Oracle® Fusion Middleware

Installing and Configuring Oracle Managed File Transfer

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Oracle Fusion Middleware Installing and Configuring Oracle Managed File Transfer, 14*c* (14.1.2.0.0)

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Contents

Preface

This document describes how to install and configure Oracle Managed File Transfer.

Audience

This guide is intended for system administrators or application developers who are installing and configuring Oracle Managed File Transfer. 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

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Diversity and Inclusion

Oracle is fully committed to diversity and inclusion. Oracle respects and values having a diverse workforce that increases thought leadership and innovation. As part of our initiative to build a more inclusive culture that positively impacts our employees, customers, and partners, we are working to remove insensitive terms from our products and documentation. We are also mindful of the necessity to maintain compatibility with our customers' existing technologies and the need to ensure continuity of service as Oracle's offerings and industry standards evolve. Because of these technical constraints, our effort to remove insensitive terms is ongoing and will take time and external cooperation.

Related Documents

Refer to the Oracle Fusion Middleware Library for additional information.

- For Managed File Transfer information, see Oracle Managed File Transfer Documentation.
- 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:

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

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About the Oracle Managed File Transfer Installation

The standard installation for Oracle Managed File Transfer described in this guide creates the standard topology, which represents a sample starting topology for this product.

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 Managed File Transfer. 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.

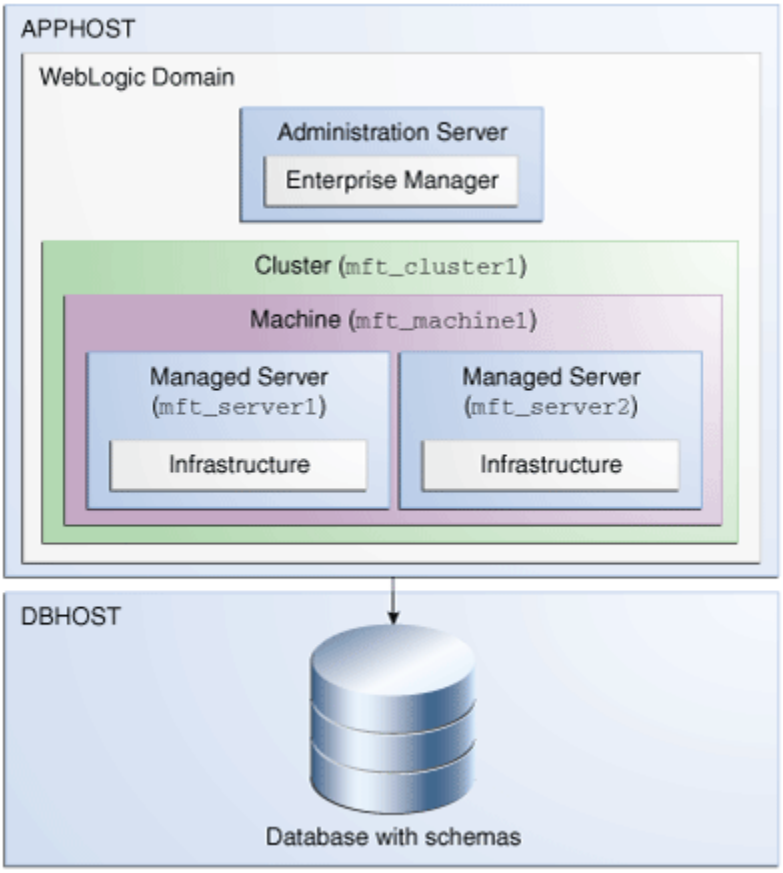
The standard installation topology represents a sample topology for this product. It is not the only topology that this product supports. See About the Standard Installation Topology in *Planning an Installation of Oracle Fusion Middleware*.

About the Oracle Managed File Transfer Standard Installation Topology

This topology represents a standard WebLogic Server domain that contains an Administration Server and a cluster that contains two Managed Servers.

The following figure shows the standard installation topology for Oracle Managed File Transfer.

Figure 1-1 Standard Installation Topology for Oracle Managed File Transfer



About Elements in the Standard Installation Topology Illustration

The standard installation topology typically includes common elements.

Table 1-1 describes all elements of the topology illustration:

Table 1-1 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) and non-Java components. See What Is an Oracle WebLogic Server Domain? in *Understanding Oracle Fusion Middleware*.
Administration Server	Central control entity of a WebLogic domain. It maintains configuration objects for that domain and distributes configuration changes to Managed Servers. See What Is the Administration Server? in *Understanding Oracle Fusion Middleware*.
Enterprise Manager	The Oracle Enterprise Manager Fusion Middleware Control is a primary tool used to manage a domain. See Oracle Enterprise Manager Fusion Middleware Control in *Understanding Oracle Fusion Middleware*.

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

Element	Description and Links to Related Documentation
Cluster	A collection of multiple WebLogic Server instances running simultaneously and working together. See Overview of Managed Servers and Managed Server Clusters in *Understanding Oracle Fusion Middleware*.
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 Overview of Managed Servers and Managed Server Clusters in *Understanding Oracle Fusion Middleware*.
Infrastructure	A collection of services that include the following: • Metadata repository (MDS) contains the metadata for Oracle Fusion Middleware components, such as the Oracle Application Developer Framework. See What Is the Metadata Repository? in *Understanding Oracle Fusion Middleware*. • Oracle Application Developer Framework (Oracle ADF). • Oracle Web Services Manager (OWSM).

About Secondary Topologies

Secondary topologies include configurations with components that require additional installation or configuration steps on top of the standard topology.

The main sections of this guide describe how to install and configure a standard installation topology. The secondary topologies contain several products that are not identified or included in the standard installation topologies.

For guidelines to install and configure secondary topologies, see Secondary Topology for Oracle Managed File Transfer.

Using This Document to Extend an Existing Domain

The procedures in this guide describe how to create a new domain. The assumption is that no other Oracle Fusion Middleware products are installed on your system.

If you have installed and configured other Oracle Fusion Middleware products on your system (for example, Fusion Middleware Infrastructure, with a domain that is up and running) and wish to extend the same domain to include Oracle Managed File Transfer, see Installing Multiple Products in the Same Domain.

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Preparing to Install and Configure Oracle Managed File Transfer

To prepare for your Oracle Managed File Transfer installation, verify that your system meets the basic requirements, then obtain the correct installation software.

Roadmap for Installing and Configuring a Standard Installation Topology

This roadmap provides the steps required to install and configure a standard Oracle Managed File Transfer installation topology.

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 Roadmap for Verifying Your System Environment.
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 Install and Configure in *Release Notes for Oracle Fusion Middleware Infrastructure*.
Obtain the appropriate distributions.	Obtain the Oracle Fusion Middleware Infrastructure and Oracle Managed File Transfer distributions.	See About Product Distributions.
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 What Are the Key Oracle Fusion Middleware Directories? in *Understanding Oracle Fusion Middleware*.
Install prerequisite software.		See Installing the Infrastructure Software in *Installing and Configuring the Oracle Fusion Middleware Infrastructure*.
Install the software.	Installing the software transfers the software to your system and creates the Oracle home directory.	See Installing the Oracle Managed File Transfer Software.
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 Managed File Transfer schemas.	See About Database Requirements for an Oracle Fusion Middleware Installation.

Table 2-1 (Cont.) Standard Installation Roadmap

Task	Description	Documentation
Create the schemas.	Run the Repository Creation Utility to create the schemas required for configuration.	See Creating the Database Schemas.
Create a WebLogic domain.	Use the Configuration Wizard/ Assistant to create and configure the WebLogic domain.	See Configuring the Domain.
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 Next Steps After Configuring the Domain.

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 Managed File Transfer.

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 Verifying Certification, System, and Interoperability Requirements.
Identify a proper installation user.	Verify that the installation user has the required permissions to install and configure the software.	See Selecting an Installation User.
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. Select a new, empty Oracle Home directory.	See About the Directories for Installation and Configuration.
Install a certified JDK.	The installation program for the distribution requires a certified JDK present on your system.	See About JDK Requirements for an Oracle Fusion Middleware Installation.
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 Managed File Transfer.	See About Database Requirements for an Oracle Fusion Middleware Installation.

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:**

Ensure that you install your product on a supported hardware and software configuration.

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. 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:**

   To learn how to install and run multiple Fusion Middleware products from the same release or mixed releases with each other, see Oracle Fusion Middleware Interoperability and Compatibility in *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.

- 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.

