) *DOMAIN\_HOME*\nodemanager\nodemanager.properties

(UNIX) *DOMAIN\_HOME*/bin/setDomainEnv.sh

(Windows) *DOMAIN\_HOME*\bin\setDomainEnv.cmd