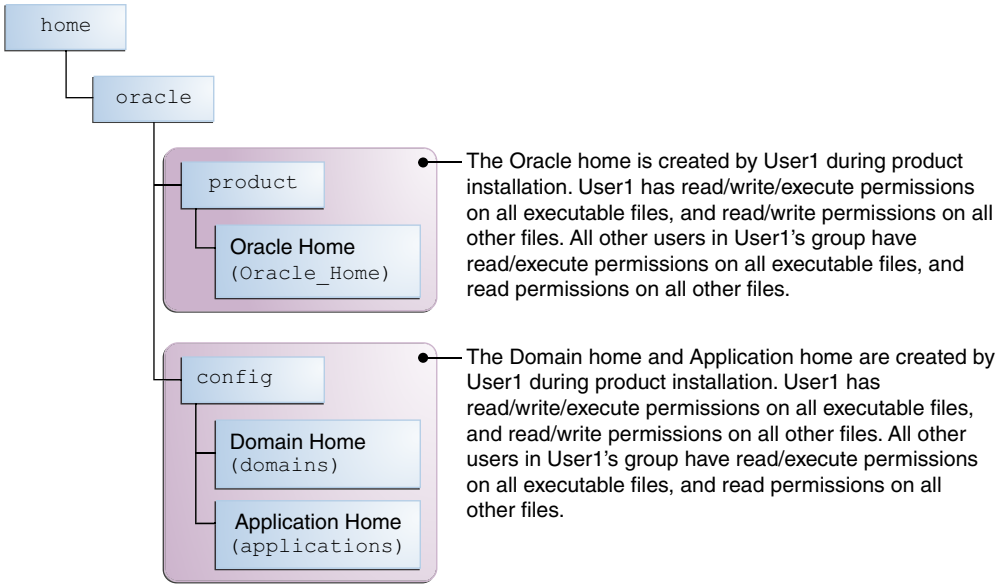
Consider the following examples:

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

  Figure 2-1 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 you manage a product installation* - a Single User Installs the Software and Configures the Domain

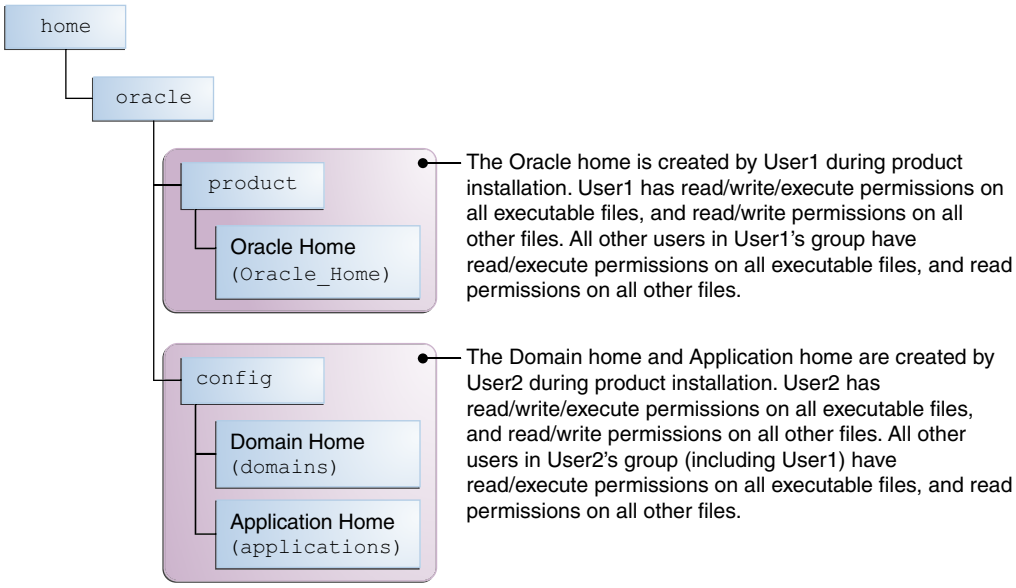


If the user who creates the domain is different than the user who installed the software, then both users must have the same privileges, as shown in the next example.

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

  Figure 2-2 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), use the same user ID that you used to install the product.

  When you manage a domain (for example, starting managed Servers), use the same user ID that you used to create the domain.
- 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 Linux or UNIX Operating Systems

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

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

Refer to your Linux or 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.

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

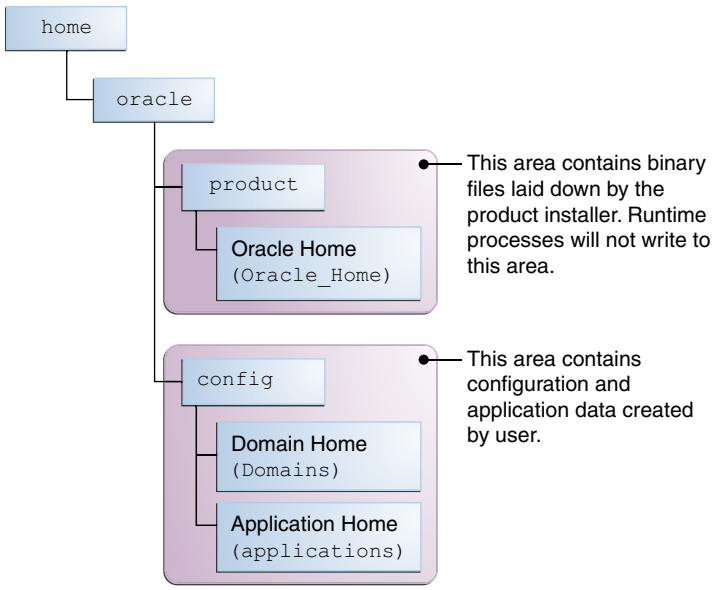
During the installation and domain configuration process, you must plan on providing the locations for these directories: Oracle home, Domain home, and the Application home.

About the Recommended Directory Structure

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

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, you are required to create an Oracle home for binary files. You must also make sure that your configuration data exists in a location where the binary files 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 the Oracle 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 Interoperability and Compatibility in *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*.

> **Note:**
>
> Oracle strongly recommends that you do not use the 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.

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.

Installing Multiple Products in the Same Domain

There are two methods to install and configure multiple products in one domain. This is also known as *extending* a domain.

- **Method 1.**

  Install and configure Product A, including creating the schemas and starting all servers in the domain to verify a successful domain configuration.

  This is the method used in all installation guides in the Fusion Middleware library. You can repeat this process for as many products as necessary. It allows you to validate one product at a time and add more products incrementally.

  To install Product B in the same domain as Product A:

  1. Stop all servers to prevent any updates to the domain while you add the new product.

     See Starting and Stopping Oracle Fusion Middleware in *Administering Oracle Fusion Middleware*.

  2. Follow the instructions in the installation guide for Product B, including creating the necessary schemas.

  3. Run the Configuration Wizard to configure the domain.

     During configuration, the Configuration Wizard automatically detects the components that have been installed and offers you the option to extend the existing Product A domain to include Product B.

- **Method 2.**

  Install all of the required products, then create the schemas for all of the products. After you create the schemas, configure the domain by using the necessary product templates, then start all the servers.

  This method of creating a multi-product domain may be slightly faster than Method 1; however, the installation guides in the Fusion Middleware library do not provide specific instructions for this method of domain creation.

See Also:

- To update WebLogic domains, see Updating WebLogic Domains in *Creating WebLogic Domains Using the Configuration Wizard*.
- For important information regarding the ability of Oracle Fusion Middleware products to function with previous versions of other Oracle Fusion Middleware, Oracle, or third-party products, see Oracle Fusion Middleware Interoperability and Compatibility in *Understanding Interoperability and Compatibility*.

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 *High Availability Guide* for more information.

For configuration requirements specific to Managed File Transfer, see High Availability Properties in *Using Oracle Managed File Transfer*.

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 Linux 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 Oracle Fusion Middleware 14c (14.1.2.0.0).

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.

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.

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 *Creating Schemas with the Repository Creation Utility*.

About Product Distributions

You create the initial Oracle Managed File Transfer domain using the Oracle Fusion Middleware Infrastructure distribution, which contains both Oracle WebLogic Server software and Oracle Java Required Files (JRF) software.

Oracle JRF software consists of:

- Oracle Web Services Manager
- Oracle Application Development Framework (Oracle ADF)

- Oracle Enterprise Manager Fusion Middleware Control
- Repository Creation Utility (RCU)
- Other libraries and technologies required to support Oracle Fusion Middleware products

Prerequisites:

- Install Oracle Fusion Middleware Infrastructure. For more information about installing Oracle Fusion Middleware Infrastructure, see Installing the Infrastructure Software in the *Installing and Configuring the Oracle Fusion Middleware Infrastructure*.

> **Note:**
>
> If you want to access public internet cloud data sources, you must have a direct network connection as connections via proxy servers are not supported.

Obtaining the Product Distribution

You can obtain the Oracle Fusion Middleware Infrastructure and Oracle Managed File Transfer distribution on *Technical Resources from Oracle*.

To prepare to install Oracle Fusion Middleware Infrastructure and Oracle Managed File Transfer:

1. Enter `java -version` on the command line to verify that a certified JDK is installed on your system. For 14c (14.1.2.0.0), the certified JDK is 17.0.12 and later.

   See About JDK Requirements for an Oracle Fusion Middleware Installation.

2. Locate and download the Oracle Fusion Middleware Infrastructure and Oracle Managed File Transfer software.

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

   To obtain the distribution for product evaluation, visit the Oracle Software Delivery Cloud page.

After preparing to install and configure the software, see Installing the Oracle Managed File Transfer Software.

Verifying Digital Signature and Integrity of Installation Archive Files

Oracle digitally signs the installation archive files with Oracle certificates to ensure the integrity of the packages before you deploy them in your environments.

Use the Java utility `jarsigner` to verify the integrity of your installation archive files. You can verify the integrity of the installation archive files before you extract the installation files.

Quick Verification

To quickly verify the installation archive files, use the `jarsigner` command with the `-verify` option:

1. Go to the directory where you have downloaded the installation archive files.

2. Run this command to check your installation archive file:

```
jarsigner -verify installation_archive_file
```

For example, to check the Oracle Fusion Middleware Infrastructure archive:

```
jarsigner -verify fmw_14.1.2.0.0_infrastructure.jar


jar verified.
```

Detailed Certificate Information

If you want detailed certificate information, then use the `-verbose:summary` and `-certs` along with the `-verify` option.

1. Go to the directory where you have downloaded the installation archive files.
2. Run this command to check your installation archive file:

```
jarsigner -verify -verbose:summary -certs installation_archive_file
```

For example, to check the Oracle Fusion Middleware Infrastructure image:

```
jarsigner -verify -verbose:summary -certs fmw_14.1.2.0.0_infrastructure.jar
```

The output is similar to the following:

```
2237119 Fri Dec 6 07:02:30 UTC 2023 META-INF/MANIFEST.MF

      >>> Signer
      X.509, CN="Oracle America, Inc.", O="Oracle America, Inc.",
L=Redwood City, ST=California, C=US
      [
      Signature algorithm: SHA256withRSA, 3072-bit key
      [certificate is valid from 12/19/24 12:00 AM to 12/19/25 11:59 PM]
      X.509, CN=DigiCert Trusted G4 Code Signing RSA4096 SHA384 2021 CA1,
O="DigiCert, Inc.", C=US
      [
      Signature algorithm: SHA384withRSA, 4096-bit key
      [certificate is valid from 4/29/24 12:00 AM to 4/28/36 11:59 PM]
      X.509, CN=DigiCert Trusted Root G4, O=DigiCert Inc, C=US
      [
      Signature algorithm: SHA384withRSA, 4096-bit key
      [trusted certificate]
      >>> TSA
      X.509, CN=DigiCert Timestamp 2024 - 2, O=DigiCert, C=US
      [
      Signature algorithm: SHA256withRSA, 4096-bit key
      [certificate is valid from 9/21/24 12:00 AM to 11/21/33 11:59 PM]
      X.509, CN=DigiCert Trusted G4 RSA4096 SHA256 TimeStamping CA,
O="DigiCert, Inc.", C=US
      [
      Signature algorithm: SHA256withRSA, 4096-bit key
      [certificate is valid from 3/23/24 12:00 AM to 3/22/37 11:59 PM]
```

```
      X.509, CN=DigiCert Trusted Root G4, O=DigiCert Inc, C=US
      [
      Signature algorithm: SHA384withRSA, 4096-bit key
      [certificate is valid from 8/1/24 12:00 AM to 11/9/31 11:59 PM]

       2237281 Fri Feb 17 07:02:32 UTC 2024 META-INF/ORACLE_C.SF (and 1
more)

      (Signature related entries)

            0 Fri Feb 17 05:41:24 UTC 2023 OPatch/ (and 1897 more)

      (Directory entries)

       2977 Tue Dec 20 08:02:16 UTC 2024 OPatch/README.txt (and 20199 more)

      [entry was signed on 2/17/24 7:02 AM]
      >>> Signer
      X.509, CN="Oracle America, Inc.", O="Oracle America, Inc.",
L=Redwood City, ST=California, C=US
      [
      Signature algorithm: SHA256withRSA, 3072-bit key
      [certificate is valid from 8/19/24 12:00 AM to 8/19/25 11:59 PM]
      X.509, CN=DigiCert Trusted G4 Code Signing RSA4096 SHA384 2021 CA1,
O="DigiCert, Inc.", C=US
      [
      Signature algorithm: SHA384withRSA, 4096-bit key
      [certificate is valid from 4/29/24 12:00 AM to 4/28/36 11:59 PM]
      X.509, CN=DigiCert Trusted Root G4, O=DigiCert Inc, C=US
      [
      Signature algorithm: SHA384withRSA, 4096-bit key
      [trusted certificate]
      >>> TSA
      X.509, CN=DigiCert Timestamp 2024 - 2, O=DigiCert, C=US
      [
      Signature algorithm: SHA256withRSA, 4096-bit key
      [certificate is valid from 9/21/24 12:00 AM to 11/21/33 11:59 PM]
      X.509, CN=DigiCert Trusted G4 RSA4096 SHA256 TimeStamping CA,
O="DigiCert, Inc.", C=US
      [
      Signature algorithm: SHA256withRSA, 4096-bit key
      [certificate is valid from 3/23/24 12:00 AM to 3/22/37 11:59 PM]
      X.509, CN=DigiCert Trusted Root G4, O=DigiCert Inc, C=US
      [
      Signature algorithm: SHA384withRSA, 4096-bit key
      [certificate is valid from 8/1/24 12:00 AM to 11/9/31 11:59 PM]


  s = signature was verified
  m = entry is listed in manifest
  k = at least one certificate was found in keystore
  i = at least one certificate was found in identity scope

- Signed by "CN="Oracle America, Inc.", O="Oracle America, Inc.",
L=Redwood City, ST=California, C=US"
    Digest algorithm: SHA-256
```

```
    Signature algorithm: SHA256withRSA, 3072-bit key
  Timestamped by "CN=DigiCert Timestamp 2024 - 2, O=DigiCert, C=US" on Fri
Feb 17 07:02:33 UTC 2024
    Timestamp digest algorithm: SHA-256
    Timestamp signature algorithm: SHA256withRSA, 4096-bit key

jar verified.

The signer certificate will expire on 2025-12-19.
The timestamp will expire on 2031-11-09.
```

3

Installing the Oracle Managed File Transfer Software

Follow the steps in this section to install the Oracle Managed File Transfer software. Before beginning the installation, ensure that you have verified the prerequisites and completed all steps covered in Preparing to Install and Configure Oracle Managed File Transfer.

Verifying the Installation Checklist

The installation process requires specific information.

Table 3-1 lists important items that you must know before, or decide during, Oracle Managed File Transfer installation.

Table 3-1 Installation Checklist

Information	Example Value	Description
`JAVA_HOME`	`/home/Oracle/Java/jdk17.0.12`	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	`password`	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 Managed File Transfer, as needed.
WebLogic Server hostname	`examplehost.exampledomain`	Host name for Oracle WebLogic Server and Oracle Managed File Transfer consoles.

Table 3-1 (Cont.) Installation Checklist

Information	Example Value	Description
Console port	**Note:** The default port values will vary depending on how you configured your domain. For a list of default values, see Port Numbers by Product and Component.	Port for Oracle Managed File Transfer consoles.
DOMAIN_HOME	`/home/Oracle/config/domains/mft_domain`	Location in which your domain data is stored.
APPLICATION_HOME	`/home/Oracle/config/applications/mft_domain`	Location in which your application data is stored.

Table 3-1 (Cont.) Installation 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	`password`	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	`MFT`	Prefix for names of database schemas used by Oracle Managed File Transfer.
RCU schema password	`password`	Password for the database schemas used by Oracle Managed File Transfer.
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 14c (14.1.2.0.0). For instructions, see Installing the Infrastructure Software in *Installing and Configuring the Oracle Fusion Middleware Infrastructure*.
4. Start the installation program by running the `java` executable from the JDK directory.

> **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 *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	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 *Installing Software with the Oracle Universal Installer*.
Welcome	Review the information to make sure that you have met all the prerequisites, then click **Next**.
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. This Oracle home must include Oracle Fusion Middleware Infrastructure , along with any other 14c (14.1.2.0.0) products that have been installed. You can click **View** to verify and ensure that you are installing in the correct Oracle home.
Installation Type	This screen is not applicable for Managed File Transfer installation
Prerequisite Checks	This screen verifies that your system meets the minimum necessary requirements. To view the list of tasks that gets verified, select **View Successful Tasks**. To view log details, select **View Log**. If any prerequisite check fails, then an error message appears at the bottom of the screen. Fix the error and click **Rerun** to try again. To ignore the error or the warning message and continue with the installation, click **Skip** (not recommended).
Installation Progress	This screen shows the installation progress. When the progress bar reaches 100% complete, click **Finish** to dismiss the installer, or click **Next** to see a summary.
Installation Complete	This screen displays the Installation Location and the Feature Sets that are installed. Review this information and click **Finish** 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.

By default, the installer writes logs files to the *Oracle_Inventory_Location*/logs directory on Linux or UNIX operating systems.

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

Schema Consolidation in MFT

In consolidated schema domain, materialized view is not enabled by default.

When you install MFT using schema consolidation, the dashboard metrics is not displayed in the graph. To view the metrics in the graph, enable the materialized view.

Execute the following script to enable materialized view.

```
EXECUTE IMMEDIATE 'ALTER MATERIALIZED VIEW MV_MFT_SOURCE_MESSAGE REFRESH
NEXT SYSDATE+1/144;
    EXECUTE IMMEDIATE 'ALTER MATERIALIZED VIEW MV_MFT_TRANSFER_COUNT_INFO
REFRESH NEXT SYSDATE+1/144;
    EXECUTE IMMEDIATE 'ALTER MATERIALIZED VIEW MV_MFT_SOURCE_INFO REFRESH
NEXT SYSDATE+1/144;
    EXECUTE IMMEDIATE 'ALTER MATERIALIZED VIEW MV_MFT_TARGET_INFO REFRESH
NEXT SYSDATE+1/144;
    EXECUTE IMMEDIATE 'ALTER MATERIALIZED VIEW MV_MFT_PAYLOAD_INFO REFRESH
NEXT SYSDATE+1/144;
    EXECUTE IMMEDIATE 'ALTER MATERIALIZED VIEW MV_MFT_TRANSFER REFRESH NEXT
SYSDATE+1/144;
```

4

Configuring Oracle Managed File Transfer Domain

After you have installed Oracle Managed File Transfer, 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 Oracle Managed File Transfer
- Installing the Oracle Managed File Transfer 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.

> **Note:**
>
> As of Oracle Fusion Middleware 14c (14.1.2.0.0), new schemas are created with editions-based redefinition (EBR) views enabled by default. When EBR is enabled, the schema objects can be upgraded online to a future Fusion Middleware release without any downtime. For more information about using editions-based redefinition, see Using Edition-based Redefinition.

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 14c (14.1.2.0.0), the certified JDK is 17.0.12 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.

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.

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 *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.

To provide the database connection details:

1. On the Database Connection Details screen, provide the database connection details.

   For example:

   Database Type: Oracle EBR Database
   Connection String Format: Connection Parameters or Connection String
   Connection String: examplehost.exampledomain.com:1521:Orcl.exampledomain.com
   Host Name: examplehost.exampledomain.com
   Port: 1521
   Service Name: Orcl.exampledomain.com
   Username: sys
   Password: ******

Role: `SYSDBA`

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

For information about specifying connection credentials when connecting to an Oracle database, see Connection Credentials for Oracle Databases and Oracle Databases with Edition-Based Redefinition.

Specifying a Custom Prefix and Selecting Schemas

Specify a custom prefix and database schema to automatically select dependent schemas.

Select **Create new prefix**, specify a custom prefix, then select **Managed File Transfer** schema This will automatically select the other schemas as dependencies.

> **Tip:**
>
> Make a note of the custom prefix you choose to enter here. You will need this later on during the domain creation process.

A schema called Common Infrastructure Services is also automatically created. It is grayed out (you can't select it or deselect it). This schema enables you to retrieve information from RCU during domain configuration. See About the Service Table Schema in *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 as schema sharing across domains is not supported.

For more information about custom prefixes, see About Custom Prefixes in *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 *Creating Schemas with the Repository Creation Utility*.

Click **Next** to proceed, then click **OK** to confirm 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.

To complete schema creation:

1. On the Map Tablespaces screen, select **Encrypt Tablespace** if you want to encrypt all new tablespaces that the RCU creates.
2. In 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 *Creating WebLogic Domains Using the Configuration Wizard*.

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 14c (14.1.2.0.0) 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

You must 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 *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.

To specify the Domain type and Domain home directory:

1. On the Configuration Type screen, select **Create a new domain**.
2. In the **Domain Locati**on field, specify your Domain home directory.

> **Note:**
>
> If MFT shares the node with SOA, the Domain home directory must be different. You can use `mftedg_domain` here.

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

Selecting the Configuration Templates for Oracle Managed File Transfer

Use the Templates screen to select the templates you require.

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

- Oracle Managed File Transfer - 14.1.2.0.0 [mft]

  Selecting this template automatically selects the dependencies.

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

Configuring High Availability Options

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.
- 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 *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.

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 *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 *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.

Specifying the Domain Mode and JDK

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

On the Domain Mode and JDK screen:

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

> **Note:**
>
> As of WebLogic Server 14.1.2.0.0, when you select **Production** mode, WebLogic Server automatically sets some of the security configurations of **Secured Production** to more secure values. However, there are certain security configurations (such as SSL/TLS) that require manual configuration. See Using Secured Production Mode in *Administering Security for Oracle WebLogic Server*.
>
> If you want to disable the more secure default settings, then you may select **Disable Secure Mode**. This will enable the non-SSL listen ports.
>
> If you want to retain the more secure default settings of **Secured Production** mode in general, but want to change which ports (listen ports, SSL listen ports, or administration ports) will be enabled by default in your domain, then you may:
>
> – Leave **Disable Secure Mode** unselected, and
>
> – Change the default port selections under **Enable or Disable Default Ports for Your Domain**
>
> For more information, see Understand How Domain Mode Affects the Default Security Configuration in *Securing a Production Environment for Oracle WebLogic Server*.

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

For more information about this screen, see Domain Mode and JDK in *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
Host Name	Enter the name of the server hosting the database. Example: `examplehost.exampledomain.com`
DBMS/Service	Enter the database DBMS name, or service name if you selected a service type driver. Example: `orcl.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 Specifying Schema Passwords). The default username is *prefix*`_STB`, where *prefix* is the custom prefix that you defined in the RCU.

For an Autonomous Transaction Processing database (both Autonomous Transaction Processing-Dedicated (ATP-D) and Autonomous Transaction Processing Shared (ATP-S)), specify the connection credentials using only the **Connection URL String** option, and enter the connect string in the following format described in Connection Credentials for an Autonomous Transaction Processing Database.

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 *Creating Schemas with the Repository Creation Utility*.

See Database Configuration Type in *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.

For an Autonomous Transaction Processing database (both Autonomous Transaction Processing-Dedicated (ATP-D) and Autonomous Transaction Processing Shared (ATP-S)), specify the connection credentials using only the **Connection URL String** option, and enter the connect string in the following format:

```
@TNS_alias?TNS_ADMIN=<path of the wallet files, ojdbc.properties, and
tnsnames.ora>
```

In the connect string, you must pass `TNS_alias` as the database service name found in `tnsnames.ora`, and `TNS_ADMIN` property to the location of the wallet files, `ojdbc.properties`, and `tnsnames.ora`.

Example connect string for Autonomous Transaction Processing-Dedicated (ATP-D) database:

```
@dbname_tp?TNS_ADMIN=/users/test/wallet_dbname/
```

Example connect string for Autonomous Transaction Processing Shared (ATP-S) database:

```
@dbname_tp?TNS_ADMIN=/users/test/wallet_dbname/
```

For high availability environments, see the following sections in *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 *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.

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

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 *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 Managed File Transfer 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 *Creating WebLogic Domains Using the Configuration Wizard*.

Configuring the Administration Server Listen Address

Use the Administration Server screen to select the Listen Address and configure the Administration Server ports.

> **Note:**
>
> The default port values will vary depening on how you conifigured your domain. The Enable SSL Listen Port is enabled by default, but the default values may change. For a list of default values, see Port Numbers by Product and Component.

1. Provide a name for the Administration Server. The name field must not be null or empty and cannot contain any special characters.
2. 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`.
3. Verify the port settings. When the domain type is set to Production, then the **Enable SSL Listen Port** option is enabled by default. Do *not* specify any server groups for the Administration Server.

   > **Note:**
   >
   > You can change the port values as needed, but **they must be unique**. If the same port numbers are used for different ports, you will not be able to navigate to the next step in the Configuration Wizard.

For more information, see Specifying the Listen Address in *Creating WebLogic Domains Using the Configuration Wizard*.

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 *Creating WebLogic Domains Using the Configuration Wizard*.

For more information about Node Manager types, see About Node Manager in *Administering Node Manager for Oracle WebLogic Server*.

Configuring Managed Servers for Oracle Managed File Transfer

Use the Managed Servers screen to configure Managed Servers.

On the Managed Servers screen, a new Managed Server named `mft_server1` is automatically created by default.

To configure Managed Servers for Oracle Managed File Transfer:

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. Do not use `All Local Addresses`.
2. Verify your port selections. If you selected Production mode with Secure Mode enabled, **Enable SSL Port** is selected by default. The default port and this port will be auto-incremented so that the ports do not conflict with any additional managed servers you add. This is true for Listen Ports and Administration Ports. You can edit any and all port values based on your configuration and machines being used.

   > **Note:**
   >
   > You can change the port values as needed using an integer in the range of 1 and 65535, but they must be unique. If the same port numbers are used for different ports, you will receive a port conflict error and you will not be able to start the server.

   Oracle recommends that you enable SSL ports for added security. If, however, you want to change the port setting to use the less secure Listen Port, then disable the Enable SSL Port and check the **Enable Listen Port** option. The default Listen Port will increment with each additional managed server.
3. In the Server Groups drop-down list, make sure that **MFT-MGD-SVRS** is selected. This server group ensures that Oracle Managed File Transfer and Oracle Web Services Manager (OWSM) services are targeted to the Managed Servers you are creating.

   There is another server group called **MFT-MGD-SVRS-ONLY** that targets only Oracle Managed File Transfer but not Oracle Web Services Manager (OWSM) to the server. This is typically used if you want to have Oracle Web Services Manager (OWSM) in a different server rather than with the MFT server.

   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 *Domain Template Reference*.

4. 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 **Add** and select **MFT-MGD-SVRS** to create a second Managed Server named `mft_server2`.

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

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

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

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

Configuring a Cluster for Oracle Managed File Transfer

Use the Clusters screen to create a new cluster.

On the Clusters screen:

1. Click **Add**.
2. Specify `SOA_cluster1` in the Cluster Name field.
3. Leave the Cluster Address field blank.

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 *Administering Clusters for Oracle WebLogic Server*.

For more information about this screen, see Clusters in *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 the domain.

To add Server Templates:

> **Note:**
>
> The default port values will vary depening on how you conifigured your domain. The Enable SSL Listen Port is enabled by default, but the default values may change. For a list of default values, see Port Numbers by Product and Component.

1. Click **Add** to create `new_ServerTemplate_1`. The server template name will increment automatically when an additional server template is added (`new_ServerTemplate_2`).

2. For Secure Production Mode, verify that the **Enable SSL Port** option is selected. The default SSL Listen Port does not increment automatically when a new server template is added. You can change the default to Enable Listen Port, but Oracle recommends that retain the default to enable SSL. Enabling Listen Port disables SSL Listen Port.

> **Note:**
>
> You can change the port values as needed using an integer in the range of 1 and 65535, but they must be unique. If the same port numbers are used for different ports, you will receive a port conflict error and you will not be able to start the server.

3. The Administration Port does not increment when an additional server template is added.

> **Note:**
>
> If the Listen ports are disabled, then instead of seeing a number you will see `Disabled`.

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

Assigning Oracle Managed File Transfer Managed Servers to the Cluster

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.

> **Note:**
>
> All Managed Servers of a component type in the domain must belong to that cluster. For example, Oracle Managed File Transfer domains support only a single Oracle Managed File Transfer cluster inside each domain.

For more on configured cluster and dynamic cluster terms, see About Dynamic Clusters in *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, `mft_cluster1`.
2. In the Servers pane, assign `mft_server1` to `mft_cluster1` by doing one of the following:
   - Click once on `mft_server1` to select it, then click the right arrow to move it beneath the selected cluster (`mft_cluster1`) in the Clusters pane.
   - Double-click on `mft_server1` to move it beneath the selected cluster (`mft_cluster1`) in the Clusters pane.
3. Repeat to assign `mft_server2` to `mft_cluster1`.

The following image shows a generic example of the Clusters pane after Managed Servers are assigned to clusters.
For more information about this screen, see Assign Servers to Clusters in *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`.

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

Creating a New Oracle Managed File Transfer 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 *High Availability Guide*.

To create a new Oracle Managed File Transfer 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 `mft_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 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 *Creating WebLogic Domains Using the Configuration Wizard*.

Assigning Servers to Oracle Managed File Transfer 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, `mft_machine1`.
2. In the Servers pane, assign `AdminServer` to `mft_machine1` 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 (`mft_machine1`) in the Machines pane.
   - Double-click on `AdminServer` to move it beneath the selected machine (`mft_machine1`) 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 *Creating WebLogic Domains Using the Configuration Wizard*.

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 *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.

Starting the Servers

After configuration is complete, start Node Manager, then the WebLogic Administration Server and Managed Servers.

> **Note:**
>
> Depending on your existing security settings, you may need to perform additional configuration before you can manage a domain with secured production mode enabled. For more information, see Connecting to the Administration Server using WebLogic Remote Console
>
> .

Windows Users Must Modify the setDomainEnv.cmd Before Starting Servers

Before starting the servers, Windows operating system users will need to modify the **setDomainEnv.cmd** file.

1. Add the following parameters:

```
-
Dweblogic.security.SSL.trustedCAKeyStore=C:\myfiles\install\14120\wlserver\
server\lib\trust.p12
        -
Djavax.net.ssl.trustStore=C:\myfiles\install\14120\wlserver\server\lib\trus
t.p12
        -Djavax.net.ssl.trustStorePassword=trustKeyStorePassword
```

2. Remove `Demotrust.jks` entry from the EXTRA_JAVA_PROPERTIES section of **setDomainEnv.cmd**.
3. Save the file.

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

For more information about Domain Mode, see Understand How Domain Mode Affects the Default Security Configuration.

Starting Node Manager

To start the per-domain Node Manager:

1.
   - (UNIX) Go to the `DOMAIN_HOME/bin` directory.
   - (Windows) Go to the `DOMAIN_HOME\bin` directory.
2. Enter the following command:
   - (UNIX) Using `nohup` and `nm.out` as an example output file:

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

     where *`LOG_DIR`* is the location of directory in which you want to store the log files.
   - (Windows) `startNodeManager.cmd`

> **Note:**
>
> On Windows operating systems, Oracle recommends that you configure Node Manager to run as a startup service. This allows Node Manager to start up automatically each time the system is restarted.
>
> See Running Node Manager as a Startup Service in *Administering Node Manager for Oracle WebLogic Server*.

Starting the Administration Server

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

To start the Administration Server:

> **Note:**
>
> When using secured production mode, you must provide additional parameters to start the Administration Server. See Connecting to the Administration Server using WLST in *Administering Security for Oracle WebLogic Server*.

1. **(Optional)** When using **Production Mode**, you can create a *boot.properties* file before starting the Administration Server and provide necessary permissions. This file can be

created to bypass the need to provide a username and password when starting the Administration Server. For more information, see Creating a Boot Identity File for an Administration Server in *Administering Server Startup and Shutdown for Oracle WebLogic Server*.

2. Go to the *DOMAIN_HOME*/bin directory.
3. Enter the following command:
   - (UNIX)

     ```
     ./startWebLogic.sh
     ```

   - (Windows)

     ```
     startWebLogic.cmd
     ```

   If you selected **Production Mode** on the Domain Mode and JDK screen when you created the domain, and you did not create the optional *boot.propeties* file, you see a prompt for the Administrator user login credentials as provided on the Administrator Account screen.
4. Open a browser and verify that the Administration Server is up and running. The default port values will vary depening on how you conifigured your domain. The Enable SSL Listen Port is enabled by default, but the default values may change. For a list of default values, see Port Numbers by Product and Component.

   ```
   https://<Host_Name>:<port>
   ```

5. Verify that all servers in the domain have unique port values. From the WebLogic Remote Console, you can review the **Local Administration Port Override** fields for each managed server and verify that each has a unique value. If one or more ports is using the same value, then you must change them before starting the managed servers. For more information about changing port values, see Connect to an Administration Server in the Oracle WebLogic Remote Console.

> **Note:**
>
> The WebLogic Server Administration Console has been removed. For comparable functionality, you should use the WebLogic Remote Console. For more information, see Oracle WebLogic Remote Console.

Starting the Managed Servers

Starting SOA Managed Servers Using Secure Product Mode

To start the SOA Managed Servers in secure production mode, you will need to add the following parameters:

```
-Djavax.net.ssl.trustStore=/u01/oracle/config/keystores/soahost1/trust.p12
-Djavax.net.ssl.trustStorePassword=<your_password>
```

SOA Managed Servers require the Keystores: *Custom Identity Key Store Pass Phrase* and the *Custom Trust Key Store Pass Phrase*, and the SSL *Server Private Key Pass Phrase* to be configured before starting the server. For detailed information, see Configuring Keystores.

You can use the WebLogic Remote Console to add the required pass phrases to the SOA Managed Server:

1. In Edit Tree, navigate to the newly created SOA Managed server. For example, WLS_SOA1.
2. In the General tab, update and specify a unique number in the **Local Administration Port Override** field. Ensure that all the managed servers in the domain on the same machine have unique administration port values (>=1024).
3. Click **Save**.
   A message confirms that the changes are added to the shopping cart.
4. Navigate to the **Security** tab, and then select **Keystores**.
5. In the Keystores tab, specify the **Custom Identity Key Store Pass Phrase** and **Custom Trust Key Store Pass Phrase**.
6. Click **Save**.
   A message confirms that the changes are added to the shopping cart.
7. Navigate to the **SSL** tab and specify the **Server Private Key Pass Phrase**.
8. Click **Save**.
   A message confirms that the changes are added to the shopping cart.
9. Navigate to the Shopping Cart in the top-right corner of the WebLogic Remote Console window and click **Commit Changes**.
10. Start the managed server. Once the pass phrases have been configured, add the following parameters to the command line:
    Sample Command:

```
cd /domains/base_domain_1/bin
./startManagedWebLogic.sh soa_server1 https://host:<port> -
Djavax.net.ssl.trustStore=/u01/oracle/config/keystores/soahost1/trust.p12 -
Djavax.net.ssl.trustStorePassword=<your_password>
```

To start a WebLogic Managed Server that is not set to secure product mode, you can use the `startManagedWebLogic` script:

- (UNIX) *`NEW_DOMAIN_HOME`*`/bin/startManagedWebLogic.sh` *`managed_server_name`*
- (Windows) *`NEW_DOMAIN_HOME`*`\bin\startManagedWebLogic.cmd` *`managed_server_name`*

> **Note:**
>
> When using secured production mode, you must provide additional parameters to start the Managed Servers. See Starting Managed Servers using a Start Script in *Administering Security for Oracle WebLogic Server*.

Verifying the Configuration

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

To verify that the domain is configured properly, see Performing Additional Domain Configuration Tasks.

Creating a Silent Domain in MFT

Perform the following steps to create a silent domain using a sample script.

1. Copy the following sample script (silent_domain_creation_mft.py) into the Linux system where you want to create the domain.

```
import os
import sys

import com.oracle.cie.domain.script.jython.WLSTException as WLSTException

class MFT12213Provisioner:

# In this sample script, only one machine is used for all servers.
# You can add more than one machine. For example, mft_server1 - machine1,
mft_server2 - machine2

    MACHINES = {
        'machine1' : {
            'NMType': 'SSL',
            'ListenAddress': '127.0.0.1',
            'ListenPort': 5658
        }
    }

    CLUSTERS = {
        'mft_cluster' : {}
    }

    SERVERS = {
        'AdminServer' : {
            'ListenAddress': '127.0.0.1',
            'ListenPort': 7001,
            'Machine': 'machine1'
        },
        'mft_server1' : {
            'ListenAddress': '127.0.0.1',
            'ListenPort': 7003,
            'Machine': 'machine1',
            'Cluster': 'mft_cluster'
        },
        'mft_server2' : {
            'ListenAddress': '127.0.0.1',
            'ListenPort': 7004,
            'Machine': 'machine1',
            'Cluster': 'mft_cluster'
        }
    }

    JRF_12213_TEMPLATES = {
        'baseTemplate' : '@@ORACLE_HOME@@/wlserver/common/templates/wls/
wls.jar',
        'extensionTemplates' : [
            '@@ORACLE_HOME@@/oracle_common/common/templates/wls/
```

```
oracle.jrf_template.jar',
            '@@ORACLE_HOME@@/oracle_common/common/templates/wls/
oracle.jrf.ws.async_template.jar',
            '@@ORACLE_HOME@@/oracle_common/common/templates/wls/
oracle.wsmpm_template.jar',
            '@@ORACLE_HOME@@/oracle_common/common/templates/wls/
oracle.ums_template.jar',
            '@@ORACLE_HOME@@/em/common/templates/wls/
oracle.em_wls_template.jar'
        ],
        'serverGroupsToTarget' : [ 'JRF-MAN-SVR', 'WSMPM-MAN-SVR' ]
    }

    MFT_12213_TEMPLATES = {
        'extensionTemplates' : [
            '@@ORACLE_HOME@@/mft/common/templates/wls/
oracle.mft_template.jar'
        ],
        'serverGroupsToTarget' : [ 'MFT-MGD-SVRS-ONLY' ]
    }

    def __init__(self, oracleHome, javaHome, domainParentDir):
        self.oracleHome = self.validateDirectory(oracleHome)
        self.javaHome = self.validateDirectory(javaHome)
        self.domainParentDir = self.validateDirectory(domainParentDir,
create=True)
        return

    def createMftDomain(self, name, user, password, db, dbPrefix,
dbPassword):
        domainHome = self.createBaseDomain(name, user, password)
        self.extendDomain(domainHome, db, dbPrefix, dbPassword)


    def createBaseDomain(self, name, user, password):
        baseTemplate =
self.replaceTokens(self.JRF_12213_TEMPLATES['baseTemplate'])

        readTemplate(baseTemplate)
        setOption('DomainName', name)
        setOption('JavaHome', self.javaHome)
        setOption('ServerStartMode', 'prod')
        set('Name', domainName)
        cd('/Security/' + domainName + '/User/username')
        set('Name', user)
        set('Password', password)

        print 'Creating cluster...'
        for cluster in self.CLUSTERS:
            cd('/')
            create(cluster, 'Cluster')
            cd('Cluster/' + cluster)
            for param in  self.CLUSTERS[cluster]:
                set(param, self.CLUSTERS[cluster][param])

        print 'Creating Node Managers...'
```

```
        for machine in self.MACHINES:
            cd('/')
            create(machine, 'Machine')
            cd('Machine/' + machine)
            create(machine, 'NodeManager')
            cd('NodeManager/' + machine)
            for param in self.MACHINES[machine]:
                set(param, self.MACHINES[machine][param])

        print 'Creating Servers...'
        for server in self.SERVERS:
            cd('/')
            if server == 'AdminServer':
                cd('Server/' + server)
                for param in self.SERVERS[server]:
                    set(param, self.SERVERS[server][param])
                continue
            create(server, 'Server')
            cd('Server/' + server)
            for param in self.SERVERS[server]:
                set(param, self.SERVERS[server][param])

        setOption('OverwriteDomain', 'true')
        domainHome = self.domainParentDir + '/' + name

        print 'Writing base domain...'
        writeDomain(domainHome)
        closeTemplate()
        print 'Base domain created at ' + domainHome
        return domainHome


    def extendDomain(self, domainHome, db, dbPrefix, dbPassword):
        print 'Extending domain at ' + domainHome
        readDomain(domainHome)
        setOption('AppDir', self.domainParentDir + '/applications')

        print 'Applying JRF templates...'
        for extensionTemplate in
self.JRF_12213_TEMPLATES['extensionTemplates']:
            addTemplate(self.replaceTokens(extensionTemplate))

        print 'Applying MFT templates...'
        for extensionTemplate in
self.MFT_12213_TEMPLATES['extensionTemplates']:
            addTemplate(self.replaceTokens(extensionTemplate))

        print 'Extension Templates added'

        print 'Configuring the Service Table DataSource...'
        fmwDb = 'jdbc:oracle:thin:@' + db
        cd('/JDBCSystemResource/LocalSvcTblDataSource/JdbcResource/
LocalSvcTblDataSource')
        cd('JDBCDriverParams/NO_NAME_0')
        set('DriverName', 'oracle.jdbc.OracleDriver')
        set('URL', fmwDb)
```

```
        set('PasswordEncrypted', dbPassword)

        stbUser = dbPrefix + '_STB'
        cd('Properties/NO_NAME_0/Property/user')
        set('Value', stbUser)

        print 'Getting Database Defaults...'
        getDatabaseDefaults()

        print 'Targeting Server Groups...'
        serverGroupsToTarget =
list(self.JRF_12213_TEMPLATES['serverGroupsToTarget'])

serverGroupsToTarget.extend(self.MFT_12213_TEMPLATES['serverGroupsToTarget'
])
        cd('/')
        for server in self.SERVERS:
            if not server == 'AdminServer':
                setServerGroups(server, serverGroupsToTarget)
                print "Set CoherenceClusterSystemResource to
defaultCoherenceCluster for server:" + server
                cd('/Servers/' + server)
                set('CoherenceClusterSystemResource',
'defaultCoherenceCluster')

        cd('/')
        for cluster in self.CLUSTERS:
            print "Set CoherenceClusterSystemResource to
defaultCoherenceCluster for cluster:" + cluster
            cd('/Cluster/' + cluster)
            set('CoherenceClusterSystemResource',
'defaultCoherenceCluster')

        print "Set WLS clusters as target of defaultCoherenceCluster:[" +
",".join(self.CLUSTERS) + "]"
        cd('/CoherenceClusterSystemResource/defaultCoherenceCluster')
        set('Target', ",".join(self.CLUSTERS))

        print 'Preparing to update domain...'
        updateDomain()
        print 'Domain updated successfully'
        closeDomain()
        return



################################################################################
    # Helper
Methods                                                          #

################################################################################

    def validateDirectory(self, dirName, create=False):
        directory = os.path.realpath(dirName)
        if not os.path.exists(directory):
            if create:
```

```
                os.makedirs(directory)
            else:
                message = 'Directory ' + directory + ' does not exist'
                raise WLSTException(message)
        elif not os.path.isdir(directory):
            message = 'Directory ' + directory + ' is not a directory'
            raise WLSTException(message)
        return self.fixupPath(directory)


    def fixupPath(self, path):
        result = path
        if path is not None:
            result = path.replace('\\', '/')
        return result


    def replaceTokens(self, path):
        result = path
        if path is not None:
            result = path.replace('@@ORACLE_HOME@@', oracleHome)
        return result


############################
# Entry point to the script #
############################

def usage():
    print sys.argv[0] + ' -oh <oracle_home> -jh <java_home> -parent
<domain_parent_dir> [-name <domain-name>] ' + \
          '[-user <domain-user>] [-password <domain-password>] ' + \
          '-rcuDb <rcu-database> [-rcuPrefix <rcu-prefix>] [-rcuSchemaPwd
<rcu-schema-password>]'
    sys.exit(0)


print str(sys.argv[0]) + " called with the following sys.argv array:"
for index, arg in enumerate(sys.argv):
    print "sys.argv[" + str(index) + "] = " + str(sys.argv[index])

if len(sys.argv) < 6:
    usage()

#oracleHome will be passed by command line parameter -oh.
oracleHome = None
#javaHome will be passed by command line parameter -jh.
javaHome = None
#domainParentDir will be passed by command line parameter -parent.
domainParentDir = None
#domainName is hard-coded to mft_domain. You can change to other name of
your choice. Command line parameter -name.
domainName = 'mft_domain'
#domainUser is hard-coded to username. You can change to other name of
your choice. Command line paramter -user.
domainUser = 'username'
```

```
#domainPassword is hard-coded to password. You can change to other
password of your choice. Command line parameter -password.
domainPassword = 'password'
#rcuDb will be passed by command line parameter -rcuDb.
rcuDb = None
#change rcuSchemaPrefix to your soainfra schema prefix. Command line
parameter -rcuPrefix.
rcuSchemaPrefix = 'DEV12'
#change rcuSchemaPassword to your soainfra schema password. Command line
parameter -rcuSchemaPwd.
rcuSchemaPassword = 'password'

i = 1
while i < len(sys.argv):
    if sys.argv[i] == '-oh':
        oracleHome = sys.argv[i + 1]
        i += 2
    elif sys.argv[i] == '-jh':
        javaHome = sys.argv[i + 1]
        i += 2
    elif sys.argv[i] == '-parent':
        domainParentDir = sys.argv[i + 1]
        i += 2
    elif sys.argv[i] == '-name':
        domainName = sys.argv[i + 1]
        i += 2
    elif sys.argv[i] == '-user':
        domainUser = sys.argv[i + 1]
        i += 2
    elif sys.argv[i] == '-password':
        domainPassword = sys.argv[i + 1]
        i += 2
    elif sys.argv[i] == '-rcuDb':
        rcuDb = sys.argv[i + 1]
        i += 2
    elif sys.argv[i] == '-rcuPrefix':
        rcuSchemaPrefix = sys.argv[i + 1]
        i += 2
    elif sys.argv[i] == '-rcuSchemaPwd':
        rcuSchemaPassword = sys.argv[i + 1]
        i += 2
    else:
        print 'Unexpected argument switch at position ' + str(i) + ': ' +
str(sys.argv[i])
        usage()
        sys.exit(1)

provisioner = MFT12213Provisioner(oracleHome, javaHome, domainParentDir)
provisioner.createMftDomain(domainName, domainUser, domainPassword, rcuDb,
rcuSchemaPrefix, rcuSchemaPassword)
```

2. Open the script and change the following values:
    a. ListenAdress: This is the IP address of the machine where the MFT domain should be created.

b. Prefix of RCU schema: This is hardcoded to *DEV12*, change this value to the specific prefix. For example, if the name of the RCU schema is SAMPLE_SOAINFRA, then the value of rcuSchemaPrefix is *SAMPLE*.

c. RCU schema password: This is hard coded to *password*. Change this value to the schema specific password.

3. Go to *FMW_HOME/oracle_common/common/bin/*

4. Type *./wlst.sh <script_location>/silent_domain_creation_mft.py -oh "<FMW_HOME location>" -jh "<JAVA_HOME location>" -parent "<new domain creation location>" -rcuDb "<hostname of your linux box>:<port>/<service id>"*

   The following is an example of the command with the required parameters:

```
Type cd $MW_HOME/oracle_common/common/bin
Type ./wlst.sh <script_name with absolute path> -oh "<oracle middleware
home>" -jh  "<java home>" -parent "<domain parent directory with absolute
path>" -name  "<domain_name>" -user "<domain user>" -password "domain
password" -rcuDb  "<hostname>:<port>/<service>" -rcuPrefix "<soa_infra
schema prefix>"  -rcuSchemaPwd "<soainfra schema password>"
```

   - -oh — Middleware home path. Default is none, set a value.
   - -jh — Java home path. Default is none, set a value.
   - -parent — domain parent directory name with absolute path. Default is none, set a value.
   - (Optional) -name — domain name. Default is *soa_domain*. If value is not set, default value will be used.
   - (Optional) -user — domain user. Default is *username*. If value is not set, default value will be used.
   - (Optional) -password — domain password. Default is *password*. If value is not set, default value will be used..
   - -rcuDb — RCU database details. Default is none, set a value.
   - -rcuPrefix — soainfra schema prefix. Default is *DEV12*. Check your soainfra prefix and set this value accordingly.
   - -rcuSchemaPwd —soainfra schema password. Default is *password*. Check your soainfra schema password and set this value accordingly.

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.

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. **Note:** The WebLogic Server Administration Console has been removed. For comparable functionality, you will use the WebLogic Remote Console.	See Overview of Oracle Fusion Middleware Administration Tools in *Administering Oracle Fusion Middleware*.
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 *Administering Oracle Fusion Middleware*.
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 *Administering Oracle Fusion Middleware*.
Monitoring Oracle Fusion Middleware	Learn how to keep track of the status of Oracle Fusion Middleware components.	See Monitoring Oracle Fusion Middleware in *Administering Oracle Fusion Middleware*.
Understanding Backup and Recovery Procedures	Learn the recommended backup and recovery procedures for Oracle Fusion Middleware.	See Introduction to Backup and Recovery in *Administering Oracle Fusion Middleware*.

Table 5-1 (Cont.) Basic Administration Tasks for a New Domain

Task	Description	More Information
Getting familiar with database purging	Get familiar with scheduling and running purge jobs that automatically remove older flow instances, adapter reports, and fault alerts data from the database.	See Managing Database Growth in *Administering Oracle SOA Suite and Oracle Business Process Management Suite*.

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 *Administering Oracle Fusion Middleware*.
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 *Installing and Configuring Oracle HTTP Server*. See also Installing Multiple Products in the Same Domain for important information.
Tuning and configuring Coherence for your topology	The standard installation topology includes a Coherence cluster that contains storage-enabled Managed Coherence Servers. This configuration is a good starting point for using Coherence, but depending upon your specific requirements, consider tuning and reconfiguring Coherence to improve performance in a production environment.	For more information about Coherence clusters, see Configuring and Managing Coherence Clusters in *Administering Clusters for Oracle WebLogic Server*. For information on tuning Coherence, see Performance Tuning in *Administering Oracle Coherence*. For information on storing HTTP session data in Coherence, see Using Coherence*Web with WebLogic Server in *Administering HTTP Session Management with Oracle Coherence*Web*. For more about creating and deploying Coherence applications, see Getting Started in *Developing Oracle Coherence Applications for Oracle WebLogic Server*.

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.

> **Note:**
>
> BAM domains that were created using WLST, and will be used in a high availability configuration, require additional provisioning scripts after the installation. The default / internal Data Objects are missing in BAM Composer when the domain is created using WLST and the scripts provide the pre-seeded data that is required for high availability BAM domains. For more information, My Oracle Support document ID 2190789.1.
>
> .

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 Scaling Out a Topology (Machine Scale Out) in *High Availability Guide*.
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 Configuring High Availability for Web Tier Components in *HTTP Server Administration Guide*.
Setting up a front-end load balancer	You can use a load balancer to distribute requests across servers more evenly.	See Server Load Balancing in a High Availability Environment in *High Availability Guide*.
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 Advanced Node Manager Configuration in *Administering Node Manager for Oracle WebLogic Server*.

6

Uninstalling or Reinstalling Oracle Managed File Transfer

Follow the instructions in this section to uninstall or reinstall Oracle Managed File Transfer.

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.

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 Stopping Oracle Fusion Middleware.
Remove your database schemas	Run Repository Creation Utility to remove your database schemas.	See Removing Your Database Schemas.
Remove the software	Run the product uninstaller to remove the software. Note that if your Oracle home contains multiple products, you must run the uninstaller multiple times, once for each product.	See Uninstalling the Software.
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 Removing the Oracle Home Directory Manually.
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 Removing the Domain and Application Data.

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 *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 *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 *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 *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 *Installing Software with the Oracle Universal Installer*.

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 the product you want to remove 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 Managed File Transfer 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 *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.
Dinstallation 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 **Save Response File** 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 *Installing Software with the Oracle Universal Installer*. Click **Deinstall**, 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 **Finish** 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 Linux operating systems, enter the following commands:

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

On Windows operating systems, 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 Linux operating systems, if your Domain home directory is `/home/Oracle/config/domains/mft_domain`, enter the following command:

   ```
   cd /home/Oracle/config/domains
   ```

   ```
   rm -rf mft_domain
   ```

   On Windows operating systems, if your Domain home directory is `C:\Oracle\Config\domains\mft_domain`, use a file manager window and navigate to the `C:\Oracle\Config\domains` directory. Right-click on the `mft_domain` folder and select **Delete**.
2. Manually remove your Application home directory. For example:

   On Linux operating systems, if your Application home directory is `/home/Oracle/config/applications/mft_domain`, enter the following commands:

   ```
   cd /home/Oracle/config/applications
   ```

   ```
   rm -rf mft_domain
   ```

   On Windows operating systems, if your Application home directory is `C:\Oracle\Config\applications\mft_domain`, use a file manager window and navigate to the `C:\Oracle\Config\applications` directory. Right-click on the `mft_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 `mft_domain`, find the following line and remove it:

   ```
   <domain location="/home/Oracle/config/domains/mft_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.

  You can either:

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

  – Select a different Oracle home directory.

- 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

Configuring Oracle Managed File Transfer in a Compact Domain

A compact domain is a developer domain consisting of a single Administration server and no Managed Servers. Compact domains are supported for development environments only. A compact domain provides a local test environment for developers and requires a limited amount of disk space or system resources.

> **Note:**
>
> For Oracle Managed File Transfer, a compact domain requires an external supported database.

To create a compact domain for Oracle Managed File Transfer, perform the tasks listed in the following table.

Table A-1 Installing Oracle Managed File Transfer in a Dedicated Compact Domain

Task	More Information
Install Oracle Managed File Transfer in its own Oracle home	See Installing the Oracle Managed File Transfer Software.
Create the Managed File Transfer schema in a supported database	See Creating the Database Schemas.
Configure a compact domain for Managed File Transfer	See Configuring a Compact Domain in *Installing Oracle SOA Suite and Business Process Management Suite Quick Start for Developers*. When you configure the compact domain, select only the Managed File Transfer configuration template in the Fusion Middleware Configuration Wizard.

B

Secondary Topology for Oracle Managed File Transfer

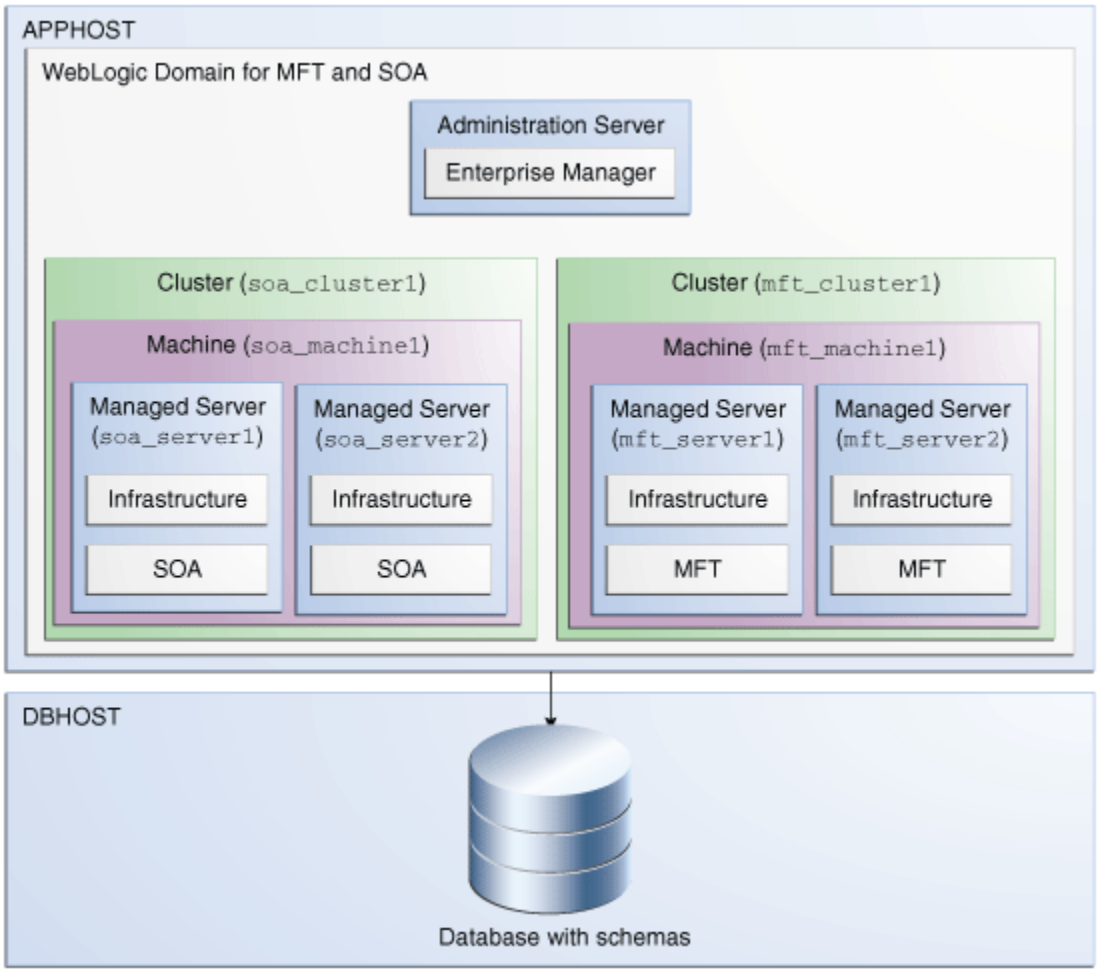
This appendix describes a secondary (alternate) topology for Oracle Managed File Transfer with Oracle SOA Suite.

Oracle Managed File Transfer and SOA Suite Topology

Use this topology to implement Oracle SOA Suite in your Oracle Managed File Transfer domain.

The Oracle Managed File Transfer software is targeted to its own cluster; this ensures that there is no resource contention between the Oracle Managed File Transfer and Oracle SOA Suite software.

Figure B-1 Roadmap for Installing and Configuring the Oracle Managed File Transfer and Oracle SOA Suite Topology



The following table describes the tasks to configure this topology on your system.

Table B-1 Overview of the Installation and Configuration Steps for Oracle Managed File Transfer and Oracle SOA Suite

Task	Description	More Information	Special Instructions
Verify your system environment	Before beginning the installation, verify that the minimum system and network requirements are met.	See Roadmap for Verifying Your System Environment.	None.
Obtain the appropriate distribution	Both Oracle Managed File Transfer and Oracle SOA Suite require an existing Oracle Fusion Middleware Infrastructure installation; Oracle Managed File Transfer and Oracle SOA Suite must be installed in the same Oracle home as Oracle Fusion Middleware Infrastructure. You must obtain all three product distributions.	See About Product Distributions.	None.
Determine your installation directories	Verify that the directories that will need to be created can be created or accessed by the installer, and exist on systems that meet the minimum requirements.	See What Are the Key Oracle Fusion Middleware Directories? in *Understanding Oracle Fusion Middleware*.	None.
Install Oracle Fusion Middleware Infrastructure	Install Oracle Fusion Middleware Infrastructure to create the Oracle home directory for Oracle Managed File Transfer.	See Installing the Infrastructure Software in *Installing and Configuring the Oracle Fusion Middleware Infrastructure*.	None.
Install Oracle SOA Suite	Install Oracle SOA Suite software into the existing Infrastructure Oracle home.	See Installing the Oracle SOA Suite and Oracle Business Process Management Software in *Installing and Configuring Oracle SOA Suite and Business Process Management*.	Select **SOA Suite** on the Installation Type screen.
Install the software	Install Oracle Managed File Transfer software into the existing Infrastructure Oracle home on which you have also installed Oracle SOA Suite.	See Installing the Oracle Managed File Transfer Software.	Select **MFT** on the Installation Type screen.
Create a WebLogic domain	Use the configuration wizard to create and configure the WebLogic domain. Ensure that you select the appropriate options on the configuration screens.	See Configuring Oracle Managed File Transfer Domain.	Follow the instructions provided for specific screens in Table B-2.
Start the servers	Once you complete creating the domain, start the administration and managed servers.	See Starting the Servers.	None.

Table B-1 (Cont.) Overview of the Installation and Configuration Steps for Oracle Managed File Transfer and Oracle SOA Suite

Task	Description	More Information	Special Instructions
Verify the configuration	Verify to ensure that the domain has been configured properly.	See Verifying the Configuration.	None.
Next steps after installing and configuring Oracle Managed File Transfer.	You can perform administrative as well as management tasks for the domain that you have just configured.	See Next Steps After Configuring the Domain.	None.

Configuration Options to Select for Oracle Managed File Transfer and Oracle SOA Suite

Almost all of the screens and options that you must select while configuring Oracle Managed File Transfer and Oracle SOA Suite are identical to those provided in Configuring Oracle Managed File Transfer Domain. However, there are a couple of screens on which you must select different options. Ensure that you select the configuration options provided in the following table.

Table B-2 Key Screens and Configuration Options for Oracle Managed File Transfer and Oracle SOA Suite Topology

Screen	Description
Templates	This screen appears after you start the configuration wizard to create your domain. In addition to the templates listed in Selecting the Configuration Templates for Oracle Managed File Transfer, select **Oracle SOA Suite - 14.1.2.0.0 [soa]**.
Managed Servers	On this screen, two managed servers are created: `mft_server_1` and `soa_server_1`. Click **Add** and create two more managed servers: `mft_server_2` and `soa_server_2`. Ensure that in the **Listen Address** drop-down list, you select the IP address of the host on which the Managed Server will reside. Do not use `All Local Addresses`. In the **Server Groups** drop-down list, ensure that `soa_server_1` and `soa_server_2` are targeted to **SOA-MGD-SVRS** and `mft_server_1` and `mft_server_2` to **MFT-MGD-SVRS-ONLY**.
Clusters	On this screen, create two clusters: `soa_cluster1` and `mft_cluster1`.
Assign Servers to Clusters	On this screen, assign the servers as follows: • `mft_server_1` and `mft_server_2` to `mft_cluster_1` • `soa_server_1` and `soa_server_2` to `soa_cluster_1`
Machines	On this screen, create two machines: `mft_machine1` and `soa_machine2`.

Table B-2 (Cont.) Key Screens and Configuration Options for Oracle Managed File Transfer and Oracle SOA Suite Topology

Screen	Description
Assign Servers to Machine	On this screen, assign the servers as follows: • `AdminServer`, `mft_server_1`, and `mft_server_2` to `mft_machine_1`. • `soa_server_1` and `soa_server_2` to `soa_machine_1`.

C

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

Consider that you have an unsupported JDK version 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. The supported JDK version for this release is jdk17.0.12 and it carries security enhancements and bug fixes. 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.

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 8u191. 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/jdk17.0.12`.

- Manually locate the files that have references to the JDK using `grep` command for Linux or UNIX operating systems and update each reference.

  See Updating the JDK Location in an Existing Oracle 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.

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:

(Linux) *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 jdk17.0.12.

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:

   (Linux) *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:

   (Linux) *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:

   (Linux) *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 jdk17.0.12.

Updating the JDK Location in an Existing Domain Home

You must search the references to the current JDK, for example 1.8.0_191 manually, and replace those instances with the location of the new JDK.

You can use the `grep` or `findstr` commands to search for the JDK-related references.

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

(Linux) *DOMAIN_HOME*`/bin/setNMJavaHome.sh`

(Windows) *DOMAIN_HOME*`\bin\setNMJavaHome.cmd`

(Linux) *DOMAIN_HOME*`/nodemanager/nodemanager.properties`

(Windows)*DOMAIN_HOME*`\nodemanager\nodemanager.properties`

(Linux) Start `bash` and then run *DOMAIN_HOME*`/bin>source setDomainEnv.sh`

(Windows)*DOMAIN_HOME*`\bin\setDomainEnv.cmd`